SCHEDULE INFORMATION
This schedule includes all courses expected to be offered by the Johns Hopkins Bloomberg School of Public Health during the 4th Term of academic year 2019-20. The listing is based on data supplied by the academic departments and approved by the subcommittee of the Committee on Academic Standards as of February 25, 2020. Courses are listed in numerical order within departments. The second three digits represent the department or division. The three digits to the right of the period represent the course number.

COURSE INFORMATION
Included in the listing for each course are class meeting dates, times, instructor, and prerequisites. Classes designated as TBA will have times arranged at a later date by the department offering the course; students must check with the department for this information. The most recent course descriptions are included at the following website:

Visit the JHSPH Course Directory for current course information:
http://www.jhsph.edu/courses/

You can access links to comprehensive course information: http://www.jhsph.edu/offices-and-services/student-affairs/records-and-registration/

REGISTRATION INFORMATION
Continuing students may register for 4th Term through March 13, 2020 by logging on to Self-Service at https://sis.jhu.edu/sswf. To register via Self-Service, students must use their JHED ID (logon user ID) and password for authentication. 4th Term tuition payments are due via the web (https://sis.jhu.edu/sswf) by Saturday, April 18, 2020. Changes to 4th Term registrations for full-term courses may be processed via Self-Service during the published Add/Drop period for 4th Term: Monday, March 23 – Friday, April 3, 2020.

School of Medicine Post Doctoral Fellows cannot register via Self-Service; they must register in person at the Registrar's Office at the School of Medicine (733 N. Broadway, Suite 147). SOM Post Docs must adhere to all course restrictions and required permissions and are responsible for any course materials/ lab fees. Registration information is available at https://www.jhsph.edu/offices-and-services/student-affairs/records-and-registration/som-post-docs.html.

Special Students Limited (SSL) may apply for the regular eight week term at http://www.jhsph.edu/offices-and-services/student-affairs/studentaccts/non-degree-application/index.html. SSL registration requests will not be processed until instructor's permission for all courses is received. SSLs must submit permission to the Continuing Education Student Services Office by email to JHSPH.cess@jhu.edu. Payment for tuition and fees must be made prior to the first day of the term. Payments for tuition not received by the first day of the term will result in a dropped enrollment. Registrations during the Add/Drop period require payment in full at time of registration.

Tuition is assessed at a rate of $1162 per credit unit. Students receive a 100% tuition refund for any withdrawals made prior to the end of the Add/Drop period; however, there is no tuition refund after the Add/Drop period. A fee of $50 will be assessed for making changes after the Add/Drop period for each academic term. No changes will be accepted during the last two weeks of a term.

REQUIRED APPROVALS
All students in the School (with the exception of Special Students Limited) are expected to have their registration selections approved by their academic advisors. It is the student's responsibility to have his/her registration, including grading options and registration changes, reviewed and approved by an advisor. Additionally, if a course is noted as requiring instructor’s consent, it is the student’s responsibility to obtain such consent. This consent may be obtained in person or by e-mail and it is in the student’s best interest to maintain documentation of such approvals. Additionally, all special studies (.800 series) and all courses taken for audit must have the instructor's consent. All Special Students Limited must have each of their course registrations approved by the instructor in writing (e-mail approvals are acceptable and should be forwarded to JHSPH.cess@jhu.edu).

As of March 13, 2020
COURSE LISTING CODES
Course listings consist of the following: a three character department code—the second two characters identify the department in which the course is offered, the third character may be used to indicate a division or cluster within the department. Refer to the list below for department/division codes.

DEPARTMENT/DIVISION CODES

<table>
<thead>
<tr>
<th>Code</th>
<th>Department/division</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>Biochemistry and Molecular Biology</td>
</tr>
<tr>
<td>140</td>
<td>Biostatistics</td>
</tr>
<tr>
<td>180-188</td>
<td>Environmental Health Engineering</td>
</tr>
<tr>
<td>220-224</td>
<td>International Health</td>
</tr>
<tr>
<td>260</td>
<td>Molecular Microbiology and Immunology</td>
</tr>
<tr>
<td>300-319</td>
<td>Health Policy and Management</td>
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<tr>
<td>330</td>
<td>Mental Health</td>
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<tr>
<td>340</td>
<td>Epidemiology</td>
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<tr>
<td>380</td>
<td>Population and Family Health Sciences</td>
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<tr>
<td>390</td>
<td>Clinical Investigation</td>
</tr>
<tr>
<td>410-415</td>
<td>Health Behavior and Society</td>
</tr>
<tr>
<td>550-551</td>
<td>Adjunct Studies</td>
</tr>
<tr>
<td>552</td>
<td>“Cells to Society/Leadership” (CEPH courses)</td>
</tr>
<tr>
<td>600-699</td>
<td>Online Programs for Applied Learning</td>
</tr>
<tr>
<td>700</td>
<td>Bioethics (Berman Institute)</td>
</tr>
</tbody>
</table>

A course number—the three character course number will be used to indicate the level, format, and the sequence of the course. Since the School of Public Health is a graduate division, courses will be numbered within the following range.

- **A. 600-699:** Formal Courses normally offered in the second year of graduate study.
- **B. 700-799:** Formal Courses normally offered in the second or last year of graduate study.
- **C. 800-899:** Repeatable courses offered in a variety of informal (i.e., non-lecture) formats that can be distinguished by the following sub designations:
  - 810 series Field Placement
  - 820 series Thesis Research (master’s and doctoral)
  - 830 series Postdoctoral Research
  - 840 series Special Studies and Research
  - 850 series Laboratory rotation courses
  - 860 series Informal seminars (e.g., journal or research clubs) that vary in content each quarter of each year and address current topics

**Examples**
- 182.820 Thesis Research in Environmental Health Engineering
- 340.840 Special Studies and Research Epidemiology
- 260.851 Laboratory Rotations
- 187.861 Toxicological Sciences Seminar

INTERDIVISIONAL CODES
Some School of Public Health courses may have prerequisites from other divisions of the University. Also, other divisions may jointly offer courses with the School of Public Health. To denote courses offered by other University divisions, the following system is used:

AS Krieger School of Arts and Sciences (KSAS)
BU Carey Business School (Carey)
ED School of Education
EN Whiting School of Engineering (EN)
ME School of Medicine (SOM)
NR School of Nursing (SON)
SA School of Advanced International Studies (SAIS)

(Example: ME 330.702 denotes a School of Medicine course, in the Department of Pharmacology and Molecular Sciences)
700.625.01 Bioethics And The Law (Cancelled - Department)
3 credits - Course offered this year - East Baltimore
Rieder, Travis

Examines central legal cases that address issues in bioethics. Topics covered include reproductive rights, end of life decision-making, informed consent, ownership of human cells, and others. Explores challenges that emerging biotechnologies (e.g., neuroimaging) pose for existing legal doctrine. Discusses evolving regulatory frameworks for oversight of human subjects research. Considers the relationship between legal reasoning and ethical reasoning, with some of the legal literature supplemented by readings from the bioethics literature.

Upon successfully completing this course, students will be able to:
1. Articulate the rulings of landmark legal cases in bioethics
2. Identify general principles of constitutional and common law
3. Critically discuss judicial opinions
4. Consider how courts may approach new cases that bear on bioethics issues
5. Describe the relationship between ethics and law

Method of Assessment

<table>
<thead>
<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>Participation</td>
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<tr>
<td>Midterm</td>
</tr>
<tr>
<td>Take home final exam</td>
</tr>
</tbody>
</table>

Email: trieder@jhu.edu

Days & Times with Start & End Dates: Mar 25, 2020 - May 17, 2020
Lecture: T 3:30 PM - 6:20 PM
Enrollment: Minimum 6, Maximum 20, Waitlist Enabled: Yes
Enrollment priority given to MBE students. This course is restricted to students who do not already have formal legal training.
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students
Prerequisite: None
Course meets in Deering Hall; LLC Room

700.630.01 Global Food Ethics (Cancelled - Department)
3 credits - Course offered this year - East Baltimore
Barnhill, Anne

Introduces and explores the ethical issues of the global food system. Provides students with the opportunity to think critically about a variety of conflicting views as to what it means to produce, process, distribute, market and consume food ethically in a globalized world. Borrows tools from practical ethics, political philosophy, and theories of justice to shed light on these issues that determine our common future and the way we personally and socially relate to the food we eat.

Upon successfully completing this course, students will be able to:
1. Identify the major ethical debates and challenges of the global food system from agriculture production systems to consumer knowledge and behavior
2. Critique significant societal values and ethical assumptions that shape the food system
3. Identify and analyze the obligations and responsibilities of different actors in high- midle and low-income countries, including local food movements, consumers, the food and agriculture industry players, and the public sector
4. Explain how programs and policies (in high-, middle- and low-income countries) can take an ethical lens to decision-making and partnerships pertaining to the food system
5. Identify potential short- and long-term ethically permissible, socially acceptable, and politically feasible solutions and strategies for producing, processing, distributing, marketing, selling and consuming food
6. Apply personal experiences to an exploration of the ethical issues of the global food system

Email: abarnhi1@jhu.edu
Lecture: T 3:30 PM - 6:20 PM
Enrollment: Minimum 3, Maximum 20, Waitlist Enabled: Yes
Enrollment Priority given to Master of Bioethics students
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for Undergraduates

Prerequisite:
In addition to the textbooks, there are several useful online resources that you're encouraged to consult: The FEWresources.org website. This website, maintained by Madison Powers, provides an eye-opening roadmap of the food-energy-water nexus from a global justice perspective. David M. Kaplan’s “Philosophy of Food Project” (http://www.food.unt.edu). This website has useful summaries of philosophical arguments related to food.

Course meets in the Berman Institute of Bioethics, Deering Hall, Lower Level Conference room

Learning Materials:
- (Book) Food Ethics: The Basics
  Sandler, Ronald L.
  Welch Library $ .00
  Comment: Available in eBook format through Welch Library online.

- (Book) From Field to Fork: Food Ethics for Everyone
  Thompson, Paul B.
  Amazon $22.00

700.632.01 Ethics, Policy, And Emerging Biomedical Technologies
3 credits - Course offered this year - East Baltimore
Mathews, Debra
Examines the ethics and policy issues raised by emerging biomedical technologies, including stem cell science, genetics/genomics, neuroscience, and synthetic biology. Integrates primers on the relevant science with discussion of the ethics and policy issues raised by the design, conduct and integration of the science into research, clinical care and commerce.

Upon successfully completing this course, students will be able to:
1. Identify some of the ethics and policy issues raised by a range of emerging biotechnologies, and describe how these issues relate to the science itself
2. Analyze the ethics and policy issues raised by emerging biotechnologies
3. Discuss the similarities and differences across emerging biotechnologies in the types of ethics and policy challenges they raise in the contexts of research, clinical care and commerce

Email: dmathews@jhu.edu
Lecture: TH 3:30 PM - 6:20 PM
Enrollment: Minimum 6, Maximum 20, Waitlist Enabled: Yes
Enrollment priority given to MBE students
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students
Prerequisite: None
Course meets in Deering Hall; LLC Room

700.640.01 Nutrition Ethics And Policy (Discontinued)
3 credits - Course offered this year - East Baltimore
Fanzo, Jess
Introduces and explores the ethical issues of the nutritional sciences field in science, policy and practice. Provides students with the opportunity to think critically about a variety of conflicting evidence and scientific views of what is considered a “good” diet, where are the social inequities in accessing a nutritious diet, and what are the implications of policies in achieving nutrition security. Borrows tools from practical ethics, political philosophy, and theories of justice to highlight key ethical issues and challenges that impede or incentivize progress in the field of nutrition.

Upon successfully completing this course, students will be able to:
1. Identify the major ethical debates and challenges of the nutrition field including issues in science, programs and policies
2. Critique significant societal values and ethical assumptions that shape the evidence and science of nutrition

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 2 of 202
3 Analyze the obligations and responsibilities of different actors in high-, middle-, and low-income countries involved in shaping the nutrition agenda

4 Explain how programs and policies (in high-, middle- and low-income countries) can apply an ethical lens to decision-making and partnerships pertaining to nutrition outcomes across various sectors and systems (food, health, social protection, water etc)

5 Identify potential short- and long-term ethically permissible, socially acceptable, and politically feasible solutions and strategies for improving nutrition

Email: jfanzo1@jhu.edu
Lecture: T 3:30 PM - 6:20 PM
Enrollment: Minimum 4, Maximum 20, Waitlist Enabled: Yes
Enrollment priority given to MBE students
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students
Course meets in Deering Hall; LLC Room

Learning Materials:
- (Book) From Field to Fork: Food Ethics for Everyone
  Thompson, Paul B.
  ISBN: 978-0199391691 Oxford University Press; edition ( )
  Amazon $22.00

700.641.01 Germs, Genes, Patients, And Populations (Discontinued)
3 credits - Course offered this year - East Baltimore
Boyce, Angie
Explores past, present, and future ethical, legal, social and policy issues at the intersection of infectious disease and genomics. Because of the inherently social nature of contagion, infectious disease challenges individualistic assumptions in bioethical models with public health dilemmas requiring attention to the relationships and interactions between hosts, vectors, pathogens, and environments.

Focuses on the potential ethical, legal, and social implications of emerging genomic science and technology for infectious disease control, including cutting-edge scientific topics like personalized vaccines, gene editing, and HIV phylogenetics.

Addresses enduring bioethical concerns about social responsibility, stigma, and the challenge of balancing individual interests and protections against risks of harms to others and to public health.

Upon successfully completing this course, students will be able to:
1 Examine ethical, legal, social, and policy issues at the intersection of genomics and infectious disease
2 Evaluate how emerging and future genomic science and technology may change existing approaches to infectious disease management and identify potential risks and benefits
3 Discuss and form persuasive arguments about how the ethical, legal, and social implications of emerging genomic technologies in infectious disease should be addressed

Email: aboyce@jhu.edu
Lecture: TH 3:30 PM - 6:20 PM
Enrollment: Minimum 6, Maximum 20, Waitlist Enabled: Yes
Enrollment priority given to MBE students. Students who have taken 700.624 BIOETHICS AND INFECTIOUS DISEASES: ETHICAL, LEGAL, AND HUMAN RIGHTS ISSUES, may not take this course for credit.
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students
Prerequisite:
Course meets in Deering Hall; LLC Room

700.642.01 Vulnerability In Childhood -- From Ethics To Advocacy (Cancelled - Department)
3 credits - Course offered this year - East Baltimore
Seltzer, Rebecca
Introduces students to the concept of vulnerability from an interdisciplinary lens of ethics, philosophy, medicine, and public health. Discusses how special protections for vulnerable populations can impact research and clinical care at the individual and population level. Presents examples of vulnerable populations of children (eg. children with medical complexity, children in foster care, children at the border, children impacted by the opioid epidemic, transgender youth) in order to illustrate relevant ethical challenges faced by vulnerable populations. Introduces students to written media (eg. op-ed, letter to the editor) as a tool to advocate for vulnerable children.

Upon successfully completing this course, students will be able to:
1. Explain the concept of vulnerability from an ethics perspective
2. Recognize the special protections that relate to vulnerable populations
3. Examine the barriers to research and clinical care for vulnerable populations of children
4. Evaluate the ethical issues faced by different subpopulations of vulnerable children
5. Create written media in order to advocate for vulnerable populations

Email: rseltze2@jhmi.edu
Lecture: F 1:30 PM - 4:20 PM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Priority enrollment given to MBE students. No undergraduates permitted to enroll.
Grading Options: Letter Grade or Pass/Fail

**700.643.01 Understanding Addiction: Philosophy, Science, Ethics**
3 credits - Course offered this year - East Baltimore
Pickard, Hanna

Employs an inter-disciplinary approach to understand the nature of addiction, drawing on philosophy, psychological science, and the perspectives of people who struggle with addiction. Provides an overview of competing models of addiction and evaluates their theoretical foundations and supporting evidence. Explores the heterogeneity of individual-level decision-making in addiction. Distinguishes different ideas of responsibility and how they intersect with addiction research and individual and societal responses to addiction, including drug criminalization. Provides students with the opportunity for in-depth reflection on conceptual and ethical issues surrounding addiction, developing analytic and argumentative skills.

Upon successfully completing this course, students will be able to:
1. Explain the theoretical foundations of different models of addiction and assess the supporting evidence
2. Identify the multiple factors that impact individual-level decision-making in addiction
3. Taxonomize ideas of responsibility and evaluate how they interact with addiction research and responses to addiction
4. Critically evaluate the philosophical-legal foundations for drug criminalization
5. Deploy conceptual reasoning skills to address complex issues of moral disagreement

**Method of Assessment**

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1. Participation</td>
<td>20</td>
</tr>
<tr>
<td>2. Paper(s)</td>
<td>15</td>
</tr>
<tr>
<td>3. Midterm Paper</td>
<td>25</td>
</tr>
<tr>
<td>4. Final Paper</td>
<td>35</td>
</tr>
<tr>
<td>5. Reflection</td>
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**Method of Assessment Detail:**
Please note that, in order to develop analytic reasoning skills, the course is writing intensive.
Class participation – 20%
3 short summary papers (250 words each) and 2 in-class pop quizzes – 15%
1 mid-term essay (1500 words) – 25%
1 final essay (2000 words) – 35%
1 end-of-course personal reflection (500 words) - 5%

Email: h.pickard@jhu.edu
Lecture: T 8:30 AM - 11:20 AM
Enrollment: Minimum 6, Maximum 16, Waitlist Enabled: Yes
Priority enrollment given to MBE students. No undergraduates permitted to enroll.
Grading Options: Letter Grade or Pass/Fail

*4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 4 of 202*
700.644.01 Justice Theory And Health
3 credits - Course offered this year - East Baltimore

Faden, Ruth

Examines why many of us are attracted to public health and the desire to make the world not only a better place, but also a more just one. Addresses that question from the standpoint of human rights and justice theory. Introduces the distinctive role of justice and structural justice in moral thought, theoretical foundations for human rights, the relationship between human rights and justice, and the related concepts of fairness, power and disadvantage.

Upon successfully completing this course, students will be able to:

1. Evaluate why health matters morally according to alternative theories of justice
2. Identify the philosophical foundations of the human right to health
3. Explain what is distinctive about justice theories in general, and structural theories in particular
4. Identify the relationship between justice, fairness, power and disadvantage and its implications for public health

Method of Assessment

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>49</td>
<td>Discussion</td>
<td>51</td>
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</table>

Method of Assessment Detail:

Please note that, in order to become acquainted with the justice literature, the course is reading intensive. Weekly discussion assignments (49 points)

For weeks 2 through 8, students will submit a two paragraph assessment of an assigned reading addressing the relevance of the reading to that week's topic and provide one question about the reading that they would like the class to consider. Students will help lead the discussion of that reading during class. Each worth 7% of students' final grade. Assignments must be received by 5:00 pm EST the day before class to receive credit.

Final paper (51 points)

Students will write a paper (at least 7 and no more than 10 pages double-spaced) that critically explores the connection between some dimension of justice theory and a problem, challenge or issue in public health policy or practice that is of interest to them. Paper topics will need to be approved in advance by the course instructor.

Email: rfaden@jhsph.edu

Lecture: W 3:30 PM - 6:20 PM

Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes

Priority enrollment given to MBE students.

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Undergraduates require instructor consent

Prerequisite: none

Jointly offered with HPM

700.645.01 Fogarty Bioethics Fellows Seminar
1 credits - Course offered this year - East Baltimore

Kass, Nancy; Ali, Joseph

Provides a small, interactive setting for discussion of research ethics, ethics committees, and ethics concepts among the trainees and between trainees and affiliated faculty. Sessions are divided among the following activities: reviewing and critiquing journal articles related to research ethics; trainees' individual presentations related to practicum research progress; guest speakers related to research ethics cases and/or concepts; and development and presentation of original case studies by each trainee. Topics include standard of care, justice, inducements, research ethics committees, informed consent, and gender roles in research decisions.

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 5 of 202
Upon successfully completing this course, students will be able to:

1. Discuss key literature in international research ethics
2. Critically analyze case studies in research ethics
3. Present research ethics cases and original research proposals
4. Identify ethics issues in cases related to ethics and research

Method of Assessment

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<tr>
<td>Participation</td>
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<tr>
<td>presentation of individual research proposals in progress (4 presentations per student; 10% each)</td>
</tr>
<tr>
<td>fully drafted practicum research proposal</td>
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</tbody>
</table>

Method of Assessment Detail:

- 50% fully drafted practicum research proposal
- 40% presentation of individual research proposals in progress (4 presentations per student; 10% each)
- 10% participation in article and case discussions

Email: nkass@jhsph.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Fogarty African Bioethics Training Program Fellows

Grading Options: Pass/Fail

Consent required for all students; to ensure students have prerequisites

Prerequisite: Prior or concurrent enrollment in: 306.665 and 306.655

700.820.01 Bioethics Program Thesis Research

variable credits 1-6 - Course offered this year - East Baltimore

Departmental Faculty

Provides an opportunity for students to actively conduct research in bioethics.

Upon successfully completing this course, students will be able to:

1. Identify research questions of importance to bioethics
2. Review and critically evaluate existing literature
3. Edit and revise the MBE thesis project

Email: nkass@jhsph.edu

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

MBE students only

Grading Options: Pass/Fail

Prerequisite: None

700.840.01 Bioethics Program Independent Study

2 credits - Course offered this year - East Baltimore

Rieder, Travis

Provides students with a one-on-one independent study experience in which they independently review papers from the current literature and meet weekly with a departmental faculty member to discuss them. Offers opportunities for complementary activities which may include participating in related course discussions, seminars, conferences, etc. Culminates with the completion of a written document, typically a substantial paper.

Upon successfully completing this course, students will be able to:

1. Summarize and discuss specific fields of research
2. Formulate an original position on a bioethical issue

Email: trieder@jhu.edu

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

MBE students only

Grading Options: Pass/Fail
700.895.01 Bioethics Program Practicum
3 credits - Course offered this year - East Baltimore
Rieder, Travis
Provides mentored opportunities for field work with a practicing bioethicist, or applying one's bioethical training to a real-world environment.
Upon successfully completing this course, students will be able to:
1. Participate in a bioethics research initiative
2. Integrate and apply bioethical reasoning to a real world problem
3. Develop a proposal, take initiative, provide direction, and participate in the implementation, evaluation and/or analysis required to establish and achieve project goals
Email: trieder@jhu.edu
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
MBE students only
Grading Options: Pass/Fail
Consent required for all students; Consent required for all students

Biochemistry and Molecular Biology
120.605.01 Genome Integrity
3 credits - Course offered this year - East Baltimore
Jordan, Phil
Provides students with a broad base in fundamental principles of genome integrity. Examines connections between genome integrity, organism fitness, and human diseases and disorders. Addresses 1) Homologous recombination, (2) Non-homologous end joining, (3) Mismatch repair, (4) Transposable elements, (5) Topoisomerases, (6) Structural maintenance of chromosomes and (7) Chromosome segregation.
Upon successfully completing this course, students will be able to:
1. Consider how exposure to various environmental agents and anti-cancer drugs can lead to DNA damage
2. Examine the mechanisms by which DNA repair proteins and enzymes maintain the integrity of the genome
3. Illustrate how DNA protection and repair systems function in the context of the cell
4. Explain the cellular mechanisms that protect against chromosome missegregation
5. Articulate the connections between DNA damage/DNA repair capacity and human diseases and disorders
Method of Assessment Percentage
1. Participation 10
2. Interim Assessment 40
3. Final Exam 50
Email: pjordan8@jhu.edu
Lecture: W F 10:00 AM - 11:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduates and BSPH students not in the departments of BMB, MMI or EHE
Prerequisite:
120.606.01 Cellular Stress In Physiology And Disease
3 credits - Course offered this year - East Baltimore
Wang, Jiou
Discuss molecular mechanisms through which eukaryotes maintain cellular homeostasis in response to stress. Examines stress response pathways at the DNA, RNA, and protein levels; topics include stress and transcription, epigenetics, RNA processing, and protein quality control. Organelle-specific stress response, such as ER stress and mitochondrion stress responses, are also discussed. Additionally, examines molecular mechanisms of cellular responses to environmental stimuli, such as heat, osmotic, hypoxic, oxidative, and starvation stressors.
Upon successfully completing this course, students will be able to:

1. Describe the basics for how cells sense and respond to a wide variety of cellular stress agents and maintain fitness and survival through quality control.
2. Understand the basis for state-of-the-art laboratory approaches to research the molecular and cellular biology of stress and quality control.
3. Examine organelle-specific stress response, such as ER stress and mitochondrion stress responses.
4. Understand the mechanisms through which cells adapt to heat, osmotic, hypoxic, oxidative, and starvation stresses.

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Students should have a background of undergraduate or graduate level coursework in Molecular Biology.

120.610.81 Introduction To Biochemistry: Protein Structure And Enzyme Catalysis

3 credits - Course offered this year - Internet

Bryant, Randy

Covers the physical and chemical properties of the amino acids, the various elements of protein structure, and the cooperative behavior of multimeric proteins. Explore the kinetics of enzyme-catalyzed reactions, and the active site mechanisms of representative classes of enzymes. Describes the molecular basis of action for selected enzyme inhibitor-based drugs.

Upon successfully completing this course, students will be able to:

1. Compare and contrast the physical and chemical properties of amino acids.
2. Describe the primary, secondary, and tertiary elements of protein structures.
3. Explain the molecular basis for the cooperative behavior of multimeric proteins.
4. Determine and interpret the steady state kinetics of enzyme catalyzed reactions.
5. Describe the active site mechanisms of representative classes of enzymes.
6. Explain how irreversible and reversible enzyme inhibitors are being used as drugs.

Method of Assessment

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>1. Exam(s)</td>
<td>33</td>
</tr>
<tr>
<td>2. Exam(s)</td>
<td>33</td>
</tr>
<tr>
<td>3. Exam(s)</td>
<td>33</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:

- There will be three equally weighted exams – each counting as 1/3 of the final grade.

Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes

Not open for BMB MHS students; Not open for students who have taken PH120.600 (BioChem I); Graduate students only.

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Students should have a background in general and organic chemistry.

120.622.01 Molecular And Cellular Mechanisms Of Reproduction

4 credits - Course offered this year - East Baltimore

Wright, William

Addresses current research in the cellular and molecular biology of fundamental reproductive processes. Topics, which may vary year-to-year based on current issues in the scientific literature, can include: synthesis and actions of hormones, gametogenesis, fertilization and activation of development, embryogenesis, sex determination, pathologies of the reproductive tracts, developmental origins of reproductive health and disease, contraception, and infertility.

Upon successfully completing this course, students will be able to:

1. Define cellular and molecular mechanisms that underlie a number of reproductive processes.
2. Describe the organs, cells, molecules, and regulatory pathways involved in reproductive processes.
 Identify the hypotheses tested in scientific papers and the strengths and limitations of experimental methods used to test the hypotheses

Critically evaluate data described in scientific papers and integrate data from multiple papers into coherent theories about the regulation of complex biological processes

Email: wwright1@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: An undergraduate or graduate level course in biochemistry, molecular biology, cell biology, or other relevant area of biology.

120.624.01 Cancer Biology
3 credits - Course offered this year - East Baltimore
Kavran, Jennifer

Presents the molecular and cellular mechanisms in the biology of cancer. Topics include Oncogenes and tumor suppressor genes, DNA damage responses, p53 signaling pathway, NF-kB signaling pathway, chemotherapy and radiotherapy, and several key research fields in major select human cancers. Emphasizes the relevance of these mechanisms to the development and treatment of human cancer.

Upon successfully completing this course, students will be able to:

1. Understand the key hallmarks associated with cancer development
2. Understand how exposure to various environmental agents could lead to carcinogenesis in normal cells and how chemotherapy- and radiotherapy-based anti-cancer drugs can kill cancer cells
3. Define the cellular signaling cascade in response to environmental and intrinsic DNA damage in normal and cancer cells
4. Define the importance of several key signaling pathways in the cellular response to DNA damage
5. Understand the mechanisms by which the cell determines the fate for survival and death
6. Understand the current research in major select human cancers

Method of Assessment

1. Participation 20%
2. Midterm 40%
3. Final Exam 40%

Email: jkavran@jhu.edu
Lecture: M W 1:30 PM - 2:50 PM
Enrollment: Minimum 6, No maximum enrollment required, Waitlist Enabled: No
Undergraduates prohibited from enrolling in this course.
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Consent required.

120.630.01 Fellowship Grant Writing For Students And Postdoctoral Fellows In Biomedical Research
2 credits - Course offered this year - East Baltimore
Culotta, Valeria

Provides students and postdoc trainees with an overview of the entire fellowship application process, including how to write an effective research proposal and specific aims, how to prepare a NIH style biosketch and how to formulate an effective personal biography. Discusses the peer review process, how fellowship applications are judged and scored. The students and postdocs will gather to form an in-class study section where trainees have the opportunity to review grants in the style of NIH study sections.

Upon successfully completing this course, students will be able to:

1. Assemble a research proposal appropriate for a NIH style fellowship application (F31 or F32)
2. Prepare an effective NIH style biosketch
3. Write an effective specific aims page
4. Review research grants of peers
5. Apply available search tools to identify appropriate funding sources for both national and international trainees
120.644.01 BMB SCM Laboratory Rotations

variable credits 4-8 - Course offered this year - East Baltimore

Jordan, Phil

All departmental ScM students spend one to three terms, respectively, participating in the research activities of departmental faculty's laboratories. Students select appropriate rotations in consultation with their academic advisor and the ScM Program Director. The objective is to provide the opportunity for interaction with several faculty members, so that a thesis laboratory may be identified. The course aims to broaden a student's knowledge of laboratory techniques and skills, expose the student to a variety of research areas and to develop the ability to carry out a research project.

Upon successfully completing this course, students will be able to:

1. Perform laboratory techniques and skills
2. Design experiments for a variety of research areas in the BMB
3. Interact effectively with faculty and fellow lab members about lab-based research
4. Develop and carry out a research project based on hypothesis-driven or discovery-driven studies

Method of Assessment

<table>
<thead>
<tr>
<th>Participation</th>
<th>50</th>
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<tr>
<td>Project(s)</td>
<td>50</td>
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Method of Assessment Detail:

Meet expectations for time commitments to research (33%), dependent on credit commitment (e.g. for 5 credits - minimum 16 hr/week). Maintain appropriate research notes (including research plan, hypothesis, future work and related published research), 33%. Communicate research findings with supervisor in form or presentation (33%).

120.800.01 MPH Capstone: Biochemistry And Molecular Biology

2 credits - Course offered this year - East Baltimore

Departmental Faculty

The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

120.820.01 Thesis Research Biochemistry

variable credits - Course offered this year - East Baltimore

Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

120.821.01 MHS Student Research
3 credits - Course offered this year - East Baltimore
Jordan, Phil
Acquaints MHS students with basic research in the biomedical sciences through work under the guidance of a faculty member in the Department of Biochemistry and Molecular Biology, and provides an introduction to hands-on experience in laboratory research.
Upon successfully completing this course, students will be able to:
1. Identify a research question of significance in biomedical science
2. Design hypothesis-driven or discovery-driven experimental studies to address the question
3. Maintain research notes, including summaries of results and data interpretation

Method of Assessment Percentage
1. Participation 50
2. Lab Assignments 50

Email: pjordan8@jhu.edu

Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Prospective students must make arrangements with a faculty member for this research experience.

120.822.01 Seminars In Research In Biochemistry And Molecular Biology
1 credits - Course offered this year - East Baltimore
Matunis, Michael
Integrates academic training with current research in biochemistry and molecular biology, reproductive biology and cell and developmental biology. Features presentations by researchers from JHU and other biomedical research institutions on the results of state of the art investigations of problems and issues of public health significance, emphasizing experimental design and methodology for analysis and discussion.
Upon successfully completing this course, students will be able to:
1. Cite examples of current research, policy, or practice in the field of biochemistry and molecular biology
2. Identify areas of interest for current and future research
3. Recognize the features of engaging presentations and participate in discussions with fellow researchers

Email: mmatuni1@jhu.edu
Lecture: M 12:00 PM - 12:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only open to BMB Postdocs, PhD and ScM students.
Grading Options: Pass/Fail

120.825.01 Advanced MHS Student Research
5 credits - Course offered this year - East Baltimore
Jordan, Phil
Builds upon existing basic research skills in biomedical sciences and emphasizes more independent hands-on research working under the guidance of a faculty member in the Department of Biochemistry and Molecular Biology or affiliated principle investigator. Provides further experience for future research pursuits at JHU and beyond.
Upon successfully completing this course, students will be able to:
1. Identify a research question of significance in biomedical science
2. Design hypothesis-driven or discovery-driven experimental studies to address the question
3. Maintain research notes, including summaries of results and data interpretation
4. Propose future research endeavors related to current research
5. Relate research to relevant current literature

Email: pjordan8@jhu.edu
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; All students must receive consent prior to registration

120.830.01 Postdoctoral Research Biochemistry
variable credits - Course offered this year - East Baltimore
Information not required for this course type

120.840.01 Special Studies And Research Biochemistry
variable credits 1-4 - Course offered this year - East Baltimore
Departmental Faculty
Consists of presentations by speakers of scientific renown on important and current information in biochemistry, and molecular and cellular biology, and by faculty members from the university whose research efforts are of general interest to fellows, students, and faculty.
Upon successfully completing this course, students will be able to:
1. Identify areas of interest for current and future research

Method of Assessment
Percentage
1. The selected Course currently does not have any Methods of Assessment.

120.850.01 Biochemical Techniques
6 credits - Course offered this year - East Baltimore
Departmental Faculty
All departmental PhD students spend eight weeks participating in the research activities of a faculty member’s laboratory. During the academic year each PhD student rotates through four laboratories.
Upon successfully completing this course, students will be able to:
1. Develop critical thinking skills and the ability to design hypothesis driven research questions
2. Develop the ability to design experiments to test hypothesis driven research questions
3. Master basic laboratory skills, including maintenance of an effective laboratory notebook
4. Develop effective written and oral communication skills
Lecture: TBA

120.870.01 MHS Thesis In Reproductive And Cancer Biology
5 credits - Course offered this year - East Baltimore
Evans, Janice
In consultation with a faculty mentor from the Department of Biochemistry and Molecular Biology, students prepare a critical, scholarly paper on an assigned subject.
Upon successfully completing this course, students will be able to:
1. Complete library-based research required for the MHS thesis, and critically analyze the scientific literature related to the assigned thesis topic
2. Revise thesis content in response to feedback from the faculty thesis supervisor
3. Describe, explain, and interpret pertinent scientific literature through the completion of the final MHS thesis
Email: jevans6@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Master of Health Science candidates in Biochemistry and Molecular Biology.

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 12 of 202
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 120.860, MHS Thesis Preparation

120.895.01 MPH Practicum: Biochemistry And Molecular Biology
variable credits Students who have not met the practicum requirement, must register for at least two credits. - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.
Upon successfully completing this course, students will be able to:
1. Demonstrate that they have had a mentored public health practicum experience
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Student must receive faculty advisor approval

140.613.95 Data Analysis Workshop I (Cancelled - Committee Decision)
2 credits - Course offered this year - Kyoto, Japan
Diener-West, Marie
Intended for students with a broad understanding of biostatistical concepts used in public health sciences who seek to develop additional data analysis skills. Emphasizes concepts and illustration of concepts applying a variety of analytic techniques to public health datasets in a computer laboratory using Stata statistical software. In the first workshop (140.613), students learn basic methods of data organization/management and simple methods for data exploration, data editing, and graphical and tabular displays. Additional topics include comparison of means and proportions, simple linear regression and correlation. Enrollment limited: students must have a laptop computer with Stata/IC versions 14.0, 15.0, or 16.0 installed.
Upon successfully completing this course, students will be able to:
1. Create, save and edit STATA datasets, log files and do files
2. Use STATA to perform exploratory data analysis for continuous and dichotomous variables
3. Use STATA do files to create reproducible analyses
4. Explain the distinction between and appropriate uses of the binomial, Poisson and normal probability models
5. Use STATA to perform paired and unpaired t-tests for differences in group means
6. Describe the appropriate use of paired and unpaired t-tests and the interpretation of the resulting STATA output
7. Use STATA to perform a chi-squared test and compute confidence intervals for differences in group proportions, relative risks and odds ratios
8. Describe the appropriate use of chi-squared tests and the interpretation of the resulting STATA output
9. Use STATA to visualize relationships between two continuous measures
10. Use STATA to fit simple linear regression models, and interpret relevant estimates from the results
Method of Assessment Percentage
1. Lab Assignments 60
2. Final Exam 40
Email: mdiener@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Experience in using a statistical analysis package; 140.611-612; enrollment limited to 20 students enrolled in an SPH degree program

140.614.95 Data Analysis Workshop II (Cancelled - Committee Decision)
2 credits - Course offered this year - Kyoto, Japan
Diener-West, Marie
Intended for students with a broad understanding of biostatistical concepts used in public health sciences who seek to develop additional data analysis skills. Emphasizes concepts and illustration of concepts applying a variety of analytic techniques to public health datasets in a computer laboratory using Stata statistical software. In the second workshop (140.614), students will master advanced methods of data analysis including analysis of variance, analysis of covariance, nonparametric methods for comparing groups, multiple linear regression, logistic regression, log-linear regression, and survival analysis. Enrollment limited: students must have a laptop computer with Stata/IC versions 14.0, 15.0, or 16.0 installed.

Upon successfully completing this course, students will be able to:

1. Use STATA to visualize relationships between two continuous measures
2. Use STATA to fit simple linear regression models, and interpret relevant estimates from the results
3. Use STATA to fit multiple linear regression models to relate a continuous outcome to multiple predictors in one model and to help assess confounding, interaction, and goodness-of-fit
4. Interpret the relevant estimates from multiple linear regression
5. Use STATA to graph lowess smoothing functions to relate the probability of a dichotomous outcome to a continuous predictor
6. Use STATA to fit multiple logistic regression models to relate a dichotomous outcome to multiple predictors in one model and to help assess confounding, interaction, and goodness-of-fit
7. Setup cohort study data into STATA survival analysis format
8. Use STATA to graph Kaplan-Meier curves and perform log-rank tests
9. Use STATA to fit Cox regression models to relate time-to-event data to multiple predictors in one model and to help assess confounding, interaction, and goodness-of-fit
10. Interpret the confounding estimates from Cox regression

Method of Assessment Percentage
1. Lab Assignments 60
2. Final Exam 40

Email: mdiener@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 140.613

Students must have a laptop computer with Stata 11 or 12 installed.

140.616.01 Statistics For Laboratory Scientists II
4 credits - Course offered this year - East Baltimore

Ruczinski, Ingo

Introduces the basic concepts and methods of statistics with applications in the experimental biological sciences. Demonstrates methods of exploring, organizing, and presenting data, and introduces the fundamentals of probability. Presents the foundations of statistical inference, including the concepts of parameters, estimates, and the use of confidence intervals and hypothesis tests. Topics include experimental design, linear regression, the analysis of two-way tables, and sample size and power calculations. Introduces and employs the freely available statistical software, R, to explore and analyze data.

Upon successfully completing this course, students will be able to:

1. Conduct a test to compare two population proportions
2. Identify the appropriate form of analysis of variance for a particular experiment, and calculate and interpret an ANOVA table
3. Perform simple and multiple linear regression and interpret the results
4. Identify and assess the appropriateness of the assumptions underlying ANOVA and linear regression
5. Use the statistical software, R, to display and analyze data

Email: iruczin1@jhu.edu

Lecture: M W F 10:30 AM - 11:20 AM
Lab Section: 01 W 1:30 PM-2:20 PM

Enrollment: Minimum 8, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 140.615

Computer lab is 1:30-2:20. Students should bring a laptop, to take full advantage of the computer lab.
140.624.01 Statistical Methods In Public Health IV
4 credits - Course offered this year - East Baltimore
Tonascia, James
Expands students' abilities to conduct and report the results of a valid statistical analysis of quantitative public health information. Develops more advanced skills in multiple regression models, focusing on log-linear models and on techniques for the evaluation of survival and longitudinal data. Also presents methods for the measurement of agreement, validity, and reliability.

Upon successfully completing this course, students will be able to:
1. Frame a scientific question about the dependence of a continuous, binary, count, or time-to-event response on explanatory variables in terms of linear, logistic, log-linear, or survival regression model whose parameters represent quantities of scientific
2. Design a tabular or graphical display of a dataset that makes apparent the association between explanatory variables and the response
3. Choose a specific linear, logistic, log-linear, or survival regression model appropriate to address a scientific question and correctly interpret the meaning of its parameters
4. Appreciate that the interpretation of a particular multiple regression coefficient depends on which other explanatory variables are in the model
5. Estimate the unknown coefficients and their standard errors using maximum (or partial) likelihood and perform tests of relevant null hypotheses about the association with the response of particular subsets of explanatory variables
6. Check whether a model fits the data well; identify ways to improve a model when necessary
7. Use several models for the analysis of a dataset to effectively answer the main scientific questions
8. Describe how longitudinal data differ from cross-sectional data and why special regression methods are sometimes needed for their analysis
9. Summarize in a table, the results of linear, logistic, log-linear, and survival regressions and write a description of the statistical methods, results, and main findings for a scientific report
10. Perform data management, including input, editing, and merging of datasets, necessary to analyze data in STATA
11. Complete a data analysis project, including data analysis and a written summary in the form of a scientific paper

Method of Assessment

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<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
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<tbody>
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<td>Quizzes</td>
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<tr>
<td>Project(s)</td>
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<tr>
<td>Exam(s)</td>
<td>40</td>
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</table>

Email: jtonasc1@jhu.edu
Lecture: T TH 10:30 AM - 11:50 AM
Lab Section: 01 T 3:30 PM-5:20 PM
Lab Section: 02 W 3:30 PM-5:20 PM
Lab Section: 03 TH 1:30 PM-3:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.621, 140.622 and 140.623
OR
140.611, 140.612, 140.613, 140.614, AND 140.620

Administrative Course Fee: 40.0000

IT IS NOT NECESSARY TO REGISTER SEPARATELY FOR LABS. Instructional labs are Tuesday (3:30-5:20), Wednesday (3:30-5:20), or Thursday (1:30-3:20). Computing labs are Monday - Friday, 2:30-4:20. Course Materials Fee is $40.00. Students will use the Stata statistical analysis software for problem sets; Stata is installed for their use in the computer labs.

140.629.01 Data Science For Public Health II
4 credits - Course offered this year - East Baltimore
Caffo, Brian
Presents the basics of data science using the R programming language. Teaches basic unix, version control, graphing and plotting techniques, creating interactive graphics, web app development, reproducible research tools and practices, resampling based statistics and artificial intelligence via deep learning, focusing on practical implementation specifically tied to computational tools and core fundamentals necessary for practical implementation. Culminates with a web app development project chosen by student (who will come out of this course sequence well-equipped to tackle many of the data science problems that they will see in their research).

Upon successfully completing this course, students will be able to:

1. Demonstrate proficiency in data-oriented R programming
2. Practice basic data cleaning in R
3. Implement and demonstrate proficiency in tidyverse commands
4. Implement plotting and interactive graphics tools on novel data sets
5. Implement artificial intelligence programs on novel data sets
6. Create a web application
7. Implement resampling-based statistics
8. Synthesize concepts of machine learning overfitting
9. Synthesize concepts of probabilistic inference

Method of Assessment

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<th>Method of Assessment</th>
<th>Percentage</th>
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<td>1. Homework</td>
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<tr>
<td>2. Weekly Quizzes</td>
<td>33</td>
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<tr>
<td>3. Final Capstone Project</td>
<td>33</td>
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Method of Assessment Detail:

Short quizzes and homeworks will be given weekly based on the content from the prior week. The capstone project will be at the end of the second term comprising the final two weeks of class. Students will develop a data application and give a presentation demonstrating it.

Email: bcaffoweb@jhu.edu

Lecture: T TH 8:30 AM - 9:50 AM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 140.628, prior programming experience, precalculus mathematics

Multi-term with 140.628

Final grade applies to all terms

Part 1 necessitates enrollment in Part II; grades given at end of Part II.

140.630.01 Introduction To Data Management

3 credits - Course offered this year - East Baltimore

Hackman, Andre

Introduces students to the principles and skills required to collect and manage research data in a public health setting. Topics focus on tools for collecting data that range from spreadsheets to web-based systems, database fundamentals, data collection form design, data entry screen design, proper coding of data, strategies for quality control and data cleaning, protection and sharing of data, and integrating data from external sources. Includes practical and hands-on exercises that require some entry-level computer programming.

Upon successfully completing this course, students will be able to:

1. Evaluate and select the appropriate tools for collection and management of study data.
2. Describe data design issues involved in collecting research data
3. Develop strategies for maintaining data quality, protecting and sharing data
4. Manage and manipulate research study data.

Email: ahackman@jhu.edu

Lecture: M W 10:30 AM - 11:50 AM
Enrollment: Minimum 5, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for non-Biostatistics students

140.632.01 Introduction To The Sas Statistical Package
3 credits - Course offered this year - East Baltimore
McDermott, Aidan
Designed for students with no experience with SAS. Familiarizes them with the skills needed for effective data management and data analysis. First covers performing exploratory analysis on data including the creation of tables and graphs. Proceeds next to creating new datasets and altering old datasets. The final part of the course covers building regression models (linear, logistic, and Poisson), interpreting results and criticizing such models and attempting to improve them.

Upon successfully completing this course, students will be able to:
1. Use the SAS statistical package, mastering the skills needed for effective data management, data manipulation, and data analysis
2. Write and execute programs using SAS syntax
3. Read and transform data in preparation for statistical analysis
4. Create tabular and graphical displays of data
5. Perform simple statistical analyses such as linear and logistic regression

Email: amcderm1@jhu.edu
Lecture: T 1:30 PM - 2:50 PM
Lab Section: 01 TH 1:30 PM-2:50 PM
Enrollment: Minimum 4, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.622 or 140.652 (may be taken concurrently), or former 140.602
Both the lecture and lab will be held in one of the School's computer labs.

140.632.02 Introduction To The Sas Statistical Package
3 credits - Course offered this year - East Baltimore
McDermott, Aidan
Designed for students with no experience with SAS. Familiarizes them with the skills needed for effective data management and data analysis. First covers performing exploratory analysis on data including the creation of tables and graphs. Proceeds next to creating new datasets and altering old datasets. The final part of the course covers building regression models (linear, logistic, and Poisson), interpreting results and criticizing such models and attempting to improve them.

Upon successfully completing this course, students will be able to:
1. Use the SAS statistical package, mastering the skills needed for effective data management, data manipulation, and data analysis
2. Write and execute programs using SAS syntax
3. Read and transform data in preparation for statistical analysis
4. Create tabular and graphical displays of data
5. Perform simple statistical analyses such as linear and logistic regression

Email: amcderm1@jhu.edu
Lecture: W 1:30 PM - 2:50 PM
Lab Section: 01 F 1:30 PM-2:50 PM
Enrollment: Minimum 4, Maximum 25, Waitlist Enabled: Yes
Limited to 25 people
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.622 or 140.652 (may be taken concurrently), or former 140.602
Both the lecture and lab will be held in one of the School's computer labs.

140.649.01 Essentials Of Probability And Statistical Inference IV
4 credits - Course offered this year - East Baltimore
Scharfstein, Daniel

Builds on the concepts discussed in 140.646 and 140.647 to lay out foundation for both classical and modern theory/methods for drawing statistical inference. Includes classical unbiased estimation, unbiased estimating equations, likelihood and conditional likelihood inference, information theory and other extended topics. Includes mathematical proofs but will not emphasize highly technical details. Extended discussion, interpretation of results, and examples for illustration will be provided.

Upon successfully completing this course, students will be able to:

1. Describe the theoretical basis for the current methods used in statistical analysis

Email: dscharf@jhu.edu

Lecture: M W 10:30 AM - 11:50 AM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Consent required only for students who have not taken 140.646, 140.647, and 140.648

Prerequisite: 140.646-648 or 140.611-12 or 140.621-24 or 140.651-54 or 140.671-74; working knowledge of calculus

One 1-hour lab per week (time TBA)

140.654.01 Methods In Biostatistics IV

4 credits - Course offered this year - East Baltimore

Colantuoni, Elizabeth

Covers regression analysis for continuous and discrete outcome data using generalized linear models including: logistic models for binary responses, log-linear models for incidence rates and contingency tables; and survival analysis for time to event responses. Also covers strategies for formulating regression analyses that effectively address scientific questions. Methods are learned through lectures and multiple problem sets/data analyses abstracted from important public health studies.

Upon successfully completing this course, students will be able to:

1. Formulate a scientific question about the relationship of a response variable Y and predictor variables X in terms of the appropriate logistic, log-linear or survival regression model

2. Interpret the meaning of regression coefficients in scientific terms as if for a substantive journal. For binary responses collected in clusters, distinguish between marginal and cluster-specific regression coefficients estimated by ordinary and conditional logistic regression

3. Develop graphical and/or tabular displays of the data to show the evidence relevant to describing the relationship of Y with X. For survival data, produce Kaplan-Meier and complimentary log, log plots of survival functions with standard errors

4. Estimate the model using a modern statistical package such as R and interpret the results for substantive colleagues. Derive the estimating equations for the maximum likelihood estimates for the class of generalized linear models and state the asymptotic distributions of the regression coefficients and linear combinations thereof

5. Give a heuristic derivation of the Cox proportional hazards estimating function in terms of Poisson regression for grouped survival data

6. Check the major assumptions of the model including independence and model form (mean, variance, proportional hazards) and make changes to the model or method of estimation and inference to appropriately handle violations. For example, use robust variance estimates for violations of independence or variance model

7. Use regression diagnostics to determine whether a small fraction of observations is having undue influence on the results

8. Correctly interpret the regression results to answer the specific substantive questions posed in terms that can be understood by substantive experts

9. Write a methods and results section for a substantive journal, correctly describing the regression model in scientific terms and the method used to specify and estimate the model

10. Critique the methods and results from the perspective of the statistical methods chosen and alternative approaches that might have been used

Email: ejohnso2@jhmi.edu

Lecture: T TH 10:30 AM - 11:50 AM

Lab Section: 01 T 3:30 PM-4:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail
140.656.01 Multilevel Statistical Models In Public Health

4 credits - Course offered this year - East Baltimore

Zeger, Scott

Explores conceptual and formal approaches to the design, analysis, and interpretation of studies with a "multilevel" or "hierarchical" (clustered) data structure (e.g., individuals in families in communities). Develops skills to implement and interpret random effects, variance component models that reflect the multi-level structure for both predictor and outcome variables. Topics include: building hierarchies; interpretation of population-average and level-specific summaries; estimation and inference based on variance components; shrinkage estimation; discussion of special topics including centering, use of contextual variables, ecological bias, sample size and missing data within multilevel models. STATA and R software are supported.

Upon successfully completing this course, students will be able to:

1. Define multilevel data
2. Implement and interpret results associated with Multi-level Statistical Models (MLMs)
3. Identify when and why MLMs can or should be used when they are unnecessary or possibly dangerous
4. Describe the implications of centering, contextual variables, missing data and ecological bias within MLMs

Email: sz@jhu.edu

Lecture: M W 10:30 AM - 11:50 AM
Lab Section: 01 W 9:00 AM-10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.621-24 or 140.651-4 required; 140.655 required.

140.664.81 Causal Inference In Medicine And Public Health I

4 credits - Course offered this year - Internet

Stuart, Elizabeth

Presents an overview of methods for estimating causal effects: how to answer the question of "What is the effect of A on B?" Includes discussion of randomized designs, but with more emphasis on alternative designs for when randomization is infeasible: matching methods, propensity scores, regression discontinuity, and instrumental variables. Methods are motivated by examples from the health sciences, particularly mental health and community or school-level interventions.

Upon successfully completing this course, students will be able to:

1. Discuss causal problems as potential interventions, through the framework of potential outcomes and assignment mechanisms
2. Describe the spectrum of designs for both randomized and non-randomized studies
3. Identify the situations for which non-randomized designs are most appropriate
4. Apply methods for estimating causal effects, including propensity score techniques, instrumental variables ("encouragement designs"), and regression discontinuity
5. Critically review research that claims to estimate causal effects with non-experimental data
6. Discuss complications encountered in causal studies, including missing data, noncompliance, and hidden bias

Method of Assessment

<table>
<thead>
<tr>
<th>Homework Assignments</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>1 additional assignment OR project (student choice)</td>
<td>30</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
</tbody>
</table>

Email: estuart@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.611-12-13-14-20; or 140.621-624; or 140.651-654; or consent of the instructor
Jointly offered with MH

140.665.01 Causal Inference In Medicine And Public Health II

3 credits - Course offered this year - East Baltimore

Frangakis, Constantine
Presents principles, methods, and applications in drawing cause-effect inferences with a focus on the health sciences. Building on the basis of 140.664, emphasizes statistical theory and design and addresses complications and extensions, aiming at cultivating students' research skills in this area. Includes: detailed role of design for causal inference; role of models and likelihood perspective for ignorable treatment assignment; estimation of noncollapsible causal effects; statistical theory of propensity scores; use of propensity scores for estimating effect modification and for comparing multiple treatments while addressing regression to the mean; theory and methods of evaluating longitudinal treatments, including the role of sequentially ignorable designs and propensity scores; likelihood theory for instrumental variables and principal stratification designs and methods to deal with treatment noncompliance, direct and indirect effects, and censoring by death.

Upon successfully completing this course, students will be able to:

1. Describe causal problems as potential interventions, through the framework of potential outcomes and assignment mechanisms
2. Discuss the role of designs and of different modes of statistical inference
3. Implement efficient (likelihood) methods with ignorable assignment of treatments
4. Describe the role of outcome models and of propensity score models
5. Assess when and how comparisons of longitudinal treatments can be designed as having sequentially ignorable assignment, and learn ways to estimate their causal effects
6. Master efficient methods for estimating effects in studies with noncompliance to treatment, direct and indirect effects, and censoring by death

Method of Assessment

<table>
<thead>
<tr>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Problem sets</td>
</tr>
<tr>
<td>Final Project</td>
</tr>
</tbody>
</table>

Lecture: T TH 1:30 PM - 2:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Consent required for undergraduates

Prerequisite: 140.654 or equivalent for matrix representation of multiple linear and logistic regression

140.683.01 Principles And Methods Of Functional Neuroimaging II (Cancelled - Department)

4 credits - Course offered this year - East Baltimore

Lindquist, Martin

Continues where Principles and Methods of Functional Neuroimaging I (140.682) leaves off. Presents a theoretical overview of human IMRI research and includes key aspects of the design, data collection, processing, analysis and publication of a human subjects fMRI experiment. Focuses on multivariate statistical analysis of fMRI data. Describes both functional and effective connectivity analysis, graph-based analysis of fMRI data, and algorithms for performing brain decoding. Also discusses preparation of methods and results from fMRI experiments for peer-reviewed publication, and how to critically evaluate research methods and results of human subjects IMRI studies in the published literature. Provides a practical application of these concepts to sample fMRI datasets via weekly labs.

Upon successfully completing this course, students will be able to:

1. Perform individual subject and group level multivariate statistical analysis of fMRI data
2. Perform both functional and effective connectivity analysis, and interpret the results of graph-based analysis of fMRI data
3. Prepare methods and results sections describing the analyzed data, suitable for publication in a peer-reviewed article
4. Critically evaluate research methods and results of human subjects IMRI studies in published literature

Email: mlindquist@jhu.edu

Lecture: M W 9:00 AM - 10:20 AM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Successful completion (B or better) of the course Principles and Methods of Functional Neuroimaging I (140.682)

140.686.01 Advanced Methods For Statistical Genetics And Genomics

3 credits - Course offered this year - East Baltimore

Chatterjee, Nilanjan;Zhao, Ni
Covers statistical methods and theory underlying advanced analysis of genetic and genomic data to address mechanistic hypotheses and to build models for prediction. Topics include methods for complex association testing, inference on genetic architecture using mixed model techniques, methods for understanding causal mechanisms using Mendelian randomization and integrative genomic analysis and strategies for clinical translation using risk prediction models. Requires making presentations and critiquing published studies that have used advance statistical methods to make new scientific observations.

Upon successfully completing this course, students will be able to:
1. use advanced methods for data analysis with an in depth understanding of strength and weakness of different methods
2. identify gaps in current literature and conduct PhD level research to develop new methods

**Method of Assessment**

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Homework</td>
<td>40</td>
</tr>
<tr>
<td>2. Presentation of one selected homework</td>
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</tr>
<tr>
<td>3. Presentation of a paper of student’s choice</td>
<td>40</td>
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</tbody>
</table>

**Method of Assessment Detail:**

- homework mini-projects (40%), a presentation of one selected mini-project (20%) and a presentation of a paper of student’s choice (40%).

**Email:** nchatte2@jhu.edu

**Lecture:** M W 1:30 PM - 2:50 PM

**Enrollment:** Minimum 3, No maximum enrollment required, Waitlist Enabled: No

**Grading Options:** Letter Grade or Pass/Fail

**Prerequisite:** Master or PhD level statistical theory classes equivalent to the 140.646-649 series or higher. Similar level statistical theory classes in other department with a quantitative focus are acceptable, but require instructor approval.

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**140.688.01 STATISTICS FOR GENOMICS**

3 credits - Course offered this year - East Baltimore

Zhao, Ni

Introduces statistical genomics with an emphasis on the next generation sequencing, including the single sequencing technology, microbiome sequencing, and bulk RNA sequencing. Covers the key capabilities of the Bioconductor project (a widely used open source software project for the analysis of high-throughput experiments in genomics and molecular biology and rooted in the open source statistical computing environment R). Also introduces statistical concepts and tools necessary to interpret and critically evaluate the bioinformatics and computational biology literature. Includes an overview of preprocessing and normalization, batch effects, statistical inference, multiple comparisons. Intended for students with a background in statistics or biology, but not necessarily both. Assumes some familiarity with the R statistical language (a student without any experience in this language can still take the class but will need to set aside additional time to learn R).

Upon successfully completing this course, students will be able to:
1. Describe the basics of how various high-throughput assays works, including microarray, next generation sequencing, microbiome sequencing and single cell RNA sequencing
2. Critique existing methodology for the analysis of high-throughput biological data
3. Write R code to import and analyze microarray and next generation sequencing data

**Method of Assessment**

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0. Homework</td>
<td>30</td>
</tr>
<tr>
<td>1. Final Paper</td>
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</tr>
<tr>
<td>2. Final Presentation</td>
<td>35</td>
</tr>
</tbody>
</table>

**Email:** nzhao10@jhu.edu

**Lecture:** T TH 1:30 PM - 2:50 PM

**Enrollment:** Minimum 10, No maximum enrollment required, Waitlist Enabled: No

**Grading Options:** Letter Grade or Pass/Fail

**Prerequisite:** Some familiarity with the R statistical language will be assumed; a student without any experience in this language can still take the class but will need to set aside additional time to learn R. A suitable background class is 140.776.01 – Statistical Computing
140.699.01 Spatial Analysis IV: Spatial Design And Application

3 credits - Course offered this year - East Baltimore

Curriero, Frank

Expands students' abilities to design, conduct and report the results of a complete public health related spatial analysis. Focuses on further developing and integrating components of the spatial science paradigm, Spatial Data, GIS and Spatial Statistics. Introduces relevant topics in GIS, spatial data technologies and spatial statistics not previously covered in Spatial Analysis I-III.

Upon successfully completing this course, students will be able to:
1. Describe how spatial information and spatial analysis can be included into public health research and practice
2. Frame a scientific question and/or hypothesis about spatial relationships into the appropriate spatial statistical methodology, the results and interpretations of which represent quantities of scientific interest
3. Complete a spatial analysis project that includes all components of the spatial science paradigm and a written summary in the form of a scientific paper

Email: fcurriero@jhu.edu
Lecture: W 9:30 AM - 10:20 AM
Lecture: M 3:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 340.696 Spatial Analysis I: ArcGIS; 340.697 Spatial Analysis II: Spatial Data Technologies; 140.698 Spatial Analysis III: Spatial Statistics

Jointly offered with EPI
Use of personal laptops is strongly encouraged.

140.724.01 Probability Theory IV

3 credits - Course offered this year - East Baltimore

Datta, Abhirup

Covers basic stochastic processes including martingales and Markov chains, followed by consideration of Markov Chain Monte Carlo (MCMC) methods.

Upon successfully completing this course, students will be able to:
1. Assess the convergence of a sequence or series of random variables using martingale theory
2. Classify the states and derive the transition probabilities of a Markov chain
3. Derive the stationary distribution of certain Markov chains
4. Understand the principles of MCMC algorithms like Gibbs sampler and Metropolis-Hastings

Email: abhidatta@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 2, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for students who are not in the Biostatistics PhD program
Prerequisite: Calculus, real analysis; 140.721-3
The course may include one or two lab sessions scheduled for the corresponding lecture periods.

140.734.01 Statistical Theory IV

4 credits - Course offered this year - East Baltimore

Rosenblum, Michael

Focuses on the asymptotic behavior of estimators, tests, and confidence interval procedures. Specific topics include: M-estimators; consistency and asymptotic normality of estimators; influence functions; large-sample tests and confidence regions; nonparametric bootstrap

Upon successfully completing this course, students will be able to:
1. Give conditions for consistency and asymptotic normality of M-estimators
2. Determine the asymptotic distribution of M-estimators
3. Construct tests and confidence regions for parameters of generalized linear models
4. Determine when the nonparametric bootstrap is appropriate, and apply it in such cases

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 22 of 202
140.754.01 Advanced Methods In Biostatistics IV
4 credits - Course offered this year - East Baltimore
Ji, Hongkai
Extends topics in 140.753 to encompass generalized linear mixed effects models. Introduces expectation-maximization and Markov Chain Monte Carlo. Introduces functional data analysis. Foundational topics include: linear mixed model, generalized linear mixed model, EM, MCMC, models for longitudinal data, and functional data analysis. Emphasizes both rigorous methodological development and practical data analytic strategies. Discusses the role of quantitative methods and sciences in public health, including how to use them to describe and assess population health, and the critical importance of evidence in advancing public health knowledge.

Upon successfully completing this course, students will be able to:
1. Use modern statistical concepts such as linear mixed model (LMM) and generalized linear mixed models (GLMM) for inference
2. Describe the relationship between LMM and GLMM
3. Extend models to account for clustering and correlation
4. Understand and use EM and MCMC
5. Learn techniques for solving prediction problems
6. Describe modern statistical methods for complex datasets
7. Improve computational and analytic skills through analysis of simulated and real data sets
8. Explain the role of quantitative methods and sciences in describing and assessing a population's health
9. Explain the critical importance of evidence in advancing public health knowledge

140.763.01 Bayesian Methods II
3 credits - Course not offered until 2020 - 2021 - East Baltimore
Scharpf, Robert; Rosner, Gary
Builds upon the foundation laid in Bayesian Methods I (140.762). Discusses further current approaches to Bayesian modeling and computation in statistics. Describes and develops models of increasing complexity based on linear regression, generalized linear mixed effects, and hierarchical models. Acquaints students with advanced tools for fitting Bayesian models, including non-conjugate prior models. Includes examples of real statistical analyses.

Upon successfully completing this course, students will be able to:
1. Develop Bayesian models for the analysis of complex problems, including repeated measurement data and latent data models
2. Create computer programs to run analyses
3. Calculate posterior distributions of parameters of scientific interest
4. Conduct Bayesian analyses of complex data sets
Prerequisite: 140.653-4

Learning Materials:

- (Book) First Course in Bayesian Statistics
  Hoff, Peter
  Amazon $48.51

140.774.01 Foundations Of Statistics II
4 credits - Course not offered until 2020 - 2021 - East Baltimore
Rohde, Charles
Investigates the foundations of statistics as applied to assessing the evidence provided by an observed set of data. Topics include: law of likelihood, the likelihood principle, evidence and the likelihood paradigm for statistical inference; failure of the Neyman-Pearson and Fisherian theories to evaluate evidence; marginal, conditional, profile and other likelihoods; and applications to common problems of inference.
Upon successfully completing this course, students will be able to:
  1. Compare and criticize the basic paradigms of statistical inference
  2. Formulate and contrast concepts of statistical evidence

Email: crohde1@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.773

140.800.01 MPH Capstone Biostatistics
2 credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.
Upon successfully completing this course, students will be able to:
  1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Lecture: TBA
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

140.820.01 Thesis Research Biostatistics
variable credits - Course offered this year - East Baltimore
Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

140.830.01 Postdoctoral Research Biostatistics
variable credits - Course offered this year - East Baltimore
Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

140.840.01 Special Studies And Research Biostatistics
variable credits - Course offered this year - East Baltimore
Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

140.850.01 Advanced Special Topics In Biostatistics
variable credits Number of credits will depend on the material being covered - Course offered this year - East Baltimore
Departmental Faculty
Exposes Biostatistics PhD students to advanced special topics that are not covered in the core courses. Comprises two- and four-week modules, with revolving instructors and topics. Possible topics include: theory underlying analysis for correlated data; latent variable modeling; advanced survival analysis; image analysis; time series; and likelihood inference.

Upon successfully completing this course, students will be able to:
1. Identify the central issues
2. Demonstrate knowledge of key models, estimation strategies, theoretical properties, and data displays
3. Describe steps for implementing analyses of relevant data
4. Engage in related statistical research

Lecture: TBA
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
For Biostatistics PhD students only
Grading Options: Pass/Fail
Consent required for all students; Consent required only if students have not already completed PhD core courses
Prerequisite: Ph.D. core courses or consent from the instructors

140.895.01 MPH Practicum: Biostatistics
variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:
1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Clinical Investigation
390.675.01 Outcomes And Effectiveness Research
3 credits - Course offered this year - East Baltimore
Hutfless, Susan M.
Provides an overview of outcomes and effectiveness research. Emphasizes conceptual, design, and analytical aspects of research including policy implications. Covers both experimental (randomized) and observational designs, with greater emphasis on the latter. Examines approaches to address confounding and selection bias. Explores methods for evaluating the effectiveness and safety of medications using experimental, observational designs and evidence synthesis. Considers a wide range of outcomes, including time to event outcomes (survival analysis), patient preferences and patient-reported outcomes.

Upon successfully completing this course, students will be able to:
1. Develop skills needed to critically evaluate the strengths and weaknesses of outcomes and effectiveness research
2. Craft a preliminary design for an outcomes or effectiveness study
3. Recognize how various epidemiological methods meets study aims
4. Describe a wide variety of innovative approaches to outcomes and effectiveness investigation
5 Understand the implications of outcomes and effectiveness studies for end-users

Email: shuttle1@jhmi.edu
Lecture: M 5:30 PM - 8:30 PM
Enrollment: Minimum 15, Maximum 40, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for students not in the GTPCI or SOCI programs.
Prerequisite: Introductory biostatistics course sequence (e.g., 140.611-612 or 140.621-623), SOCI student, or consent of instructor.
One of the 7 courses offered in the SOCI Award Program.

390.678.01 Introduction To Quality Improvement & Knowledge Translation Research
3 credits - Course offered this year - East Baltimore
Lubomski, Lisa
Introduces the basic principles of quality improvement/knowledge translation (QI/KT) research, and focuses on efforts aimed at increasing the extent to which patients receive evidence-based therapies. Didactic presentations and in-class discussions of the concepts, methods, and applications of QI/KT theory and practice use examples and methods from real-world QI/KT projects. Faculty with expertise in QI/KT research and interventions facilitate course sessions. Students taking the course for a grade develop a research paper and give a brief presentation related to one of the following criteria: outlines the development of a research proposal for a specific QI/KT topic; critically appraises a published guideline; systematically reviews of the literature around a QI/KT topic.

Upon successfully completing this course, students will be able to:
1. Summarize the importance of and point of view regarding quality improvement/knowledge translation for policymakers, providers, and the public
2. Describe one conceptual framework for quality improvement/knowledge translation research
3. Identify and assess barriers and facilitators for quality improvement/knowledge translation interventions
4. Discuss issues regarding the selection, tailoring, and implementation of quality improvement/knowledge translation interventions
5. Apply the concepts and tools to a quality improvement/knowledge translation project of the student's choosing

Email: lluboms1@jhmi.edu
Lecture: M 5:30 PM - 8:30 PM
Enrollment: Minimum 10, Maximum 40, Waitlist Enabled: Yes
GTPCI degree students and SOCI training program students only.
Grading Options: Letter Grade or Pass/Fail

390.703.01 Presentation Skills
1 credits - Course offered this year - East Baltimore
Punjabi, Naresh
Prepares students to organize and deliver an effective scientific presentation. Focuses on designing a scientific talk, including preparing effective visual aids. Complements 390.721-722, at the end of which students are required to present their work.

Upon successfully completing this course, students will be able to:
1. Apply effective ways of organizing and delivering scientific presentation
2. Design a scientific talk, including preparing effective visual aid

Email: npunjabi@jhmi.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to GTPCI students.
Grading Options: Pass/Fail
Consent required for some students; consent required of all non-GTPCI students

390.711.01 Biomedical Writing II
2 credits - Course offered this year - East Baltimore
Poynton, Sarah
Introduces the process of writing peer-reviewed research papers and provides a brief overview of grant proposal writing. Emphasizes a logical organization, clear writing, and an understanding of readers’ and reviewers' expectations. Students prepare selected sections of a first draft of a research paper based on their own research, and they receive feedback on their drafts through in-class discussion and written comments from the instructor.

Upon successfully completing this course, students will be able to:

1. Write a high quality biomedical research paper for submission to a peer-reviewed journal
2. Demonstrate logical organization, clear and effective writing, and an understanding of readers’ and reviewers’ expectations
3. Describe the content that reviewers expect to see in each of the main sections of a peer-reviewed biomedical research paper
4. Demonstrate the ability to edit texts, figures and tables for content, form and style
5. Critically analyze, and recommend revisions to, a draft of a biomedical research paper written by a peer, to improve its organization and style

Email: spoynton@jhmi.edu
Lecture: T 1:30 PM - 3:20 PM
Enrollment: Minimum 4, No maximum enrollment required, Waitlist Enabled: No max of 2 non-GTPCI students
Grading Options: Pass/Fail
Consent required for some students; Permission is required of all non-GTPCI students
Prerequisite: 390.710
Multi-term with 390.710
Final grade applies to all terms

390.711.02 Biomedical Writing II
2 credits - Course offered this year - East Baltimore
Poynton, Sarah

Introduces the process of writing peer-reviewed research papers and provides a brief overview of grant proposal writing. Emphasizes a logical organization, clear writing, and an understanding of readers’ and reviewers' expectations. Students prepare selected sections of a first draft of a research paper based on their own research, and they receive feedback on their drafts through in-class discussion and written comments from the instructor.

Upon successfully completing this course, students will be able to:

1. Write a high quality biomedical research paper for submission to a peer-reviewed journal
2. Demonstrate logical organization, clear and effective writing, and an understanding of readers’ and reviewers’ expectations
3. Describe the content that reviewers expect to see in each of the main sections of a peer-reviewed biomedical research paper
4. Demonstrate the ability to edit texts, figures and tables for content, form and style
5. Critically analyze, and recommend revisions to, a draft of a biomedical research paper written by a peer, to improve its organization and style

Email: spoynton@jhmi.edu
Lecture: W 10:00 AM - 11:50 AM
Enrollment: Minimum 4, No maximum enrollment required, Waitlist Enabled: No max of 2 non-GTPCI students
Grading Options: Pass/Fail
Consent required for some students; Permission is required of all non-GTPCI students
Prerequisite: 390.710
Multi-term with 390.710
Final grade applies to all terms same as 390.711.01; This section, .02, is held in Carnegie 321

390.722.01 Principles Of Grant Writing II
4 credits - Course offered this year - East Baltimore
Punjabi, Naresh
Considers the principles of successful clinical research strategies and the requirements of funding agencies. Students identify
a defined research project together with a suitable team of mentors and collaborators. With mutual review and criticism, each
student develops a written research proposal in the format of a grant application which integrates the scientific principles of the
GTPCI curriculum.

Upon successfully completing this course, students will be able to:
1. Integrate the competencies of the GTPCI curriculum in planning and proposing a coherent clinical research project
2. Write a grant application to support the proposed research program, incorporating scientific rigor and elements of
successful grantsmanship
3. Write an IRB submission to permit the conduct of the proposed research

Email: npunjabi@jhu.edu
Lecture: M 1:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Must be GTPCI MHS
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; This course is restricted to GTPCI students.
Prerequisite: 390.721
Multi-term with 390.721
Final grade applies to all terms
Grade for 390.721 and 722 given at completion of 390.722.

390.820.01 Thesis Research In Clinical Investigation
variable credits - Course offered this year - East Baltimore
Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

390.840.01 Special Studies And Research In Clinical Investigation
variable credits - Course offered this year - East Baltimore
Determined by student's advisor.
Upon successfully completing this course, students will be able to:
1. Perform original research which will provide educational experiences not available in the formal coursework curriculum.

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

390.855.01 Research Forum
1 credits - Course offered this year - East Baltimore
Adkinson, Franklin
A monthly research forum, lasting one hour, in which advanced fellows will present interim research findings and plans for
discussion with colleagues and faculty.
Information not required for this course type
Email: fadkinso@jhsph.edu
Lecture: W 9:30 AM - 10:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
This course is restricted to GTPCI students.
Grading Options: Pass/Fail

Environmental Health and Engineering
180.605.01 Food System Sustainability Practicum (Cancelled - Department)
3 credits - Course offered this year - East Baltimore
Neff, Roni

Students learn first-hand about food system sustainability issues by engaging with organizations working for positive change. They broaden their learning through classroom education, readings and assignments covering: food system sustainability, with emphasis on content areas relevant to student projects; skills and context relevant to working with these organizations; and reflection on service-learning experiences.

Upon successfully completing this course, students will be able to:

1. Discuss concepts of food system environmental (and social) sustainability, including important threats, barriers to change, and approaches to addressing these barriers.
2. Describe the operation of a program or project, including the site’s relationship with its community.
3. Reflect on the student’s own role as a professional engaging with an organization, including identifying strengths and areas for further improvement.
4. Discuss the contributions to food system environmental sustainability of the programs other students in the class worked with, and otherwise draw broader lessons from these site experiences.
5. Critically evaluate tradeoffs and potential unintended consequences from interventions.
6. Discuss selected topics in food system sustainability in depth.

Email: mneff1@jhu.edu
Lecture: F 1:30 PM - 3:20 PM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; All students must obtain consent.
Prerequisite:

180.606.81 Case Studies In Food Production And Public Health
4 credits - Course offered this year - Internet

Nachman, Keeve

Focuses on food production practices in the United States and the associated public health risks and benefits; discussions on animal and crop agriculture and food processing encompass both historical practices and modern methods. Presents case studies which delve deeper into specific topics, including industrial food animal production and worker health, aquaculture, climate change, urban food systems and sustainable production methods. Challenges students to think critically about the impact of food production methods on ecosystem and human health and apply a "one-health" lens to analyze strategies to reduce public health risks from food production. Lectures draw from the literature, and from the firsthand experiences of lecturers in research translation and agricultural production.

Upon successfully completing this course, students will be able to:

1. Describe in detail the major steps of the food production process, from farm to retail
2. Identify practices associated with crop and food animal production that may threaten public health
3. Apply an ecological perspective to explain the connections among farm animal health, ecosystems and public health
4. Categorize impacts of food production practices by affected population subgroups
5. Identify alternative farming and distribution practices that may protect public health

Method of Assessment

<table>
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<tr>
<th>Method</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Quizzes</td>
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<tr>
<td>Written Assignment(s)</td>
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<tr>
<td>Participation</td>
<td>25</td>
</tr>
</tbody>
</table>

Email: knachman@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

180.608.01 Public Health Responses To Environmental Incidents And Disasters (Cancelled - Department)
3 credits - Course offered this year - East Baltimore

Silbergeld, Ellen
Focuses on population exposures to and health impacts of non-infectious agents. Prepares students for applying methodologies for public health response and acquiring skills in developing standardized protocols to effectively recognize, evaluate and respond to public health emergencies and reported clusters of disease. Presents basic aspects of applied environmental health and policy frameworks for decision-making in environmental health. Provides competencies in finding and using web-based data sources, applying geospatial and other methodologies in analyzing information on exposures and health outcomes; identifying resources for coordinated response to environmental incidents; and communicating findings to decision-makers and the public. Equips students to participate in responding to disasters, reported outbreaks and apparent clusters. Provides experience in establishing exposure registries.

Upon successfully completing this course, students will be able to:

1. Identify and assess population exposures to environmental exposures in the form of disasters, outbreaks, and apparent clusters
2. Establish and access data systems that provide information on environmental exposures and health outcomes
3. Utilize these systems and other information to evaluate associations between exposures and health outcomes
4. Investigate reported outbreaks and clusters of environmentally associated health outcomes
5. Establish registries for longer term follow-up
6. Monitor trends in both environmental noninfectious exposures and disease
7. Effectively communicate information and findings related to outbreaks to policymakers, health officials and the public

Email: esilber2@jhu.edu
Lecture: T TH 10:30 AM - 11:50 AM
Enrollment: Minimum 12, Maximum 40, Waitlist Enabled: Yes
No undergraduates
Grading Options: Pass/Fail
Consent required for some students; Consent required for students without prerequisite courses.
Prerequisite: 340.721 Epidemiologic Inference in Public Health
Recommended: 187.610 Public Health Toxicology

180.612.01 Advanced Environmental Health
4 credits - Course offered this year - East Baltimore
Yager, James

Content is organized around how environmental contaminates originating from four environmental vectors, Air, Water, Soil and Food, impact human health. Students build on the basic principles and concepts presented in Principles of Environmental Health I. Students focus on the foundational knowledge and methods in environmental health needed by doctoral students to prepare for advanced careers in environmental health including integration of multi-disciplinary approaches.

Upon successfully completing this course, students will be able to:

1. Determine the interdisciplinary scientific collaborations needed to address environmental health problems
2. Evaluate and critique in depth a body of literature in environmental health in order to assess the state of knowledge, research gaps and potential future investigations
3. Evaluate in detail analytic methodologies currently used in environmental health research in the context of topics covered in the course
4. Analyze current problems and potential solutions in environmental health research, policy and the communication of the science to affected communities
5. Work in a group to develop a grant proposal for a population based or mechanistic study to determine the human health impacts of an environmental exposure through the air, water, food or soil
6. Work in a group to develop, make and defend an oral presentation of a research proposal

Email: jyager1@jhu.edu
Lecture: T TH 8:30 AM - 10:20 AM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Enrollment restricted to PhD students in EHE
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; PHD students from other BSPH departments and DrPH students can enroll if they have taken Principles of Environmental Health I (180.609.01) or equivalent and with instructor permission.
Prerequisite: 180.609.01 Principles of Environmental Health I or equivalent

180.627.01 Lessons Learned In 1918 Pandemic Flu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses
Prepares students to examine the complex history surrounding the 1918 influenza pandemic, the public health response at that time, and compare to preparedness, today. Acquaints students with the realities of mass vaccination and medical countermeasure development. Topical issues related to influenza preparedness will be discussed, including an examination of what happened in the 1977 reemergence of H1N1 influenza, gain of function influenza experiments and other controversial influenza research, and the effectiveness of non-pharmaceutical interventions. Encourages application of critical thinking skills through class discussions and written assignments.

Upon successfully completing this course, students will be able to:

1. Describe the historical, public health, and statistical features of the 1918 influenza pandemic
2. Describe current efforts towards influenza preparedness
3. Engage in professional written and oral communications with experts to elicit useful information
4. Link possible policy options to current influenza threats and public health preparedness
5. Describe the role scientists from Johns Hopkins University played in changing our approach to infectious diseases

Email: ggronvall@jhu.edu
Lecture: F 10:30 AM - 11:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

As part of this course, students will be expected to craft a professional email to a current professional who might have some relevant responsibility in the event of a modern pandemic influenza (for example, scientist, public health official, mortuary services). They will send that email, schedule an interview, develop interview questions, conduct and write up the interview, and submit their report. This assignment will aim to teach professional skills as well as increase knowledge of important public health roles.

Learning Materials:
- (Book) Pale Horse, Pale Rider
  Porter, Katherine Anne
  Any $10.00
  1990
- (Book) The Great Influenza
  Barry, John
  Any $16.00
  2005
- (Book) Pale Rider
  Spinney, Laura
  Any $12.00
  2018

180.628.81 Introduction To Environmental And Occupational Health Law
4 credits - Course offered this year - Internet
Locke, Paul
Examines US and international environmental and occupational health laws and regulations. Covers significant US federal laws, such as the Clean Air Act, the Occupational Safety and Health Act, Superfund, the Toxic Substances Control Act, Safe Drinking Water Act, the Resource, Conservation and Recovery Act and significant international treaties and laws, such as the European Union's REACH legislation, with a particular emphasis on how they influence public health intervention strategies. Also introduces students to the agencies that administer worker health and environmental protection programs.

Upon successfully completing this course, students will be able to:

1. Identify and describe significant environmental and occupational health laws and regulations
2. Explain public health history, philosophy and values in environmental and occupational health
3. Identify and describe the significant agencies and institutions charged with protecting environmental and worker health
4. Analyze the strengths and weaknesses of these laws and regulations
180.630.60 Chemical And Biological Weapons Threats: Science, Public Health, Policy
3 credits - Course offered this year - East Baltimore
Gronvall, Gigi
Provides a broad understanding of the application of scientific concepts of biological and chemical warfare agents to inform evidence-based public health action and policy-making. Reviews the scientific principles and outcomes of threat agent use. Includes topics such as scientific and clinical aspects of threats agents, history of past use, and overarching policies to control their use. Examines the public health aspects of preparedness, including national development, use, and sharing of medical countermeasures. Explains principles of preparedness and response using case studies. Builds skills in crafting evidence-based public health policy options in preparing and responding to chemical and biological threats.
Upon successfully completing this course, students will be able to:
1. Describe the properties and clinical impacts of chemical and biological warfare agents
2. Compare and contrast the public health impact of chemical and biological agent use on civilian populations, especially in resource constrained areas
3. Discuss the international framework for addressing chemical and biological weapons use, including arms control agreements and the responsibilities of the international community in addressing their use
4. Explain the measures that can be taken to prepare for and respond to chemical or biological agent use
5. Outline the processes for the development, use, and sharing medical countermeasures when chemical and biological weapons are employed
6. Discuss the history of chemical and biological agent use, especially against civilians

180.631.01 Environmental And Occupational Health Policy Seminar
3 credits - Course offered this year - East Baltimore
Locke, Paul
Uses a case-study approach to discuss the political, economic and scientific contexts of environmental and occupational health policy making. Covers the regulation of chemical and pesticide production and use, waste management, occupational health and safety, food safety, and international aspects of policy making. Emphasizes the critical analysis of specific case studies, involving specific decisions and current controversy, including the roles of risk assessment, cost benefit analysis, and the precautionary principle. Also covers the interactions of environmental and occupational health policy with international affairs, specifically trade and development.
Upon successfully completing this course, students will be able to:
1. Describe the institutions, laws, and processes that are utilized in occupational and environmental health policy in the U.S. a. Describe the national, state, and local institutions involved in making environmental and occupational health policies b. Describe
2. Critically evaluate the objectives and performance of policy making a. Explain policy documents (regulations, executive orders, court decisions, etc.) b. Identify and analyze the role of stakeholders in policymaking c. Perform a policy analysis using critical thinking
3. Apply policy making methods to problem identification and policy formulation a. Formulate environmental and occupational health problems in the terms of policy objectives b. Analyze the relationship between policies and problems c. compare policy making i
4. Understand the international aspects of environmental and occupational health policy a. Describe the international aspects of environmental and occupational health issues b. Identify institutions and processes in international policy making c. Evaluate in

Email: ggronvall@jhu.edu
Lecture: W 1:30 PM - 2:50 PM
Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduate students must obtain consent.
Several lectures will be available online. These will be the lectures that cover more specific and scientific background material, which will allow students to proceed at their own pace. In addition, it will allow for expert guest instructors who work for the Department of Defense to record a lecture at a time that may be better suited to their schedule, and allow their lectures to be used in future years.

Email: plocke@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 32 of 202
Email: plocke@jhu.edu
Lecture: TH 3:30 PM - 6:20 PM
Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Requires consent if student has not taken 180.629.
Prerequisite: 180.629 or consent of the instructor.
Jointly offered with HPM

**180.632.81 Introduction To Molecular Toxicology**

3 credits - Course offered this year - Internet
Biswal, Shyam S.
Introduces students to toxicology at a molecular level. Reviews the molecular mechanisms of diseases associated with environmental exposures and both genetic and epigenetic changes that are associated with disease pathogenesis. Introduces the cellular signaling pathways involved in protection from effects of chronic exposure to environmental toxicants including responses to stress and oxidative damage. Presents the most recent technological advances in the molecular tools available to study effects of environmental toxicants including next generation sequencing, mass spectrometry, gene editing models and emerging alternative animal models.

Upon successfully completing this course, students will be able to:
1. Describe the biological consequences leading to disease pathogenesis in response to toxins in the environment
2. Relate the genomic pathways by which environmental toxicants regulate gene expression and cell functions
3. State the stress response to environmental toxicants
4. Describe how DNA damage and repair contributes to carcinogenesis caused by environmental toxicants
5. Compare various state-of-the-art techniques including gene editing models and high throughput profiling including genomics, epigenomics, proteomics and metabolomics, and state their applications for toxicological studies and public health research

**Method of Assessment**

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<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
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<td>Final Exam</td>
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<tr>
<td>Discussion Board</td>
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Email: sbiswal@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: A college level background in the biological sciences.
Introduction to On-line Learning (550.02.81)
Public Health Toxicology (online) (187.610.81) is suggested

This course is designed for students with minimal background in biology and toxicology.

**180.633.01 The Sociocultural Dimensions Of Disasters**

3 credits - Course offered this year - East Baltimore
Schoch-Spana, Monica
Provides an anthropological viewpoint on extreme events including natural disasters, outbreaks, and technological accidents. Explores the human hand in, and experience of disasters - phenomena that influenced by the ways people imagine, build, organize, and value their communities. Critically examines the present trend of more frequent and more severe disasters, as well as chronic disparities in people's abilities to withstand and to recover from mass tragedy. Introduces theories of social vulnerability and community resilience to inform policies on how to reduce the chances for, as well as consequences of disasters.

Upon successfully completing this course, students will be able to:
1. Analyze the human role in causing the conditions for, and impacts of disasters
2. Compare anthropology's ecological, political-economic, and cultural approaches to the study of disasters
3. Apply vulnerability models that emphasize political, economic, social, and cultural factors endangering people in different ways before, during, and after a disaster
4. Specify the roles that race, ethnicity, class, gender, age, and dis/ability play in how people are harmed by and are able to cope with disaster

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 33 of 202
Model components of community resilience and assess adaptive capacities that can help people reduce the chances for, as well as the consequences of disasters.

Evaluate the role that culture plays in how people make sense of the individual and collective experience of mass tragedy.

Propose examples of how culture and politics become entangled in public struggles to recognize, explain, and remember disasters and to remedy future ones.

Critique prevalent myths about human behavior in disasters that often contribute to poorly conceived policies and practices in disaster management.

Describe the disaster life cycle (i.e. mitigate, prepare, respond, and recover) and propose ideas on how anthropological insights can enhance policies at each stage of emergency management.

Method of Assessment

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<th>Method of Assessment</th>
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<td>2. Briefing memo</td>
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<tr>
<td>3. Case study written report</td>
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<td>4. Written Assignment(s)</td>
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Method of Assessment Detail:

1. Class participation (10% of final grade, assessed based on attendance and active participation in class discussion and lectures)
2. Description of Topic (10% of course grade, pass/fail)
3. Decision-Making Case Analysis (25% of course grade, graded)
4. Risk Communication memo (25% of course grade, graded)
5. Case Study After Action Report (30% of course grade, graded)

Email: mschoch@jhu.edu
Lecture: M W 9:00 AM - 10:20 AM
Enrollment: Minimum 5, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduate JHU students must obtain consent to enroll.

180.634.01 Public Health Emergencies: Risk Communication and Decision Science

3 credits - Course offered this year - East Baltimore
Sell, Tara
Explores the science of risk communication and decision making. Discusses risk perception, communication guidance, and news media portrayal of risks. Reviews existing guidance on risk decision making. Presents previous and current public health emergencies as practice-based examples of risk communication and decision making. Examines public health emergency scenarios to prepare students for communication and decision making in their future work.

Upon successfully completing this course, students will be able to:

1. Identify the human factors that influence decision making under uncertainty and time pressure
2. Explain techniques for improved decision making in a crisis
3. Analyze decision making in past public health emergencies
4. Apply decision science to improve public health decision making
5. Articulate the importance of communicating effectively about risks from and responses to public health threats
6. Apply components of effective risk communication to provide messages to policy makers and the public about health risks and protective actions
7. Identify common pitfalls in risk communication and how to avoid them
8. Critique existing risk communication controversies

Method of Assessment

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<tbody>
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<td>1. Participation</td>
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<tr>
<td>2. Written Assignment(s)</td>
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</table>

Method of Assessment Detail:

- Class participation (10% of final grade, assessed based on attendance and active participation in class discussion and lectures)
- Description of Topic (10% of course grade, pass/fail)
- Decision-Making Case Analysis (25% of course grade, graded)
- Risk Communication memo (25% of course grade, graded)
- Case Study After Action Report (30% of course grade, graded)

Email: tksell@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

180.636.01 Human Rights And Health Seminar
3 credits - Course offered this year - East Baltimore
Stein, David
Introduces students to human rights in general, health as a human right, impact of health policies, programs and practices on human rights, and collective impacts of human rights violations, whether gross violations in human conflict or insidious violations associated with mistreatment of individuals and marginalized groups.
Upon successfully completing this course, students will be able to:
1. Discuss and begin to understand the realization of the right to health and its consequences for health practice, based on building a “culture of human rights” through law, ethics, policy, economics and 'social norms'
2. Understand some governmental obligations for health under international human rights law and practice or "custom"
3. Describe some commonalities between public health and human rights, including human rights law
4. Discuss application of the human rights framework to the design, implementation, and evaluation of public health policies and interventions
5. Understand some health impacts of human rights violations
6. Discuss dilemmas in the application of human rights principles to health research and practice
7. Discuss some of the numerous roles for health professionals in documenting and ameliorating human rights violations

Email: ds5@jhmi.edu
Lecture: W 1:30 PM - 3:50 PM

Enrollment: Minimum 5, Maximum 15, Waitlist Enabled: Yes
Undergraduates are restricted from taking this course
Grading Options: Letter Grade or Pass/Fail
Held in departmental space

180.640.81 Molecular Epidemiology And Biomarkers In Public Health (Cancelled - Department)
4 credits - Course offered this year - Internet
Buckley, Jessie
Emphasizes the scientific basis of molecular epidemiology and provides examples of the application of molecular biology, analytical chemistry, and toxicology to the study of chronic disease etiology and its public health application, including examples in human cancer, cardiovascular, immunological, and neurological diseases. Also discusses methodological and study design problems.
Upon successfully completing this course, students will be able to:
1. Describe how and when molecular and chemical biomarkers can be applied in public health biomonitoring and in epidemiological studies
2. Articulate the difference between biomarkers of exposure, dose, effect, and susceptibility in various chronic diseases
3. Discuss methodological and study design problems in applying biomarkers in epidemiological studies
4. Compare the attributes and deficiencies of particular biomarker assays for biomonitoring and molecular epidemiology
5. Determine if you should sacrifice banked serum samples to analysis by a particular biomarker assay
6. Explain the importance of the half-life of a biomarker to an epidemiological study design

Method of Assessment
1. Paper(s) 50
2. Final Exam 50

Email: Jbuckl19@jhu.edu
Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
Undergraduate students may not enroll in this course
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for auditors
Prerequisite: An introductory course on epidemiology

180.653.81 Climate Change: Avoiding Conflict And Improving Public Health
3 credits - Course offered this year - **Internet**

Parker, Cindy

This course explores the potential for a changing climate to cause food and water shortages, forced migration, and conflict. Through a series of case studies of climate change-relevant crisis events around the world, we will examine the factors that led to the communities in question mustering resilience to survive and recover from the crisis vs. the factors that led to conflict. Through this analysis, we will identify a suite of resilience factors and strategies, such as community cohesion, ecosystem restoration, agricultural and water capture and storage, that could be built into policies to assist high risk areas in avoiding conflict.

Upon successfully completing this course, students will be able to:

1. Identify the most important risk factors for forced migration and conflict
2. Explain the role of climate change in the most important risk factors for conflict
3. Analyze case studies to determine common factors that increased or decreased the risk of conflict
4. Characterize the role of science and technology in adaptation to climate change
5. Develop a suite of strategies that could help at-risk communities avoid conflict

Email: cindyparker@jhu.edu

Enrollment: Minimum 10, Maximum 12, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required for those who have not taken one of the prerequisites
Prerequisite: One of the following:
180.611.01 The Global Environment, Climate Change and Public Health,
180.607.81 Climate Change and Public Health, or consent of instructor

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**180.662.01 Writing Scientific Papers II**

1 credits - Course offered this year - **East Baltimore**

Davis, Meghan

Enables doctoral students to attain skills in writing successful scientific papers, including dissertations, grant, and papers that are accepted by peer-reviewed journals. Confers and utilizes skills acquired in part I of this course to access and select relevant scientific literature from online information sources for writing. Informs participants on different publication options, including open source journals. Explains NIH requirements for notification and access to data. Through problem based learning and review of successful scientific papers, conveys the elements of successful scientific writing, including grammar, sentence structure, formats, data presentation, citations and acknowledgements. Demonstrates successful response to reviewer comments.

Upon successfully completing this course, students will be able to:

1. Use computer-based systems to build an archive of information and references
2. Recognize the elements of scientific writing, including structure and language, data presentation, and citation management
3. Critically review literature and identify what makes an effective publication
4. Read and respond to literature reviews
5. Explain open source publishing and NIH requirements for access

Email: mdavis65@jhu.edu

Lecture: W 12:00 PM - 1:20 PM
Enrollment: Minimum 5, Maximum 15, Waitlist Enabled: Yes
Restricted to PhD students in EHE
Grading Options: Pass/Fail
Prerequisite: 180.661 Writing Scientific Papers I
Final grade applies to all terms

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**180.670.01 Introduction To Public Health Emergency Preparedness**

3 credits - Course offered this year - **East Baltimore**

Barnett, Dan
Introduces public health emergency preparedness procedures, including natural and technological disasters; terrorism; emerging threats; and methods to address these from planning and response perspectives. Content includes domestic and international public health emergency contexts, and integrates knowledge and skills learned from other courses within the Health in Crisis: Human Rights, Disaster Preparedness and Humanitarian Assistance MPH Concentration. Practical work focuses on small group participation in in-class scenarios and exercises. As a final project, each student individually prepares a press statement regarding a potential public health emergency threat scenario.

Upon successfully completing this course, students will be able to:

1. Identify and describe the main public health activities in preparing for and responding to public health emergencies
2. Identify natural and technological hazards
3. Identify chemical, biological, radiological, nuclear, and explosive terrorist weapons
4. Describe the consequences of recent disasters
5. Describe the roles of public health agencies in emergencies, and interactions with public safety and other agencies
6. Monitor baseline and disaster-related public health status to identify community health problems to enhance planning capabilities
7. Define the structure and organization of disaster response efforts, including incident command systems and the responsibilities of governmental and nongovernmental entities
8. Conduct post-emergency/catastrophe assessments for the purpose of informing future public health preparedness systems

Email: dbarnet4@jhu.edu
Lecture: T TH 9:00 AM - 10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Jointly offered with HPM

180.820.01 Doctoral Thesis Research
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty
Provides an opportunity to actively conduct research in environmental health
Upon successfully completing this course, students will be able to:
1. Write a publishable manuscript

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Doctoral students in EHE only
Grading Options: Pass/Fail
Register with adviser

180.840.01 Doctoral Special Studies & Research
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty
Provides a forum for students to get feedback on their research ideas and projects. Acquaints students with research of leading environmental health experts.
Upon successfully completing this course, students will be able to:
1. Identify areas of interest for current and future research

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Doctoral students in EHE only
Grading Options: Pass/Fail
Register with adviser

180.860.01 EHE Student Seminar & Grand Rounds
1 credits - Course offered this year - East Baltimore
Departmental Faculty
Provides a forum for students to present their current research project and receive feedback from faculty and students. Introduces students to research of leading environmental health experts.

Upon successfully completing this course, students will be able to:

1. Discuss and provide feedback on research proposals and projects

Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

Enrollment restricted to PhD students in EHE

Grading Options: Pass/Fail

181.845.01 MHS Special Studies & Research

variable credits 1-22 - Course offered this year - East Baltimore

Departmental Faculty

Provides a forum for students to receive feedback on essay topics and outlines.

Upon successfully completing this course, students will be able to:

1. Identify an essay topic relevant to environmental health

Method of Assessment Percentage
1. Meeting MHS essay milestones 99

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

Restricted to MHS students in the Department of Environmental Health & Engineering

Grading Options: Pass/Fail

Students should select their adviser as the instructor.

181.850.01 MHS Essay

1 credits - Course offered this year - East Baltimore

Departmental Faculty

Provides the opportunity for the student to work with their adviser to formulate, research, finalize, and gain approval of the required essay.

Upon successfully completing this course, students will be able to:

1. Identify and propose solutions to environmental health issues
2. Apply analytical and technical skills to conducting literature reviews
3. Produce a high quality written document

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

MHS students in EHE only

Grading Options: Pass/Fail

Register with adviser

182.617.60 Exposure Sciences For Health Risk Assessment

4 credits - Course offered this year - East Baltimore

Ramachandran, Gurumurthy

Prepares students to use techniques of exposure assessment in aid of epidemiological studies. Introduces students to core concepts including exposure variability and its implications for reconstructing historical exposures; sparse data and measurement errors; the exposure data matrix; methods for imputation of missing values; the relationship between exposure and tissue concentrations; the choice of exposure metric; and exposure-response relationships. Examines advanced techniques for imputing missing data while reconstructing exposures. Demonstrates the application of mathematical models of exposure using exposure determinant information and Bayesian methods. Considers exposure windows and exposure lagging. Focusses on using biologic models of how disease develops in response to exposure. Students critically evaluate exposure assessment strategies in selected epidemiological studies from the peer-reviewed literature.

Upon successfully completing this course, students will be able to:

1. Explain the nature of exposure problems in reconstructing historical exposures in occupational and non-occupational settings
2. Recognize the implications of sparse and missing data and the choice of the exposure metric on the resulting exposure-response relationship
3 Design studies to estimate exposure for prospective and retrospective epidemiological studies and interpret data obtained from such studies
4 Use statistical techniques, physical mathematical models, and Bayesian methods to quantify exposures while accounting for temporal and spatial dependence
5 Articulate the relationship between exposures and biological outcomes, such as tissue concentrations from pharmacokinetic models
6 Critically evaluate exposure assessment strategies in epidemiological studies and risk assessments

Email: gramach5@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 3, Maximum 40, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required for students who have not take the prerequisite courses
Prerequisite: 180.609 Principles of Environmental Health or 180.601 Environmental Health or an equivalent introductory course in environmental health

182.613 Exposure Assessment Techniques for Health Risk Management

Recommended textbooks:

182.622.01 Ventilation And Hazard Control (Cancelled - Department)
4 credits - Course offered this year - East Baltimore
Rule, Ana Maria;Bowes, Stephen M.
Covers the principles of industrial ventilation and engineering controls for airborne hazards. Provides competency in general ventilation and industrial ventilation design.
Upon successfully completing this course, students will be able to:
1 Discuss the occupational/environmental health approach to risk management
2 Define the characteristics of local exhaust and general dilution ventilation
3 Analyze the performance of ventilation systems
4 Select an appropriate exhaust hood, balance flow in ducts, determine exhaust fan requirements, and choose the appropriate air cleaning technology to use for standard industrial operations
5 Design a balanced local exhaust ventilation system integrating all components

Email: arule1@jhu.edu
Lecture: F 1:30 PM - 5:20 PM
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: College chemistry and physics w/labs, math through differential and integral calculus

182.625.81 Principles Of Occupational And Environmental Hygiene
4 credits - Course offered this year - Internet
Zerbe, Diane
Introduces concepts, terminology, and methodology in the practice of industrial hygiene, and identifies resource materials. Includes lectures, typical problems, demonstrations, and a walk-through survey.
Upon successfully completing this course, students will be able to:
1 Describe the legal, professional, and ethical framework for the practice of industrial hygiene
2 Define basic terms and technical concepts integral to the practice of industrial hygiene

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 39 of 202
3 Explain the differences between chemical (gases/vapors, dusts/mists/fumes), physical, and biological agents in the workplace
4 Calculate time-weighted averages
5 Convert between various units of exposure (for example, mg/m³ to ppm)
6 Calculate and interpret noise exposures and doses
7 Identify the basic concepts of workplace exposure assessment
8 Describe the hierarchy of controls and how it applies to hazard control
9 Integrate various concepts into a broader occupational/environmental health practice

Method of Assessment

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<th>Method</th>
<th>Percentage</th>
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Email: Dzerbe1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.
Not designed to prepare you for the Certified Industrial Hygienist qualifying exam.

182.638.01 Environmental And Health Concerns In Water Use And Reuse (Discontinued)
4 credits - Course offered this year - East Baltimore
Schwab, Kellogg
Provides an overview of environmental and public health issues related to water use and reuse, and describes the different strategies for treating both drinking water and wastewater to meet regulatory standards and ensure the health of both human populations and the environment. Since two key issues in public and environmental health are sustainable access to clean drinking water and safe reclamation of wastewater, respectively, students learn core principles of water quality engineering that are critical for protecting human populations from waterborne pathogens.

Upon successfully completing this course, students will be able to:
1 Explain the basic concepts of drinking water and wastewater treatment approaches
2 Characterize challenges related to direct and indirect potable water reuse
3 Characterize waterborne pathogens and health risks related to their waterborne transmission

Email: kschwab1@jhu.edu
Lecture: W F 8:30 AM - 10:20 AM
Enrollment: Minimum 6, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail

182.810.01 Ms Field Placement
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty
Focuses on a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:
1 Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
MS students in EHE only
Grading Options: Pass/Fail
Register with adviser

182.845.01 Ms Special Studies And Research
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty
Prepares students to identify and research the central issues in environmental health.

Upon successfully completing this course, students will be able to:

1. Identify areas of interest for current and future research

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Enrollment restricted to MS students in EHE
Grading Options: Pass/Fail

182.850.01 Ms Essay
variable credits 1-22 - Course offered this year - East Baltimore

Departmental Faculty
Students work with their adviser to formulate, research, finalize, and gain approval of their master’s essay, which is based on a required Independent Professional Project (IPP). Students write the essay as a professional report summarizing the findings of the IPP. This represents a substantive application of professional technical skills through the process of collecting and summarizing data and reviewing appropriate literature.

Upon successfully completing this course, students will be able to:

1. Augment their training by pursuing an independent project within their particular area of interest or specialized competency
2. Prepare a professional report on their findings
3. Present in an oral seminar setting

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
MS students in EHE only
Grading Options: Pass/Fail
Register with adviser

182.860.81 Special Studies Seminar In Occupational And Environmental Hygiene
1 credits - Course offered this year - Internet
Reinhard, Carla

Provides a platform for faculty, students and invited speakers to present seminars dealing with occupational and environmental hygiene professional practice and research. Provides examples of various occupational/environmental settings and associated worker hazards. Serves to integrate various courses taken as part of the online master’s in OEH program and to familiarize students with state-of-the art professional practice procedures and guidelines. Provides a venue for master’s students to present their final essays.

Upon successfully completing this course, students will be able to:

1. Discuss current issues in occupational safety and health/occupational and environmental hygiene.
2. Discuss workplace risk management approaches including regulatory, engineering, and behavioral/risk communication options.
3. Describe the strengths and weaknesses of various methodological approaches used in the practice of occupational and environmental hygiene.

Email: creinha2@jhu.edu

Enrollment: Minimum 1, Maximum 20, Waitlist Enabled: Yes
Registration restricted to students enrolled in MSPH OEH PTIB program.
Grading Options: Pass/Fail
Consent required for some students; Instructor consent is required for students not in the MSPH OEH PTIB Program
Prerequisite: Introduction to Online Learning.
This course is presented monthly throughout the academic year; however, students don’t officially enroll until Term 4.

183.631.81 Fundamentals Of Human Physiology
4 credits - Course offered this year - Internet
Kohr, Mark; Fitzgerald, Robert

Provides an in-depth view of integrated human systems physiology by covering the key aspects of a number of different organ systems. Offers a unique perspective on physiology by incorporating environmental, clinical and public health aspects, where possible.
Upon successfully completing this course, students will be able to:

1. Explain the fundamental principles of integrated systems physiology at the genetic, cellular and organ level
2. Apply basic physiological principles toward a better understanding of the health consequences of current and emerging environmental and public health issues
3. Describe the significance of physiological principles when interacting with a broad spectrum of public health professionals

Method of Assessment

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<th>Percentage</th>
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<tr>
<td>3 non-cumulative exams (30% each)</td>
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<tr>
<td>Non-cumulative quizzes (2% each)</td>
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</tbody>
</table>

Email: mkohr1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning; Biology and/or related coursework preferred

183.641.01 The Health Effects Of Indoor And Outdoor Air Pollution (Discontinued)

Spannhake, Ernst

Provides background on respiratory tract defense mechanism and the factors that control inhalation exposures to environmental pollutants and their influences on health and diseases. Topics include oxidant pollutants, sulfur dioxide and acid aerosols, particulates, bioaerosols, building-related illness, volatile organic compounds, environmental tobacco smoke and radon. Also covers host susceptibility factors, risk assessment, the influence of global warming, and regulation and public policy.

Upon successfully completing this course, students will be able to:

1. Describe the general anatomy and physiology of the human respiratory track, including its primary innate host-defense mechanisms, and factors that may affect individual susceptibility to adverse health effects linked to airborne exposures
2. Describe the various categories of indoor and outdoor pollutants, their primary sources, levels and distribution within the environment, and methods by which they are measured
3. Explain the physical and chemical characteristics of pollutant agents that influence their distribution, deposition and toxic effects within the airways and elsewhere in the body
4. Discuss the mechanisms through which exposures to selected environmental pollutants can initiate, maintain and/or exacerbate human disease

Email: Spannhake@jhu.edu
Lecture: T TH 3:00 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

183.642.01 The Cardiopulmonary System Under Stress

Fitzgerald, Robert

Identifies the responses of the cardiopulmonary system to physiological and environmental stress, presenting information from both human and research laboratory model experimentation. Reviews hypoxia and some common air pollutants (e.g. ozone) as a prototypical environmental stress factors, and exercise as an example of physiologic stress. Discusses epithelial, circulatory, and ventilatory responses of the pulmonary system, as well as susceptibility factors and biomarkers to stress.

Upon successfully completing this course, students will be able to:

1. Assess the varied responses of the cardiopulmonary system to physiological and toxicological stresses such as: emotion, isometric and isotonic exercise, changes in gravity, diving, altitude, viral cardiac infections, air pollution (e.g., ozone) on lung function, oxidative stress on the lung, stress encountered with hyperoxic assisted ventilation, and, finally, the impact of social stress on the heart and on asthma

Email: rfitzger@jhu.edu
Lecture: F 3:30 PM - 5:20 PM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required if student has not taken 183.638.
Prerequisite: 183.638 - Mechanisms of Cardiopulmonary Control or consent of instructor

183.643.01 Essentials Of Pulmonary Function Measurements
3 credits - Course offered this year - East Baltimore

Mitzner, Wayne

Presents the theory and fundamentals underlying the measurement of pulmonary function in clinical and experimental studies. Discussions address pulmonary function, lung disease, asthma and lung pathology. Vonsiders the following topics and measurements: lung elasticity, lung volumes, spirometric indices, ventilation, perfusion, diffusion, and imaging assessments of lung function.

Upon successfully completing this course, students will be able to:
1. Describe the anatomy, physiology, and theory underlying the measurement of pulmonary function in clinical and experimental studies
2. Explain why we bother to make such measurements and what they might tell us about lung function and disease
3. Accurately interpret pulmonary function tests at the level of most pulmonary physicians and basic researchers

Email: wmitzner@jhu.edu

Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

Prerequisite: Basic course in mammalian physiology

Instructional material includes books, scientific papers, and practical demonstrations.

183.825.01 SCM Thesis Research
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty

Provides an opportunity to actively conduct research in environmental health

Upon successfully completing this course, students will be able to:
1. Write a publishable manuscript

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Only students in the ScM program in EHE may enroll
Grading Options: Pass/Fail
Register with adviser

183.840.01 SCM Special Studies & Research
variable credits 1-22 - Course offered this year - East Baltimore
Departmental Faculty

Provides a forum for students to receive feedback on research ideas and projects. ScM students enroll in this course prior to passing the written comprehensive exam.

Upon successfully completing this course, students will be able to:
1. Identify areas of interest for current and future research

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
EHE ScM students only
Grading Options: Pass/Fail
Register with adviser as the instructor

184.830.01 Postdoctoral Research Environmental Health And Engineering
variable credits 1-22 - Course offered this year - East Baltimore

Offers an opportunity for postdoctoral students to conduct research and write papers for publication

Upon successfully completing this course, students will be able to:
1. Conduct post-graduate research and write papers for publication

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 43 of 202
185.600.81 One Health Tools To Promote And Evaluate Healthy And Sustainable Communities
3 credits - Course offered this year - Internet
Davis, Meghan
Students will learn and apply tools and principles of One Health, which is the interface of human health, animal health and environmental health, to promote and evaluate healthy and sustainable communities. Classes will cover methods central to the conduct of One Health research or programs, which includes study design, stakeholder participation, community engagement and program evaluation, and will cover topics of high relevance to One Health in a way that uses systems approaches and synthesis to join perspectives from the multiple disciplines. These topics include drivers—such as the food system and antimicrobial resistance—that can contribute to or detract from the health and sustainability of communities. Methods will be presented in the context of applications such as policy, regulation, and economics and will connect One Health techniques for knowledge integration and other approaches to the design of healthy communities.

Upon successfully completing this course, students will be able to:

1. Define the three One Health domains and how they relate to each other
2. Describe methods to measure One Health drivers of community health or disease
3. Apply the principles of systems thinking to describe how these drivers are interconnected
4. Describe the importance of stakeholder involvement and methods to incorporate and assess the impact of multiple perspectives in One Health research
5. Design observational or interventional studies or programs to incorporate One Health methods and approaches to support healthy and sustainable communities
6. Identify and critique policies and programs that incorporate One Health knowledge and approaches
7. List metrics and describe methods to evaluate the effectiveness of One Health approaches to research or program design

Email: mdavis65@jhu.edu
Enrollment: Minimum 6, Maximum 60, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required for students who have not taken prerequisite courses. Consent is not required for all other students.
Prerequisite: 340.601 PRINCIPLES OF EPIDEMIOLOGY or 340.751 EPIDEMIOLOGIC METHODS 1 or 340.721 EPIDEMIOLOGIC INFERENCE IN PUBLIC HEALTH or equivalent course in epidemiology; AND Introduction to Online Learning

This is course that integrates methods applicable to research and practice with practical applications, including public health challenges related to the food system and antimicrobial resistance, and utilizes systems thinking in the approach to these challenges.

No textbooks will be required for this course. Students will be assigned reading from different texts, governmental or NGO reports or from the scientific literature to meet course objectives.

185.801.01 Exposure Sciences & Environmental Epi Journal Club
1 credits - Course offered this year - East Baltimore
Smith, Genee
Provides a forum for students and multiple faculty to keep up-to-date on the latest environmental health research and get feedback on their research ideas and projects. Emphasizes active participation in discussions of the peer-reviewed literature, the most up-to-date research, and the process of research development.

Upon successfully completing this course, students will be able to:

1. Critique peer-reviewed manuscripts
2. Explain the peer review process
3. Discuss and provide feedback on research ideas and projects

Email: genee.smith@jhu.edu
Lecture: M 12:00 PM - 1:20 PM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for some students; Consent is required for students not in EHE
To be held in departmental space. Method of Assessment varies by term. Student assessment is a self-assessment unless the student is required to present that term.
185.805.01 Toxicology, Physiology & Molecular Mechanisms Journal Club & Seminar (Cancelled - Department)
1 credits - Course offered this year - East Baltimore
Kohr, Mark; Sille, Fenna
Provides a platform for doctoral and postdoctoral students (postdoctoral fellows) and faculty to present and discuss impactful scientific papers from the current literature that deal with mechanisms underlying environmental disease along with accompanying methods. Papers are organized around a term-specific theme selected by the course directors.

Upon successfully completing this course, students will be able to:
1. Critically read and evaluate scientific papers, and identify criteria for assessing the quality of the science
2. Analyze and assess new methodological approaches in the areas of biochemistry, physiology, biophysics, cell and molecular biology, genomics, epigenetics, proteomics, metabolomics, etc.
3. Evaluate the pathophysiological pathways of environmental disease at the molecular, cellular, tissue, whole organ-whole animal, and individual-to-population levels
4. Give a high quality presentation that effectively conveys scientific results

Email: mkohr1@jhu.edu
Lecture: M 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for some students; Consent required for students not in EHE
Consent required for students not in EHE

185.806.01 Advanced Concepts In Toxicology, Physiology & Molecular Mechanisms
2 credits - Course offered this year - East Baltimore
Kohr, Mark; Sille, Fenna
Provides a platform for students, postdoctoral fellows and faculty to present and discuss impactful scientific papers from the current literature that deal with mechanisms underlying environmental disease along with accompanying methods. Explores additional aspects that are relevant to conducting and conveying laboratory research, including study design and statistical analysis, manuscript and grant review, policy and practice, and risk assessment. Outside speakers will also be invited to present on a topic relevant to advanced concepts.

Upon successfully completing this course, students will be able to:
1. Critically evaluate scientific papers and the quality of the science, including experimental design, data analysis, and statistical approaches
2. Assess new methodological approaches in the areas of biochemistry, physiology, biophysics, cell and molecular biology, genomics, epigenetics, proteomics, and metabolomics
3. Evaluate the pathophysiological pathways of environmental disease at the molecular, cellular, tissue, whole-organ, animal, and individual-to-population levels
4. Demonstrate the skills necessary for conducting and conveying laboratory research, including study design, manuscript and grant review, and possible impacts on policy and practice
5. Give a high-quality presentation that effectively conveys summaries of scientific results and advanced concepts

Method of Assessment

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Method of Assessment Detail:

For attendance and participation, we expect that the students are actively engaged during class by asking questions and participating in the discussion when appropriate. For assignments, this will likely vary by term, but the students may have to complete a 1-2 page document in the form of a manuscript review or public policy stance.

Email: mkohr1@jhu.edu
Lecture: M 3:30 PM - 5:20 PM
Enrollment: Minimum 5, Maximum 30, Waitlist Enabled: Yes
Restricted to PhD and ScM students, and Postdoctoral Fellows. No undergraduates, MHS with permission
Grading Options: Pass/Fail

Consent required for some students; Consent is required for MHS students

186.800.01 MPH Capstone: Environmental Health & Engineering
2 credits - Course offered this year - East Baltimore
Departmental Faculty

Provides students with the opportunity to work on a public health practice project on a chosen public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1 Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

186.895.01 MPH Practicum: Ehe variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore
Departmental Faculty

The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:

1 Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

187.625.81 Animals In Research: Law, Policy, And Humane Sciences
3 credits - Course offered this year - Internet
Herrmann, Kathrin

Imparts fundamental knowledge about basic and applied (bio)medical research. Explores the main shortcomings of animal use in science. Discusses how to fully apply the 3R principles, and how to properly conduct experiments. Prepares students to critically appraise the validity of animal and non-animal models and methods in order to choose the best means for particular research interests.

Upon successfully completing this course, students will be able to:

1 Explain which laws apply when using animals in biomedical research
2 Describe the 3Rs principles (Replacement, Reduction, Refinement) that govern the responsible use of laboratory animals in science
3 Perform comprehensive literature searches on the research topic as well as on possible Replacement (animal-free methods), Reduction of animal numbers and animal experiments and Refinement of animal experiments to reduce inflicted pain and suffering to an absolute minimum
4 Detect bias in scientific work
5 Identify the steps by which biomedical research involving animals is reviewed by Institutional Animal Care and Use Committees (IACUCs)
6 Assess the ways in which the application of humane science principles in biomedical research can lead to more robust scientific methodology and results
7 Perform successful planning of research studies

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 46 of 202
8 Explain why full reporting of research studies is imperative and what the key items that need to be reported in publications are
9 Identify available means to reduce pain, distress and suffering (Refinement methods) that ought to be applied if animals are used
10 Describe means to reduce animal experiments and numbers of animals used (Reduction)
11 Identify available non-animal methods and models that can be used to enhance chances of translatability of results to human settings

Method of Assessment | Percentage
--- | ---
1. Midterm | 30
2. Participation | 30
3. Final Paper | 40

Method of Assessment Detail:
- Midterm Exam: Literature search – 30%;
- Course participation based on viewing all lecture content, completing quizzes, participating in the discussion forum – 30%
- Final Paper – 40%

Email: kherra1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.

187.633.01 Introduction To Environmental Genomics And Epigenomics
3 credits - Course offered this year - East Baltimore
Maertens, Alexandra; Wang, Zhibin

Presents the concept of the genetic and epigenetic data analysis in environmental health studies. Introduces not only single gene analysis but also genome-wide data searching. Also introduces cutting-edge analytical tools for 'omic' data not limited to genomics, but also for epigenomics, proteomics and metabolomics. Provides an introduction to the pathway analysis for 'omic' data.

Upon successfully completing this course, students will be able to:
1 Explain the basic knowledge for genomic and epigenomic data analysis
2 Identify the difference between omic based network analysis and the traditional lab-based analysis
3 Describe the approaches used for in silico analysis of the genome
4 Describe the publicly available tools for the genomic and epigenetic database access and searching
5 Explain the computational analyses used to identify or validate cellular pathways

Method of Assessment | Percentage
--- | ---
1. Participation | 20
2. Quizzes | 80

Email: amaerte1@jhu.edu
Lecture: W F 3:30 PM - 4:50 PM

Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 187.632.01 Molecular Toxicology or other courses related to molecular biology

187.634.01 Analysis For Environmental Genomics And Epigenomics
1 credits - Course offered this year - East Baltimore
Maertens, Alexandra; Wang, Zhibin

Emphasizes the analytical methods for genomic and epigenomic data analysis. It presents step-by-step instructions for searching and extracting databases and performing pathway analyses on existing genomic and/or epigenomic data. In addition, this course acquaints students with 'omic' data analysis by participating group project that aims for proving the principle or generating new hypothesis for a selected research topic.

Upon successfully completing this course, students will be able to:
1 Understand the workflow for omic data analysis

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 47 of 202
2 Apply the publicly available tools for the search, access and analysis of genomic data
3 Apply computational analysis to identify or validate cellular pathways

Method of Assessment  Percentage
1. Participation  40
2. Group Presentation  60

Email: amaerte1@jhu.edu
Lecture: F 5:00 PM - 6:00 PM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for master's students

187.650.81 Alternative Methods In Animal Testing
3 credits - Course offered this year - Internet
Bressler, Joseph
Discusses and evaluates strategies for reducing the number of animals utilized in basic and applied research. Addresses traditional in vitro methods, including cell culture and analytical chemistry as well as newer and evolving techniques such as informatics, genomics, proteomics, and metabolomics. Also discusses governmental regulatory processes for approving new testing methods, especially in vitro methods.

Upon successfully completing this course, students will be able to:
1 Identify concerns in designing in vitro methods used to replace or supplement in vivo methods
2 Evaluate tissue culture methods for their ability to provide useful data
3 Define the strengths and limitations of bioinformatic techniques for reducing the numbers of animals in applied basic research
4 Explain the regulatory process in approving, verifying, and validating in vitro methods

Email: jbressl1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Enrollment restricted to students in the MSPH TTHRA degree program or the Humane Sciences and Toxicology certificate program
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning

187.655.81 Evidence-Based Toxicology
3 credits - Course offered this year - Internet
Smirnova, Lena; Hartung, Thomas
Provides students with fundamental knowledge about EBT approaches currently in use (or in development) that integrate and utilize diverse sources of data. These approaches include meta-analysis and systematic reviews, as used in evidence-based medicine. Introduces, explains, and expands upon techniques such as the risk of bias, QA/QC, good laboratory practice and validation, and the role that these tools and techniques play in assuring maximum confidence in evidence-based approaches.

Upon successfully completing this course, students will be able to:
1 Discuss the advantages of evidence-based and bioinformatics approaches
2 Describe the principles of systematic review and meta-analysis
3 Explain quality assurance schemes in scientific work
4 Explain the basis of validation processes
5 Identify reasons for bias in scientific work
6 Apply quality scoring to published studies

Email: Ismirm01@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 187.610 Public Health Toxicology

187.661.01 Environmental Health In Neurological And Mental Disorders (Discontinued)
3 credits - Course offered this year - East Baltimore
Bressler, Joseph

Covers physical and chemical factors in our environment that contribute to neurodevelopmental disorders, mental health disease, and neurodegeneration. Lectures include a brief introduction to neurobiology, experimental studies in neurotoxicology, and studies on human populations.

Upon successfully completing this course, students will be able to:

1. Describe intracellular and intercellular mechanisms underlying normal brain function
2. Explain mechanisms underlying associations between mental disorders/neurological diseases and exposure to environmental pollutants
3. Discuss developmental, senescent, and genetic factors that increase the individual's risk to environmental pollutants
4. Analyze data from experimental and epidemiological studies on neurodevelopment neurodegeneration
5. Discuss animal models to study human behavior
6. Explain tests given to assess human cognition and motor function
7. Assess methods to test chemicals for safety
8. Explain the involvement of neurological diseases and mental illnesses in the well-being of the population
9. Explain the biology of neurodevelopment and neuroaging
10. Discuss the historical and philosophical perspectives in studying the brain

Email: jbressl1@jhu.edu

Lecture: M W 1:30 PM - 2:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 187.610 or consent of instructor

187.661.81 Environmental Health In Neurological And Mental Disorders

3 credits - Course offered this year - Internet

Bressler, Joseph

Covers physical and chemical factors in our environment that contribute to neurodevelopmental disorders, mental health disease, and neurodegeneration. Lectures include a brief introduction to neurobiology, experimental studies in neurotoxicology, and studies on human populations.

Upon successfully completing this course, students will be able to:

1. Describe intracellular and intercellular mechanisms underlying normal brain function
2. Explain mechanisms underlying associations between mental disorders/neurological diseases and exposure to environmental pollutants
3. Discuss developmental, senescent, and genetic factors that increase the individual's risk to environmental pollutants
4. Analyze data from experimental and epidemiological studies on neurodevelopment neurodegeneration
5. Discuss animal models to study human behavior
6. Explain tests given to assess human cognition and motor function
7. Assess methods to test chemicals for safety
8. Explain the involvement of neurological diseases and mental illnesses in the well-being of the population
9. Explain the biology of neurodevelopment and neuroaging
10. Discuss the historical and philosophical perspectives in studying the brain

Email: jbressl1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 187.610 or consent of instructor

188.681.01 Onsite Evaluation Of Workplace And Occupational Health Programs

5 credits - Course offered this year - East Baltimore

Rule, Ana Maria

Lectures, discussions, and visits to various industrial sites present approaches to evaluating the industrial environment, including industrial process, hazards, organization, and management structure. Stresses the importance of interdisciplinary cooperation in the development of occupational health programs, with reference to the U.S. workplace in the next decade.
Upon successfully completing this course, students will be able to:
1. Practice in collaboration with other disciplines within the field of occupational practice
2. Evaluate the industrial environment, including industrial processes, hazards, labor issues, and corporate structure in the context of worker health and safety
3. Analyze examples of workplace and other environmental exposures in the context of regulations, laws, and policies
4. Formulate a program and a feasible implementation plan to control occupational health hazards
5. Recommend risk management approaches, including regulatory, engineering, and behavioral/risk communication options
6. Assess the effectiveness of interventions that have been instituted to modify risks associated with workplace and other environmental hazards
7. Identify the association between social, behavioral, and organizational factors and health outcomes in the workplace

Method of Assessment

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<tr>
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<tr>
<td>2. Participation</td>
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<tr>
<td>3. Group Presentation</td>
<td>40</td>
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<tr>
<td>4. Final Project</td>
<td>30</td>
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Email: arule1@jhu.edu
Lecture: W 8:30 AM - 4:50 PM
Lecture: M 8:30 AM - 11:50 AM
Enrollment: Minimum 5, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Consent required for all students
Prerequisite: 188.680, 187.610 and 182.625 are recommended.

188.682.81 A Built Environment For A Healthy And Sustainable Future

3 credits - Course offered this year - Internet
Parker, Cindy
Addresses the role that the built environment plays in public health. Specifically examines how building design, community planning and design, land use, and transportation networks contribute to energy use, water supply degradation, climate change, ecosystem degradation, and public health. Explores the contributions of suburban sprawl to adverse environmental and public health outcomes. Also examines how the built environment could and must change if we are to stabilize the climate and move into a sustainable future.

Upon successfully completing this course, students will be able to:
1. Analyze how land use and transportation networks contribute to adverse public health outcomes
2. Explain the role of health impact assessment in addressing these issues
3. Use Systems Thinking to explain the relationships between the built environment, climate change, equity, and public health
4. Distinguish the focus, tools, and solutions offered by the green architecture, the New Urbanism, and smart growth approaches to the environmental and public health impacts of the built environment
5. Develop a framework for considering different strategies of creating or transforming the built environment for a sustainable future

Method of Assessment

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<tbody>
<tr>
<td>1. Participation</td>
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<td>2. Midterm Assignment</td>
<td>30</td>
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<tr>
<td>3. Final Assignment</td>
<td>40</td>
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Email: cindyparker@jhu.edu
Enrollment: Minimum 10, Maximum 18, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent of instructor required for students who have not taken the prerequisite
Prerequisite: 180.611 The Global Environment, Climate Change and Public Health, 180.607 Climate Change and Public Health, or consent of instructor

188.688.01 Global Sustainability & Health Seminar

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 50 of 202
Students and faculty discuss the causes, consequences, and implications of key global environmental challenges that we are facing and that are likely to become more challenging over time. Specifically addresses how land use (e.g., patterns of urban growth and suburban sprawl), energy use, food production and distribution, water use, and population growth are causing climate change, ecosystem degradation, biodiversity losses, species extinctions, and other resource depletion, and how all this is in turn is a threat to human health as individuals, in communities, and globally. Focuses on discussion and not lectures and will utilize a mix of movies, guest discussants, and student directed discussions.

Upon successfully completing this course, students will be able to:

1. Define the aspects of land use, energy use, food production and distribution, water use, and population growth that contribute to environmental degradation
2. Analyze how peak petroleum (AKA “after peak oil”), political obstacles, economic interests, and federal indebtedness influence how we address these issues
3. Define how the “drivers” in #1 above cause climate change, ecosystem degradation, species losses, biodiversity losses, and other resource depletions
4. Begin to develop an analytic framework for how we should address these issues to prevent the major health risks they present

Email: cindyparker@jhu.edu
Lecture: TH 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: 180.611.01 The Global Environment, Climate Change, and Public Health

188.840.01 Special Studies And Research Environmental Health & Engineering
variable credits 1-22 - Course offered this year - East Baltimore

Prepares students to identify and research the central issues in environmental health

Upon successfully completing this course, students will be able to:

1. Identify areas of interest for current and future research

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

188.861.01 Advanced Topics In Toxicology And Physiology (Cancelled - Department)
1 credits - Course offered this year - East Baltimore
Davis, Meghan; Mitzner, Wayne; Tang, Winnie Wan-ye

Reviews the unique and advanced topics in toxicology and physiology. Presents students with guidelines for understanding the basic knowledge as well as the advanced methodology in toxicology and physiology. Prepares students to be able to identify the environmental health problems and present the critical reviews on the original peer-review papers in selected topics.

Upon successfully completing this course, students will be able to:

1. Critically review experimental designs, methods, data presented and conclusions drawn in selected published papers
2. Orally present clear, critical summaries of assigned papers
3. Know how to formulate and ask critical questions following oral presentations by others
4. Able to identify the current trends in toxicology and physiology studies
5. Demonstrate skills needed to write critical reviews on selected topics

Email: mdavis65@jhu.edu
Lecture: T 12:00 PM - 1:20 PM
Enrollment: Minimum 5, Maximum 10, Waitlist Enabled: Yes
No undergraduates
Grading Options: Pass/Fail
Prerequisite: Background in environmental health
340.600.01 Stata Programming
2 credits - Course offered this year - East Baltimore
Segev, Dorry; Massie, Allan
Teaches Stata programming in a systematic way to students who have had exposure to Stata or another statistical package, but may not have the tools to perform complex analytical projects independently. Covers data management, programming concepts, procedural programming, Stata-specific commands and constructs, and project workflow.

Upon successfully completing this course, students will be able to:

1. Demonstrate STATA commands that are necessary for analysis, but that students may not encounter in the core biostatistics/epidemiology series: reshape, collapse, encode, insheet; variable formats (strings, ints, floats, dates); factor variables; advanced graphing
2. Produce STATA programming to make work more efficient and less error-prone: loops; macros, .ado files; text file output; automating table/figure generation
3. Create project workflow so that data are not lost and results are reproducible: logging, commenting, versioning, file organization

Method of Assessment

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<th>Percentage</th>
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<tbody>
<tr>
<td>1. Homework</td>
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<tr>
<td>2. Participation</td>
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Email: dorry@jhmi.edu
Lecture: TH 3:30 PM - 5:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Auditors and those without the prerequisites.
Prerequisite: 340.751-752 or 34.721-722; 140.621-622 or 140.651-652 or permission from instructors

340.610.81 The One Health Approach To Epidemiology And Global Public Health: Problem Solving Seminar
3 credits - Course offered this year - Internet
Gurley, Emily; Lessler, Justin
Introduces the One Health approach to global public health research and practice, providing examples of how evidence shapes public health policy and health promotion, from the local to the global scale. Strategic thinking, negotiation and consensus-building methods, and shared decision making in translating evidence to behavior and international policy will be practiced. Interaction with guest speakers working in One Health fields will be available.

Upon successfully completing this course, students will be able to:

1. Describe the meaning of One Health and give illustrative examples from global public health research and practice about how this concept can be applied to prevent disease in international contexts
2. Identify global health problems that should optimally be addressed through the One Health approach, including infectious and non-infectious diseases
3. Communicate public health science resulting from One Health investigations to diverse stakeholders of various backgrounds in order to influence behavior and policy
4. Develop a strategic resource plan that proposes human, fiscal, and other resources to achieve a One Health goal
5. Use negotiation and consensus-building methods to facilitate shared decision making with a diverse group of national and international public health professionals in the design of a One Health program
6. Integrate epidemiologic data, scientific information, international regulatory frameworks, ethical considerations and stakeholder interests in international policy development and analysis

Method of Assessment

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<th>Percentage</th>
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<tbody>
<tr>
<td>1. Assignments</td>
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<tr>
<td>2. Group Project(s)</td>
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<tr>
<td>3. Participation</td>
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Method of Assessment Detail:

70% Individual Assignments (10% for each of the 7 assignments);
20% Final Group Project;
10% Class Participation: Attendance and active participation in all 3 LiveTalks, including the final session.
340.618.81 Epidemiology: The Basics
3 credits - Course offered this year - Internet
Celentano, David;Deal, Jennifer
Introduces the population science of epidemiology, including methods and approaches to measurement and outcomes, study design and inference, risk estimation, and surveillance. Provides the essential elements of epidemiology as appropriate for public health scientists.
Upon successfully completing this course, students will be able to:
1. Define and describe epidemiology as it is applied to public health science.
2. Distinguish study designs and target and source populations.
3. Identify, calculate, and interpret basic epidemiologic measures of disease frequency, validity and reliability, and associations.
4. Identify, describe, and critique the distinguishing features of fundamental study designs including randomized clinical trials, cohort, case-control, ecologic, and cross-sectional.
5. Calculate basic measures used to compare disease frequencies, identify and classify sources of information and selection bias, identify concepts and frameworks useful for inferring causation, and define confounding.
6. Summarize how epidemiologic methods are used in public health sciences, including in conducting outbreak investigation and surveillance, evaluating screening programs and health interventions, and in developing health policy.
Method of Assessment: Percentage
1. Quizzes 50
2. Midterm 25
3. Final Exam 25
Method of Assessment Detail:
  1. 4 online quizzes (10% each), midterm (30%), final (30%)

340.639.01 Assessing Epidemiologic Impact Of Human Rights Violations
2 credits - Course offered this year - East Baltimore
Beyrer, Chris;Wirtz, Andrea
Using a case-based approach, investigates interactions of epidemics, public health, and human rights. Explores how human rights violations and failed public policies can affect the health of populations and the efficacy of public health efforts. Examines epidemiologic methods to investigate and describe these interactions, including qualitative assessments and interview approaches, population level measures, indirect measures for use in conflict areas, and new tools of molecular epidemiology. Case studies include the stalled response to cholera in Zimbabwe; HIV/AIDS in Burma; HIV, STIs, and violence in relation to human trafficking and sex work; HIV prevention for drug users in Russia, the CIS and China; and the policies of limiting condom availability for prisoners in the US, Russia, and Thailand.
Upon successfully completing this course, students will be able to:
1. Explain the mechanisms through which policies and rights abrogations can worsen epidemics, of the benefits of using a rights-based approach to public health problems, and of current epidemiologic tools to study these complex issues.

Email: egurley1@jhu.edu
Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
DrPH students
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning,
Learning Materials:

- (Book) Public Health & Human Rights: Evidence-Based Approaches
  Beyrer, Chris
  Matthews Book Center $31.30
  Comment: price is quoted by Amazon.com

340.641.01 Healthcare Epidemiology (Cancelled - Minimum Not Met)
4 credits - Course offered this year - East Baltimore
Korpe, Poonum
Prepares students for a career in healthcare epidemiology, examines the epidemiology, pathogenesis and prevention of healthcare associated infections and the evidence behind interventions to control these infections. Uses analytic tools to answer important research questions and practical skills such as conducting root cause analyses, utilizing CUSP methodology for process improvement, performing surveillance, and evaluating outbreaks.

Upon successfully completing this course, students will be able to:
1. Introduce the principles of identifying healthcare-associated infections, organisms resistant to antimicrobial agents, or organisms that are epidemiologically important
2. Identify strategies for infection surveillance in healthcare settings
3. Effectively communicate about exposure of communicable diseases
4. Ascertain appropriate prevention and control strategies in healthcare settings
5. Explain the impact that healthcare associated infections have on patient safety

Method of Assessment     Percentage
1. Written Assignment(s)   33
2. Group Work              33
3. Final Exam              33
4. Participation           1

Email: pkorpe1@jhu.edu

Lecture: T TH 1:30 PM - 3:20 PM

Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Instructor consent required for auditors only.

Prerequisite:

340.644.01 Epidemiology Of Diabetes And Obesity
2 credits - Course offered this year - East Baltimore
Yeh, Hsin-Chieh (Jessica); Pilla, Scott

Describes the epidemiology and prevention of diabetes, obesity, and associated complications. Discusses methodological issues associated with evaluating these in epidemiologic studies. Designed to cover the global epidemics of diabetes and obesity, the risk factors, as well as interventions to alter the course of these diseases. Includes lectures from several expert faculty members in the School of Public Health and the School of Medicine.

Upon successfully completing this course, students will be able to:
1. Describe the epidemiology and prevention of diabetes, obesity, and associated complications
2. Discuss methodological issues associated with evaluating these in epidemiological studies
3. Apply methodological principles when implementing research studies or interpreting the scientific literature

Method of Assessment     Percentage
1. Homework               30
2. Midterm                30
3. Final Project          30
4. Participation          10

Email: hcyeh@jhsph.edu

Lecture: T 3:30 PM - 5:20 PM
340.648.01 Clinical Trials Management
3 credits - Course offered this year - East Baltimore
Ervin, Ann
Provides an overview of methods related to the day-to-day conduct of multicenter randomized clinical trials with an emphasis on the Coordinating Center perspective. Using case studies of multicenter clinical trials for illustration, emphasizes topics related to practical applications such as organizational models, use of standardization, and performance monitoring. Discussion of methods is encouraged, including alternatives to usual practice.
Upon successfully completing this course, students will be able to:
1. Apply competencies gathered throughout this and other epidemiology or biostatistics courses on key components of multicenter clinical trials
2. Describe developing strategies applicable at most participating centers in a multicenter setting including writing study policies and procedures
3. Conduct multicenter trials
Email: aervin@jhu.edu
Lecture: T TH 2:00 PM - 3:20 PM

340.651.01 Emerging Infections
2 credits - Course offered this year - East Baltimore
Beyrer, Chris
Explores the factors promoting the emergence of new infectious diseases and the re-emergence of some of the more traditional infections. Evaluates agent, host, environmental and ecological factors in the emergence of infectious diseases. Presents methods of surveillance and early recognition of several important emerging infections. Lecturers with considerable experience in the investigation of specific emerging infections discuss the issues specific emerging infections. Following each one hour lecture, students present and discuss a paper describing an investigation of an Emerging Infection. Presents, describes, and analyzes the factors related to the emergence of infectious diseases, new and old, that have emerged as important public health problems, or which have the potential for major epidemic spread. Explains possible methods for the rapid recognition, prevention, and control.
Upon successfully completing this course, students will be able to:
1. Demonstrate clear discussing of the major factors leading to he emergence of new infectious diseases , or re-emergence of infectious diseases in humans
2. Describe and discuss the means of transmission and reservoirs of several new emergent infections in humans and how data pertaining to the means of transmission and reservoir of these newly emergent infectious diseases were obtained and interpreted
3. Evaluate the positive features and limitations of various methods to control or prevent the emergence of infectious diseases
Email: cbeyrer@jhu.edu

Learning Materials:
- (Book) A Clinical Trials Manual from the Duke Clinical Research Institute: Lessons from a Horse Named Jim
  Liu, Margaret B
  Amazon $70.37
- (Book) Clinical Trials: Design, Conduct, and Analysis
  Meinert, Curtis L
  Amazon $128.25
Comment: other prices found, including 1st ed. for $0.19.

Email: aervin@jhu.edu

Lecture: T TH 2:00 PM - 3:20 PM
Enrollment: Minimum 5, Maximum 35, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Students may take either 340.601 or 340.751, but they must also take 340.645. (n.b. Some concepts covered in this course are also covered in 340.660 offered 1st term.)

Learning Materials:
- (Book) A Clinical Trials Manual from the Duke Clinical Research Institute: Lessons from a Horse Named Jim
  Liu, Margaret B
  Amazon $70.37
- (Book) Clinical Trials: Design, Conduct, and Analysis
  Meinert, Curtis L
  Amazon $128.25
Comment: other prices found, including 1st ed. for $0.19.

FOURTH TERM COURSE SCHEDULE 2019-2020 -- March 23 - May 15, 2020

Email: aervin@jhu.edu
Lecture: W 3:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

340.666.81 Foundations Of Social Epidemiology
3 credits - Course offered this year - Internet
Latimore, Amanda

Students learn to apply social epidemiologic concepts, introduced through weekly online lectures and readings, and the use of discussions and case studies. Prepares students to understand and appreciate the contribution of social factors to disease etiology, course and the distribution of states of health in populations. After reviewing the conceptual and theoretical underpinnings of social epidemiology from an historical perspective, we focus on the scientific findings in the field from the 1970's until today. The influence of social context on behavior is well known, and forms the backbone for most health promotion interventions; we focus initially on how the social environment influences behavior, by shaping norms, reinforcing social control, providing environmental opportunity, and coping strategies.

Upon successfully completing this course, students will be able to:
1. Explain the historical and theoretical underpinnings of the field of social epidemiology and discuss the major unsolved issues confronting the field
2. Demonstrate the quality and limitations of measurement of key social conditions influencing health and illness of populations
3. Distinguish between psychological (individual-based) approaches to discussing health disparities from the social perspective (community-based), and demonstrate how the empirical literature critically supports these differences for a particular health or disease state.
4. Operate within and facilitate a discussion group format

Method of Assessment

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<tbody>
<tr>
<td>1. Quizzes</td>
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<td>2. Discussion Board</td>
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<tr>
<td>4. LiveTalks</td>
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Email: alatimore@jhu.edu

Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 340.601, 340.721, or 340.751 or equivalent. Students must complete Introduction to Online Learning prior to enrolling in this course.
Students must have some background in social science theory and methods. Students who have not had college level social science (sociology, psychology, anthropology) should consult with the course director before signing up for this course.

340.677.01 Infectious Disease Dynamics: Theoretical And Computational Approaches
3 credits - Course offered this year - East Baltimore
Wesolowski, Amy;Lessler, Justin

Focuses on the dynamic processes that affect the spread of infectious disease. Presents basic conceptual approaches and a survey of specific theoretical and computational methods for simulating the spread of diseases. Specific topics include simulations of disease in small populations, and of the impacts of interventions; social networks and the links between transmission dynamics and the evolution of pathogens. Methods include deterministic, stochastic, age-structured and spatially structured models, social network theory, and other tools of systems epidemiology. Particular focus is paid to simple models of transmission and estimation of parameters describing the dynamics of transmission. Students will be comfortable constructing their own simulations of disease transmission. Concepts and methods are applied to historical epidemics, current emerging diseases and diseases of international public health importance.

Upon successfully completing this course, students will be able to:
1. Assess computational and theoretical studies of infectious diseases that appear in the literature
2. Develop simple computational models of infectious disease to simulate the spread of an infectious disease in a population
3. Distinguish between existing computational approaches and describe the relative strengths and weaknesses of each

Email: awesolo2@jhu.edu

Lecture: M F 3:30 PM - 4:50 PM
Enrollment: Minimum 10, Maximum 33, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Biostatistics 621-623 or 651-653 or consent of instructors. In addition, one year of calculus is recommended.

340.680.01 Environmental And Occupational Epidemiology
4 credits - Course offered this year - East Baltimore
Guallar, Eliseo; Heaney, Christopher
Introduces the key health effects of environmental and occupational exposures and the epidemiologic methods used to identify and estimate those effects. Emphasizes the interplay of methodological issues, including the assessment of environmental exposures and the understanding of specific disease processes in identifying the health impact of environmental exposures in the population. Students learn about environmental and occupational exposures (including water and air pollution, food contamination, ionizing radiation, persistent environmental pollutants and emergent environmental exposures) and key methodological issues relevant for these exposures in population studies (including study design, exposure assessment and biomonitoring, disease clusters, dose-response relationships, susceptibility, geographic analysis, and evidence synthesis).

Upon successfully completing this course, students will be able to:

1. Identify the major environmental and occupational risk factors for health-related outcomes in human populations
2. Explain the key methodological issues relevant to the identification and estimation of the burden of disease caused by environmental factors
3. Describe the pattern of burden of disease in a country using standard fertility and mortality indicators, estimates of disease burden measured in Disability-Adjusted Life Years (DALYs), data on disease incidence, prevalence, risk factors and geographic distribution and the concept of epidemiologic transition
4. Describe and analyze environmental and occupational health problems, and discuss exposure-disease relationships in human populations

Method of Assessment

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Email: eguallar@jhu.edu
Lecture: M W 1:30 PM - 3:20 PM
Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Either 340.601 Principles of Epidemiology and 340.608 Observational Epidemiology, OR 340.751 Epidemiologic Methods 1, 340.752 Epidemiologic Methods 2, and 340.753 Epidemiologic Methods 3
Jointly offered with EHE

340.692.01 Prisons, Public Health, And Human Rights (Cancelled - Department)
2 credits - Course offered this year - East Baltimore
Eber, Gabriel
Explores the public health implications of mass incarceration and discusses the human rights and ethical ramifications of providing health care to men, women, and children in jails, prisons, and detention centers both in the United States and internationally. Takes a systems approach to addressing the basic health needs of the prison population, including infection control, care for acute and chronic medical conditions, and mental health care. Students apply problem-solving skills and explore the challenges of providing care in incarcerated settings. Emphasizes the roles of human rights principles and professional ethics in public health.

Upon successfully completing this course, students will be able to:

1. Explain the intersection of prisons, public health practice and policy, and human rights principles
2. Describe the key elements of prison health care systems and the challenges of providing care in the correctional setting
3. Recognize the ethical conflicts faced by health care professionals who treat incarcerated patients.
4. Describe the role of public health ethics in the correctional context, including the tension between patient autonomy and the coercion inherent in incarceration
5. Identify the special health needs of women, the elderly, and lesbian, gay, bisexual, transgender and intersex (LGBTI) prisoners
6. Apply public health principles to improve specific processes, including intake screening and reentry into the community
7. Assess the epidemiology of infectious diseases and mental illness in correctional populations

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 57 of 202
### Method of Assessment

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<th>Method of Assessment</th>
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<tr>
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<td>85</td>
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<td>2. Participation</td>
<td>15</td>
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### Method of Assessment Detail:

Three written assignments, submission of discussion questions, and participation in discussion/activities: Written assignment 1: 5% Written assignment 2: 40% Written assignment 3: 40% Participation in Class Discussion/Activities: 15%.

Email: geber1@jhu.edu
Lecture: M 5:30 PM - 7:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

**340.698.01 Methods For Assessing Power, Privilege, And Public Health In The United States**

4 credits - Course offered this year - **East Baltimore**

Dean, Lorraine

Discusses emergent health issues and how the choice of measures for power, privilege, and inequality influence results in epidemiological research. Challenges you to reflect on how your own positions of privilege influence your interpretation of data and your public health practice. Provides an opportunity to apply epidemiology research skills to develop and execute a data-driven project on a real-world health problem that can will be presented and used by a community partner.

Upon successfully completing this course, students will be able to:

1. Recognize structures of power and privilege in the US and the rest of the world, and articulate how that impacts health.
2. Describe strengths and limitations of quantitative and qualitative methods used to evaluate structures of power and privilege and how they influence health.
3. Identify their own roles in structures of power and privilege, and how that influences approach to epidemiological analysis and interpretation of results.
4. Determine the role of data in a community-based organization.
5. Collaborate with a community-based organization as an equal partner in developing a data-related product appropriate for community usage
6. Interpret community-based health data in the context of structures of power and privilege

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<td>1. Reflection</td>
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<td>2. Problem sets</td>
<td>20</td>
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<td>3. Assignments</td>
<td>50</td>
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<tr>
<td>4. Participation</td>
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### Method of Assessment Detail:

20% Written Reflections, 20% Mid-term Exam, 50% Class Final Project, 10% participation (1/2 class attendance, 1/2 completion of SOURCE online modules)

Email: idean9@jhu.edu
Lecture: M W F 10:30 AM - 11:50 AM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Consent required for any students who have not met prerequisites (i.e. not have taken a social epidemiology course) but are interested in taking the course.

Prerequisite: 340.601 or 340.721 or 340.751 or equivalent Epidemiology course, 140.621 or equivalent Biostatistics course, 1 course in social epidemiology such as 340.666 and basic knowledge of a programming language (e.g., Stata, SPSS, SAS, R)

This is a service-learning course, so will include up to 3 trips to the community partner for orientation, observation, and presenting the final data product.
340.700.01 Advanced Stata Programming (Cancelled - Department)
1 credits - Course offered this year - East Baltimore
Massie, Allan; Segev, Dorry
Presents advanced topics in Stata Programming to expand upon the material in 340.600. Topics include simulations, advanced programming, file manipulation, and code optimization.
Upon successfully completing this course, students will be able to:
1. Use advanced Stata syntax
2. Create and run simulations using Stata
3. Write powerful and flexible programs to automate analytical tasks in Stata
4. Optimize Stata code for faster runtime and minimal memory/disk usage
5. Generate hypertext output using Stata (HTML, LaTeX)

Email: amassie1@jhmi.edu
Lecture: T 4:00 PM - 5:00 PM
Enrollment: Minimum 8, Maximum 25, Waitlist Enabled: Yes
The course is restricted to students concurrently enrolled in 340.600.
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Instructors to assess background knowledge
Prerequisite: Concurrent enrollment in 340.600 and at least 1.5 years’ experience with Stata, or familiarity with Stata and knowledge of another programming language
Course is an offspring of 340.600

Learning Materials:
• (Computer File) Stata
  ISBN:  ; 14 preferred, 12>= edition ()
  StataCorp LP $125.00
  Comment: Graduate Student pricing:range from rental to perpetuity:
  http://www.stata.com/order/new/edu/gradplans/student-pricing/

340.715.01 Problems In The Design Of Epidemiologic Studies: Proposal Development And Critique
5 credits - Course offered this year - East Baltimore
Selvin, Elizabeth; Shin, Jung-Im
Presents the methodologic and logistic problems involved in designing and conducting epidemiologic studies. Students participate in the preparation of a research proposal for a study in a human population. Offers an opportunity to critically evaluate the adequacy and scientific merit of research proposals, develop an appreciation of the ethical aspects of conducting research involving human subjects, and apply methods and principles learned in earlier (340.751 - 753) and current courses to specific epidemiologic problems.
Upon successfully completing this course, students will be able to:
1. Describe the methodological and logistic problems involved in designing and conducting epidemiologic studies
2. Prepare a research proposal for study in a human population modeled after the National Institutes of Health grant application format
3. Critically evaluate the adequacy and scientific merit of research proposals

Method of Assessment

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<tr>
<td>0. Participation</td>
<td>12</td>
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<tr>
<td>1. Attendance</td>
<td>12</td>
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<td>2. Final proposal</td>
<td>60</td>
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<tr>
<td>3. Written reviews</td>
<td>15</td>
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Method of Assessment Detail:
  Participation is 12.5% and Attendance is 12.5%.

Email: eselvin@jhu.edu
Lecture: M W F 1:30 PM - 3:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
2nd year doctoral students in Dept. Epidemiology

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 59 of 202
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for non-Epidemiology doctoral students
Prerequisite: 340.751 - 340.753 and 340.863 (3 terms)
The course cannot be taken as pass/fail by doctoral students in Epidemiology.
There are some scheduled days that the course doesn't meet. Email instructor for the specific days.

340.722.81 Epidemiologic Inference In Public Health II
4 credits - Course offered this year - Internet
Tarwater, Patrick
Expands knowledge beyond introductory level epidemiologic concepts and methods material, using examples from the published literature. Emphasizes interpretation and the ability to critically evaluate issues related to populations/study design, measurement, population comparisons and inference, including: modern cohort study designs; advanced nested designs; novel techniques for exposure assessment; interpretation and utility of measures of impact; sources of bias and methods for their prevention; descriptive and analytical goals for observational study inference; the counterfactual model for defining exchangeability, cause, and confounding; and synthesis of inferences from observational studies.

Upon successfully completing this course, students will be able to:
1. Critically analyze public health literature and utilize a framework to illustrate strengths and limitations in the epidemiologic approach
2. Compare and contrast advanced aspects of randomized clinical trials, cohort, and nested study designs, with an emphasis on methods for participant selection, data summarization and population comparisons based on these designs
3. Identify and differentiate sources of bias resulting from participant selection, measurement and misallocation of person-time, describe the impact of these biases on epidemiologic inferences, and identify approaches for ameliorating their influence
4. Articulate concepts and terminology used to define a ‘cause’ in epidemiology; utilize graphical tools (e.g., DAGs) to illustrate and explain causal inference concepts
5. Distinguish and illustrate confounding, effect modification, and mediation, and contrast ‘classical’ (e.g., regression-based) and modern (e.g., propensity-score) approaches for addressing these phenomena
6. Evaluate the strengths and weakness of epidemiological investigations with non-causal inferential goals, including ‘risk-factor’ studies and prediction

Method of Assessment Percentage
1. Quizzes 25
2. Project(s) 35
3. Assignments 15
4. Final Exam 25

Email: ptarwat1@jhmi.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 340.601 or 340.721 or 340.751; Biostatistics 140.621 or equivalent.
Course replaces 340.608 Observational Epidemiology. Students who have successfully completed 340.608 should not take this course. This is the second course in the Professional Epidemiology methods sequence.

340.723.01 Epidemiologic Practice Methods For Population Health Research
2 credits - Course offered this year - East Baltimore
Chandran, Aruna
Introduces quantitative epidemiologic techniques applied by both academics and public health professionals to analyze and interpret routinely collected at the subpopulation level to target and address health inequities. Four modules include instruction in Stata and R, with topics including:

1. Weighted Survey Analysis: Analytic techniques for the incorporation of weights in the analysis of survey data to make inferences about the target population.
2. Calculating Life Expectancy: Calculation of single-decrement life tables using statistical programs as well as publically available Excel-based tools.
4. Conceptual Frameworks in Epidemiology: Apply graph theory to understand the relationships between variables in commonly-used causal frameworks. Understand the importance of using conceptual frameworks in guiding epidemiologic inquiry.

Upon successfully completing this course, students will be able to:

1. Apply methods for the analysis of weighted survey data, access publically available population-based survey data conducted routinely in the US, and understand techniques used in weighting population survey data.
2. Describe the components of a single-decrement life table, and use of life table tools to calculate at-birth life expectancy in demographic subpopulations using vital statistics data.
3. Apply appropriate econometric techniques for quantifying changes in population-level core measures of health and well-being having averted deaths through adjustments in modifiable risk factors.
4. Identify opportunities for intervention and policy change in behavioral/environmental risk factors affecting population health through understanding the relationships between variables using elements of graph theory, and applying approaches for developing appropriate conceptual frameworks to answer a stated research question.

Email: achandr3@jhu.edu
Lecture: W 8:30 AM - 10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Epid Methods 1 and 2, e.g. 340.752 OR Epi Inference 1 and 2/Principles of Epi 1 and Epi Inference 2 (e.g. 340.722) AND 2 terms of Biostats: 140.622 OR 140.652

The format of this course is a combination of lectures and small group discussions. In each module, students will be given time in small groups to discuss concepts and assignments, but ultimately each assignment will be turned in individually. There will be no requirement for small groups to meet outside of class time.

340.734.01 Principles Of Genetic Epi 4: Emerging And Advanced Methods
2 credits - Course offered this year - East Baltimore
Duggal, Priya; Beaty, Terri
Discusses current topics in genetic epidemiology methods. Builds on the knowledge gained in Principles of Genetic Epidemiology 1-3 and provides an opportunity for students to drive the discussion and understand the details of the methods they have learned, as well as gain exposure to specialized topics still evolving in genetic epidemiology and genomics.

Upon successfully completing this course, students will be able to:

1. Evaluate the various approaches to gene-gene and gene-environment interaction, and enrichment analyses such as gene set analysis and pathway analysis
2. Conduct enrichment analyses such as gene set analysis
3. Develop and utilize analytical techniques suitable for trans-ethnic and admixed population samples
4. Discuss and determine epigenetics
5. Conduct analysis of sequence data
6. Communicate the nuances of ethical, legal and social implications (ELSI) of genetic and genomics studies
7. Incorporate novel genetic technologies in various study designs

Email: pduggal@jhu.edu
Lecture: TH 1:30 PM - 3:20 PM
Enrollment: Minimum 6, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; PHS undergraduates must request permission from Dr. Beaty or Dr. Duggal to enroll
Prerequisite: 340.733; 340.753, 140.623 or 653
340.776.01 Study Design And Analysis For Causal Inference With Time-Varying Exposures (Cancelled - Department)

Jackson, John

Presents a holistic framework for studying causal effects of time-varying exposures. Builds on 140.664 and 340.774 and explores how to articulate causal questions and clarifies assumptions needed to identify the effects of time-varying exposures. Distinguishes total effects of exposures at a given point in time from those that involve cumulative doses or adherence to dynamic treatment rules. Outlines design parameters such as eligibility, start of follow-up, and artificial censoring with data from cohorts or administrative healthcare records. Reviews the motivation, intuition, and application of advanced methods such as time-dependent propensity scores, marginal structural models, and the parametric g-formula to overcome time-varying confounding and selection-bias. Emphasizes practical application and robustness checks, guideposts for choosing among study designs and analytic methods, and comparative strengths for studies with an etiologic vs. translational focus.

Upon successfully completing this course, students will be able to:

1. Formulate well-defined causal questions in terms of total, direct, sustained, and cumulative effects of time-varying exposures
2. Encode scientific knowledge into a causal model and identify what data are needed to identify causal effects of time-varying exposures
3. Craft appropriate study designs from complex longitudinal data that overcome immortal person-time, selection-bias, and feedback between time-varying exposures and confounders
4. Compare the practical and inferential strengths and weaknesses of advanced methods for studying time-varying exposures and identify when simpler methods suffice
5. Apply study designs and statistical models to study the effects of cumulative exposure and adherence to complex treatment rules using cohort and administrative healthcare data

Method of Assessment

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<tr>
<td>Group Work</td>
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<tr>
<td>Participation</td>
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<tr>
<td>In-class Exercises</td>
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Method of Assessment Detail:

4 group-based assignments, 20% each, consisting of 4 problem sets and a data analysis; Journal club facilitation, 10%; class participation, 10%.

Email: john.jackson@jhu.edu
Lecture: M W 10:30 AM - 11:50 AM

Enrollment: Minimum 7, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Auditors and anyone who has not completed 340.774.
Prerequisite: Prior enrollment in 140.664 or concurrent enrollment in 140.665. AND Prior enrollment in 140.621-623 with concurrent enrollment in 140.624 OR Prior enrollment in 140.651-653 with concurrent enrollment in 140.654. Prior enrollment in 340.774.

340.800.01 MPH Capstone Epidemiology

2 credits Must have 1-4 credits per term for two terms. - Course offered this year - East Baltimore

Departmental Faculty

The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).
340.803.01 Advanced Topics In Cardiovascular Disease Epidemiology
2 credits - Course offered this year - East Baltimore
Sharrett, A Richey; Miller, Edgar R.
Provides a forum for in-depth discussion of current research on cardiovascular diseases etiology. Selected topics, to be chosen together by students and faculty, include the major factors predicting coronary heart disease and stroke. Students review literature and present to the class information on specific hypotheses and their biological plausibility, and evaluate the population-based evidence to support them.

Upon successfully completing this course, students will be able to:
1. Gain familiarity with research challenges in cardiovascular research
2. Apply epidemiologic methods to address these challenges

Email: rsharret@jhu.edu
Lecture: T 8:30 AM - 10:20 AM
Enrollment: Minimum 8, Maximum 14, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Dr. Sharrett requires pre-screening of non-CVD degree students.
Prerequisite: 340.753 and 340.607 waivers may be granted only on permission of the instructor.

340.810.01 Field Placement Epidemiology
variable credits 1-16 - Course offered this year - East Baltimore
Provides a mechanism for recognizing student work off-site. Students may elect this option to reflect research experiences outside of the on-campus research and analysis positions open to students. International students completing Curricular Practical Training must register for a minimum of one credit while working.

Upon successfully completing this course, students will be able to:
1. Apply epidemiologic methodology and biostatistical theory in actual public health settings.
2. Perform epidemiologic analysis to existing datasets
3. Demonstrate professionalism in industry, education, or government agencies

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

340.820.01 Thesis Research Epidemiology
variable credits - Course offered this year - East Baltimore
Upon successfully completing this course, students will be able to:
1. Write a publishable quality manuscript

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

340.830.01 Postdoctoral Research Epidemiology
variable credits - Course offered this year - East Baltimore
Upon successfully completing this course, students will be able to:
1. Conduct post-graduate research and write papers for publication

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

340.840.01 Special Studies And Research Epidemiology
variable credits - Course offered this year - East Baltimore
Upon successfully completing this course, students will be able to:
1. Become proficient in field of research; perform literature reviews; or conduct secondary data analysis at an advanced level

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsphs.edu/courses - Page 63 of 202
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

340.855.01 SS/R: Biological Basis Of Cardiovascular Disease Epidemiology
2 credits - Course offered this year - **East Baltimore**

Maruthur, Nisa
Overview of cardiovascular pathophysiology specifically geared for students without a clinical medicine background. Topics covered include cardiovascular physiology, coronary heart disease, hypertension, heart failure, kidney disease, stroke, cardiovascular imaging, and electrocardiograms. Topics are covered by a combination of selected readings, invited speakers, and class discussions.

Upon successfully completing this course, students will be able to:
1. Discuss normal and abnormal cardiac and vascular anatomy and physiology
2. Describe pathophysiologic processes involved in common cardiovascular disease states, including atherosclerosis, coronary artery disease, and heart failure
3. Describe biological mechanisms through which cardiovascular risk factors, including hypertension, kidney disease and diabetes, affect the cardiovascular system
4. Identify the diagnostic techniques used to assess common cardiovascular disease states, including invasive and non-invasive imaging techniques

Email: maruthur@jhmi.edu
Lecture: M 3:30 PM - 5:20 PM

Enrollment: Minimum 5, Maximum 15, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Consent required for all students; Screening and scheduling required prior to start.
Prerequisite: 340.751, 340.752, 340.753
location: Welch Center: 2024 E Monument St; Whelton Conf Room 2-600

340.860.01 Current Topics In Epidemiologic Research
1 credits - Course offered this year - **East Baltimore**

Camarata, Laura
Attended by staff, students and faculty, this seminar series is an opportunity for the Department of Epidemiology to come together for exposure to epidemiologic methods as applied in research settings. Provides a broader perspective on contemporary issues in epidemiology and its research, through presentations of current research in the field of epidemiology.

Upon successfully completing this course, students will be able to:
1. Discuss current epidemiologic research being conducted by or in collaboration with the JHSPH Department of Epidemiology
2. Interact with Department faculty and epidemiologic researchers
3. Discuss topics related to professional development as an epidemiologist

**Method of Assessment**

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<tr>
<th>Method</th>
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<tr>
<td>1. Active Listening</td>
<td>25</td>
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<tr>
<td>2. Discussion</td>
<td>25</td>
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<tr>
<td>3. Participation</td>
<td>50</td>
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Email: lcamarat@jhsph.edu
Lecture: F 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: Concurrent or prior introductory epidemiology course.
Meets every Friday during the term. Seminars begin promptly at 12:15. Attendance of 7 sessions is required.

340.865.01 Teaching Epidemiologic Methods And Concepts At The Graduate Level
variable credits 1 to 8 credits - Course offered this year - **East Baltimore**

Camarata, Laura
Review and evaluate critical skills in teaching and communicating science, epidemiology, methods, and theory to a wide range of individuals. Provides a feedback mechanism for learning best practices in education at the graduate level.

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*FOURTH TERM COURSE SCHEDULE 2019-2020 -- March 23 - May 15, 2020*

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at [http://www.jhsph.edu/courses](http://www.jhsph.edu/courses) - Page 64 of 202
Upon successfully completing this course, students will be able to:

1. Guide learners to interpret and critique epidemiological studies, epidemiologic data and make valid inferences from study findings.
2. Communicate effectively in oral and written formats with students, professionals and the public on issues related to epidemiology and public health.
3. Provide epidemiologic critique and advice though advising students and professionals on epidemiologic concepts and methods and conducting peer review activities.

Method of Assessment

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<tr>
<td>1. Reflection</td>
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<td>2. Discussion</td>
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Method of Assessment Detail:

Students will prepare their goals and objectives for evaluation by the teaching faculty as the culminating project per term.

Email: lcamarat@jhsph.edu

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

PHD students in Epidemiology
Grading Options: Pass/Fail

Consent required for all students; Doctoral students must be approved to serve as a teaching assistant prior to registration.

Prerequisite: 340.753 AND passing the department of epidemiology's written comprehensive exam at the doctoral level.

Doctoral students must complete and communicate their teaching goals for the term prior to the start of the term. Students should attend all course activities assigned to the TA role.

340.871.01 Welch Center Research Seminar

1 credits - Course offered this year - East Baltimore
Selvin, Elizabeth

Students, postdoctoral fellows, and faculty present scientific papers from the current and/or classic literature dealing with epidemiologic research, with a focus on clinical and cardiovascular epidemiology. Emphasizes presentation skills and the ability to critically evaluate scientific papers. Uses a journal-club format in which one or more papers are distributed in advance. Participants are expected to read and discuss the assigned material. Media reporting/coverage in the lay and medical press is explicitly discussed related to the article. Provides a forum for the discussion of the appropriate use of statistical methods for various study designs.

Upon successfully completing this course, students will be able to:

1. Read and critically evaluate scientific papers
2. Give a presentation and lead a discussion related to a research article
3. Critique analytic methods in the published literature
4. Describe the strengths and weaknesses of various methodological approaches in clinical epidemiology and cardiovascular epidemiology.

Email: eselvin@jhu.edu

Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes

MHS, ScM, PhD, and ScD students in Cardiovascular and Clinical Epidemiology only.
Grading Options: Pass/Fail

Consent required for some students; Course is restricted to MHS, ScM, DrPH, PhD, and ScD students in the Cardiovascular and Clinical Epidemiology Track in the Department of Epidemiology only.

Prerequisite:
Course is restricted to MHS, ScM, DrPH, PhD, and ScD students in the Cardiovascular and Clinical Epidemiology Track in the Department of Epidemiology only. Students are expected to read and post discussion points prior to the day of class.

340.895.01 MPH Practicum: Epidemiology

variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore

Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:

1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Extradepartmental

550.002.01 English For Academic Purposes II (Cancelled - Department)

0 credits - Course offered this year - East Baltimore
Hong Smith, Vicki
Focuses on academic writing skills including documentation styles, and combines Saturday class meetings with online assignments and one individual conference.

Upon successfully completing this course, students will be able to:

1. Apply strategies used in the three main stages of the writing process; spiral strategies include brainstorming, outlining, drafting, proofreading, rewriting and editing
2. Formulate an effective thesis statement
3. Support thesis with concrete supporting details
4. Avoid global errors such as fragments, run-on/splice sentences, dangling modifiers
5. Avoid errors in tenses and agreements
6. Correctly incorporate quotation, summary, and paraphrase when citing outside sources
7. Correctly apply required parenthetical documentation and bibliographical documentation format

Method of Assessment

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<td>1. class attendance</td>
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Email: vhongs@jhsph.edu

Lecture: F 3:30 PM - 6:20 PM

Enrollment: Minimum 5, Maximum 12, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Consent required for all students;
Multi-term with 550.001
Final grade applies to all terms

550.002.01 English For Academic Purposes II (Cancelled - Department)

0 credits - Course offered this year - East Baltimore
Hong Smith, Vicki
Focuses on academic writing skills including documentation styles, and combines Saturday class meetings with online assignments and one individual conference.

Upon successfully completing this course, students will be able to:

1. Apply strategies used in the three main stages of the writing process; spiral strategies include brainstorming, outlining, drafting, proofreading, rewriting and editing
2. Formulate an effective thesis statement
3. Support thesis with concrete supporting details
4. Avoid global errors such as fragments, run-on/splice sentences, dangling modifiers
5. Avoid errors in tenses and agreements
6. Correctly incorporate quotation, summary, and paraphrase when citing outside sources
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Email: vhongs@jhsph.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 66 of 202
Lecture: F 3:30 PM - 6:20 PM
Enrollment: Minimum 5, Maximum 12, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Consent required for all students;
Multi-term with 550.002
Final grade applies to all terms
Final grade applies to all terms

550.600.01 Living Science Ethics - Responsible Conduct Of Research
1 credits - Course offered this year - East Baltimore
Bosch, Gundula
Fosters the responsible conduct of scientific research using a combination of lectures, discussion and analysis of case studies. Topics include: data management, conflict of interest, scientific misconduct, questionable research practices, responsible authorship, peer review, collaborations with peers and industry, trainee-mentor relationships, research ethics and regulatory requirements of the conduct of animal and human research, and the scientist as a responsible member of society.
Upon successfully completing this course, students will be able to:
1. Explain the regulatory requirements that govern the modern research environment
2. Discuss the expectations for adherence to the ethical principles in the conduct of research
3. Apply ethical and regulatory principles to the trainee’s own current and future research program

Method of Assessment Percentage
1. Quizzes 50
2. Completion of attendance-taking records 50

Email: gbosch2@jhu.edu

Lecture: W 3:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Eligibility restricted to doctoral students. Other JHSPH students or fellows who are required to have in-person RCR training based on funding source may also enroll.
Grading Options: Pass/Fail
Prerequisite:

550.608.95 Problem Solving In Public Health
4 credits - Course offered this year - Kyoto, Japan
Departmental Faculty
Uses divergent public health issues to illustrate a systematic problem solving process for use in addressing public health problems. The problem solving process includes defining the problem, measuring its magnitude, understanding the key determinants, developing a conceptual framework of the relationships between the key determinants, identifying and developing intervention and prevention strategies (either interventions or policies), setting priorities among intervention options, understanding barriers to implementation and evaluation, and developing an effective communication strategy. Consists of lectures, discussions, small-group exercises, a group project, and individual assignments.
Upon successfully completing this course, students will be able to:
1. Analyze a public health problem and evaluate intervention/policy alternatives using the problem solving methodology outlined above
2. Compare and contrast the utility of the methodology to solve public health problems that emerge at different periods in the life cycle and in different cultures, including: HIV/AIDS, childhood immunization, radioactive iodine exposure and thyroid cancer, unintended injuries and their prevention, obesity prevention, tobacco abuse, screening mammography and breast cancer
3. Carry out a group project under the guidance of a Teaching Assistant (TA), in which student groups will research a specific public health problem, prepare a written report and present their recommendations to the class following the problem-solving methodology
4. Recognize the complexity of policy development, including a discussion of the politics of public health issues, the roles of interest groups and stakeholders, and the laws and social values that must be woven into successful policies
5. Integrate human rights and ethical principles into the analysis of public health problems and recommended strategies
6. Recognize the critical role of communication in public health practice

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 67 of 202
7 Work together in multi-disciplinary groups that model the way public health agencies conduct problem-solving activities
8 Demonstrate critical and analytical thinking by preparing three individual products (a self-assessment of the process, an individual critique of a paper submitted by another group, and a health and human rights assessment)

### Method of Assessment

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<tbody>
<tr>
<td>1. Group Presentation</td>
<td>20</td>
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<tr>
<td>2. Lab Assignments</td>
<td>25</td>
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<tr>
<td>3. Assignments</td>
<td>20</td>
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<tr>
<td>4. Group Work</td>
<td>35</td>
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Enrollment: Minimum 10, Maximum 90, Waitlist Enabled: Yes
Restricted to MPH Cohort
Grading Options: Letter Grade or Pass/Fail
Jointly offered with EHS

Prospective students should note that there are several required prerequisite readings and an assignment to be completed prior to the first day of class, and there will be 3 short assignments due within 2 weeks following the last day of class. Please contact the course instructors for further information.

#### 550.630.81 Public Health Biology

3 credits - Course offered this year - Internet
Sullivan, David

Discusses the molecular, cellular, physiological, genetic and immunological determinants of human diseases and disease susceptibility, including infectious disease, nutritional deficiencies, reproductive and developmental anomalies, and effects of exposures to toxic environmental agents. Explores ecological principles that determine the distribution of infectious disease in human populations, and how principles of the human immune system provide the rationale for methods of immunization. Focuses how biological principles help to understand the development, treatment and prevention of disease, and to assess risk from potentially hazardous agents and behaviors.

Upon successfully completing this course, students will be able to:
1. Describe the molecular, cellular, and physiological bases of selected human diseases and conditions
2. Describe the ecological principles that determine the distribution of infectious disease in human populations
3. Explain the role of genetic determinants in human disease and disease susceptibility
4. Describe biological principles that underlie the development of disease prevention, control, and management programs
5. Describe biological principles that underlie risk assessment from potentially hazardous agents and behaviors

Email: dsulliv7@jhmi.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to On-line Learning (550.02.81)
Jointly offered with MMI
Content similar to 550.630.01

#### 550.845.20 Comprehensive Or Preliminary Oral Exam For Part Time International DRPH Students

2 credits - Course offered this year - East Baltimore
Departmental Faculty

Since US Immigration laws require that all International students must be enrolled full time when on campus, students must complete their departmental/program comprehensive examination or their School preliminary oral examination enrolled as a full-time student during the time period of the exam.

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Enrollment restricted to international part time Doctor of Public Health degree students who intend to be on campus to complete their departmental/program comprehensive exam or their Departmental or School preliminary oral exam.
Grading Options: Pass/Fail

Please enroll with your advisor. Full time enrollment for part time students engaged in on campus/in person academic activities is defined as 2 term credits (16 contact hours) per week.

#### 550.855.81 Ma Public Health Biology Thesis

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 68 of 202
variable credits 5-6 - Course offered this year - Internet

Zirkin, Barry
Provides an opportunity for students to, in consultation with a faculty mentor from the Dept of Biochem and Molecular Bio, Environmental Health or Molecular Microbiology and Immunology, prepare a critical, scholarly paper on an agreed upon subject area.

Upon successfully completing this course, students will be able to:
1 Compose, explain and defend a 20-30 page scholarly thesis that demonstrates a deep understanding of how biological principles and methods are used to understand, treat and/or prevent a particular condition of importance in the public health arena.
2 Critically evaluate data described in scientific papers and integrate data from multiple papers into coherent theories about the regulation of complex biological processes and diseases.
3 Synthesize public health principles learned during prior coursework through original writing project.

Email: brzirkin@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Jointly offered with BIOCHEM,EHE,MMI

Students must take MA in Public Health Biology Thesis in addition to a minimum of 42-43 didactic course credits in order to complete the degree program. A primary and secondary reader will be assigned to evaluate each student's Thesis. At least one reader will be from one of the three departments offering the program; Biochemistry and Molecular Biology, Environmental Health and Engineering and Molecular Microbiology and Immunology.

550.860.82 Academic & Research Ethics At Jhsp
0 credits - Course offered this year - Internet module

Vernick, Jon
Examines academic and research ethics at JHSPH in a series of online interactive modules. Focuses on information about the academic ethics code and responsible conduct of research at the School. Explores issues of academic integrity such as proper ethical conduct and referencing, and discusses violations such as plagiarism and cheating, relative to case studies that illustrate situations faced by students and faculty in the academic setting. Addresses topics that include responsible conduct of research, authorship, data management, data ownership, guidelines for professional conduct, research fraud or scientific misconduct, federal and institutional guidelines related to research using human and animal subjects and ethical issues involving vulnerable subjects in research.

Upon successfully completing this course, students will be able to:
1 Describe and explain the policies and procedures that govern academic integrity and ethical conduct of research in the school
2 Practice proper attribution when referencing sources in academic assignments and scholarly works
3 Avoid violations of academic and research integrity such as plagiarism, cheating, research fraud and scientific misconduct
4 Conduct research in a responsible and professional manner with attention to maintaining integrity relative to authorship, data management and ownership, and protection of human and animal rights

Email: jvernic1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Auditing not permitted
Grading Options: Pass/Fail
All students must complete during their first term of matriculation; failure to do so will result in blockage of further course registration.

550.870.01 SS/R: Occupational Medicine Residency-Practicum Year
variable credits Depends on rotations, courses, and research workload. - Course offered this year - East Baltimore
Schwartz, Brian;Rivera, Aisha
Occupational medicine resident physicians perform a series of clinical, administrative, regulatory, and plant-based rotations throughout the year.

Upon successfully completing this course, students will be able to:
1 Demonstrate that they have had a mentored occupational medicine practicum experience

Email: bschwar1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Residency training
Grading Options: Pass/Fail

550.880.01 SS/R: General Preventive Medicine Residency-MPH
1 credits - Course offered this year - East Baltimore
Lam, Clarence; Hatef, Elham
Prepare residents in the theoretical, practical, and clinical knowledge and skills essential to leadership roles in the design, management, and evaluation of population-based approaches to health
Upon successfully completing this course, students will be able to:
1. Prepare residents in the theoretical, practical, and clinical knowledge and skills essential to leadership roles in the design, management, and evaluation of population-based approaches to health
2. Provide training in the teaching, research, and practice of preventive medicine
3. Instill in residents the ability to synthesize clinical and population-based approaches to disease prevention and health promotion
4. Enable residents to view health issues on a broad continuum from local to international perspective
5. Apply knowledge toward the protection of the public's health
6. Provide residents with the management and epidemiologic skills needed to address the overall health needs of underserved populations

Email: ckl@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to MPH/GPMR during MPH year.
Grading Options: Pass/Fail

550.890.01 SS/R: General Preventive Medicine Residency-Residency Year
variable credits Range of 6-16 credits - Course offered this year - East Baltimore
Lam, Clarence
Prepare residents in the theoretical, practical, and clinical knowledge and skills essential to leadership roles in the design, management, and evaluation of population-based approaches to health.
Upon successfully completing this course, students will be able to:
1. Prepare residents in the theoretical, practical, and clinical knowledge and skills essential to leadership roles in the design, management, and evaluation of population-based approaches to health
2. Provide training in the teaching, research, and practice of preventive medicine
3. Instill in residents the ability to synthesize clinical and population-based approaches to disease prevention and health promotion
4. Enable residents to view health issues on a broad continuum from local to international perspective
5. Apply knowledge toward the protection of the public's health
6. Provide residents with the management and epidemiologic skills needed to address the overall health needs of underserved populations
7. Residents will participate in a core course of modules known as "Fundamentals of General Preventive Medicine." Approximately 10 modules will be offered annually. Examples include Health Care Delivery; Injury Epidemiology and Prevention; Health Promotion; and Public Health Preparedness

Email: ckl@jhu.edu

Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Restricted to GPMR during post MPH year.
Grading Options: Pass/Fail

550.895.01 MPH Practicum (Non Departmental)
variable credits Credits are determined in conjunction with the MPH practicum coordinator - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.
Upon successfully completing this course, students will be able to:

1. Demonstrate that they have had a mentored public health practicum experience
2. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Please consult MPH Program Office before registering for course, mphprog@jhsph.edu

551.895.01 Source Practicum Special Studies
variable credits 1 credit if work 4 hours/week with community 2 credit if work 8 hours/week with community 3 credit if work 12 hours/week with community - Course offered this year - East Baltimore
Levin, Mindi
Special studies for practicum activities with SOURCE and participating Baltimore City community-based organizations.
Upon successfully completing this course, students will be able to:

1. Develop a collaboration with a community-based organization to address public health issues in Baltimore.

Email: mlevin@jhu.edu
Enrollment: Minimum 1, Maximum 20, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Consent required for all students; All students must seek permission from SOURCE Director, Mindi Levin. Students must have already identified collaboration/project with SOURCE non-profit
Prerequisite: Student must first be matched with a SOURCE partnering community-based organization

552.601.81 Foundational Principles Of Public Health
0.5 credits - Course offered this year - Internet
Departmental Faculty
Provides a broad systematic understanding of the executive practice of public health from its inception to modern day. Uses case studies, as well as ethical and public health practice frameworks to provide students with a grounding in "what is public health practice," why it is important, and why it is contested.
Upon successfully completing this course, students will be able to:

1. Recognize key factors that precipitate the establishment and evolution as well as erosion and destruction of public health systems in the U.S. and globally
2. Articulate the mission, vision and core functions and essential services of public health
3. Explore the role of public health systems to address key public health challenges
4. Use ethical and practice frameworks to reflect on the role and practice of public health

Method of Assessment

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<th>Method of Assessment</th>
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<td>Final Exam</td>
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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.602.81 The Role Of Quantitative Methods In Public Health
0.5 credits - Course offered this year - Internet
Departmental Faculty
Covers the bases for the role of quantitative methods in public health, including how to formulate scientific questions quantitatively, different types of data, properties characterizing high or poor quality of measurements, the implications of statistical uncertainty, and the difference between association and causation. Uses illustrative case examples including the opioid epidemic and aging.
Upon successfully completing this course, students will be able to:

1. Use statistical reasoning to formulate public health questions in quantitative terms.
2. Provide examples of different types of data arising in public health studies and of characteristics describing the quality of measurements.
3. Interpret estimates and uncertainty for a single population quantity and for a comparison of populations.
4. Articulate the distinction between correlation and causation and the benefit of randomization when estimating causal effects.

Method of Assessment

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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.603.81 The Role Of Qualitative Methods And Science In Describing And Assessing A Population’S Health

Departmental Faculty

Acquaints students with a broad overview of the use of qualitative research methods in public health. Explores the types of critical public health questions best addressed through a qualitative approach and introduces conceptual principles that are foundational to qualitative research. Exposes students to key issues in planning and conducting qualitative research, as well as strategies for analyzing qualitative data.

Upon successfully completing this course, students will be able to:

1. Identify when qualitative methods are best suited to generate insight on a public health concern.
2. Distinguish between objectivist and constructivist epistemologies.
3. Provide examples of different types of qualitative data arising in public health studies.
4. Describe ways in which qualitative research is incorporated into current public health research.
5. Describe different qualitative analytic approaches and means to evaluate rigor.

Method of Assessment

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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.604.81 Causes And Trends In Morbidity And Mortality

Departmental Faculty

Provides a broad understanding of the top causes of morbidity and mortality globally, in the U.S., and in Baltimore City, as well as the trends in these estimates. Introduces measurement of morbidity and mortality, and threats to the quality of measurements. Addresses the role of population characteristics (age, sex, region, race/ethnicity) in estimates and trends. Discusses case studies of major causes and trends in morbidity and mortality in defined populations.

Upon successfully completing this course, students will be able to:

1. Describe the trends and major causes of morbidity and mortality in the world, U.S., and Baltimore.
2. Articulate the concepts that guide the methodology for measuring morbidity and mortality.
3. Explain the role of population characteristics in differentiating major causes of morbidity and mortality.
**Method of Assessment** | **Percentage**
---|---
1. Participation | 20
2. Interim | 40
3. Final | 40

**Method of Assessment Detail:**

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Satisfactory/Unsatisfactory

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**552.605.81 The Science Of Primary Secondary And Tertiary Prevention In Population Health**

0.5 credits - Course offered this year - Internet

**Departmental Faculty**

Provides a broad understanding of the different levels of public health prevention: primary, secondary, and tertiary and discusses the impact of each level on prevention in population health. Emphasizes the role of epidemiology in prevention and control; compares and contrasts the descriptive epidemiology, natural history, and pathologic and biologic characteristics as well as factors related to their etiology. Presents the impacts of recent advances in human genomics/genetics, immunology and metabolism on prevention strategies for chronic and acute disease. Introduces basic principles, theories, and methods in the field of prevention science. Identifies public health interventions that operate at multiple ecological levels, including the community, family, and individual. Introduces the role of resilience. Discusses case studies related to the prevention of different physical, mental, behavioral and infectious disease health problems.

Upon successfully completing this course, students will be able to:

1. Articulate the role of prevention science in public health
2. Explain the different levels of public health prevention
3. Identify prevention approaches at different ecological levels

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**552.606.81 The Critical Importance Of Evidence In Advancing Public Health Knowledge**

0.5 credits - Course offered this year - Internet

**Departmental Faculty**

Emphasizes the need to establish the credibility of the evidence, based on the rigor of the methods used in generating it (e.g., type of studies, rules of causality, the nature of errors) before employing evidence to advance knowledge, practice, or policy. Discusses the bases for debate about recommendations for particular interventions that impact a population’s health, how to weigh their benefits and harms, the ethics of scientific conduct, and effective communication in building evidence. Uses illustrative case examples, such as breast and prostate cancer screening, vaccines for measles and cervical cancer, nutritional sodium reductions, and the opioid epidemic.

Upon successfully completing this course, students will be able to:

1. Establish the credibility of the evidence
2. Assess the impact of credible evidence when applied to a population’s health
3. Weigh relative benefits and harms
4. Discuss the ethics of scientific conduct
5. Describe the role of effective communication in building evidence

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4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 73 of 202
Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.607.81 Essentials Of Environmental Health
0.5 credits - Course offered this year - Internet
Departmental Faculty
Summarizes the public health impact of environmental agents (e.g. chemical, biological, physical) present in air, water, soil, food, and the community. Discusses how these agents cause adverse health effects as well as ways to assess the risk of such effects and apply strategies for preventive interventions. Presents systems that have major impacts on environmental health, as well as applications of the science in the real domestic and international world. Through four modules: Foundations; Exposures in Air, Water and Food; Systems; and Cases, exemplifies effects of specific environmental exposures.

Upon successfully completing this course, students will be able to:

1. Describe the foundations of environmental health, including toxicology and risk assessment
2. List the main types of environmental exposures that impact domestic and international public health
3. Use examples to explain the importance of systems thinking in environmental health, such as the climate or the built environment
4. Discuss applications of environmental health to solve issues in the workplace or community

Method of Assessment

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<td>3. Final Exam</td>
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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.608.81 Biologic, Genetic And Infectious Bases Of Human Disease
0.5 credits - Course offered this year - Internet
Departmental Faculty
Focuses on the basics of cellular and molecular biology, genetics, and infectious agents. Explains concepts that link basic biology to disease and population health. Illustrates application of biologic and genetic principles to population health using case studies.

Upon successfully completing this course, students will be able to:

1. Describe the basics of cellular function and how cellular dysfunction contributes to pathology
2. Explain how infectious agents contribute to disease in human populations
3. Explain how genetic factors contribute to disease in human populations
4. Apply cellular and genetic principles to understanding of model disease

Method of Assessment

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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
**552.609.81 Psychological And Behavioral Factors That Affect A Population's Health**

Grading Options: Satisfactory/Unsatisfactory

0.5 credits - Course offered this year - Internet

Departmental Faculty

Shows the role of behavior in health, drawing from smoking and other risk behaviors. Examines factors along the socioecological continuum that influence such behavior. Highlights key determinants for achieving behavior change to improve health outcomes, such as feasibility, self-efficacy and social support. And introduces common types of behavior change interventions, such as counseling and social marketing.

Upon successfully completing this course, students will be able to:

1. Define psychological factors and explain their direct and indirect influence on population health
2. Define and distinguish between behavior, behavioral factor and public health outcome
3. Explain the role of behavior on poor and good health
4. Name and define socioecological factors along the continuum that influence behavior
5. Name and define key factors for behavior change
6. Recognize common types of behavior change interventions

Method of Assessment | Percentage
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1. Participation | 20
2. Interim | 40
3. Final | 40

Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Satisfactory/Unsatisfactory

**552.610.81 The Social Determinants Of Health**

Grading Options: Satisfactory/Unsatisfactory

0.5 credits - Course offered this year - Internet

Departmental Faculty

Provides an overview of social, political, and economic influences on health and their role in producing health inequalities within and among populations. Emphasizes key axes of inequality: gender, race/ethnicity, and socioeconomic status. Explains conceptual foundations for social determinants of health and health inequalities. Summarizes evidence linking selected social, political, and economic factors to health and the pathways by which they influence health. Highlights importance of understanding social determinants of health, despite challenges of designing interventions targeting social determinants.

Upon successfully completing this course, students will be able to:

1. Identify and define the primary social, political and economic factors that influence population health
2. Describe the evidence linking these factors to health outcomes within and among populations
3. Explain the ways that these factors lead to health inequalities within and among populations
4. Explain what is meant by structural determinants of health, how they contribute to understanding population health, and why they can be difficult to target with interventions
5. Describe the general pathways through which social, political and economic factors affect health outcomes

Method of Assessment | Percentage
--- | ---
1. Participation | 20
2. Interim | 40
3. Final | 40

Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Satisfactory/Unsatisfactory

**552.611.81 Globalization And Population Health**
Evaluates in depth the complex relationship between globalization and health. Discusses this relationship across the four main dimensions of globalization (economic, political, cultural and environmental). Examines the existing evidence on the impact of globalization on global burdens of disease. Explores the opportunities of globalization and strategies for mitigating its negative effects.

Upon successfully completing this course, students will be able to:

1. Characterize the existing evidence on the impact of globalization on population health
2. Identify and explain the challenges of globalization and its effect on population health
3. Propose strategies for catalyzing the opportunities of globalization and mitigating its negative effects

Method of Assessment

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Method of Assessment Detail:

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.612.81 Essentials Of One Health

Introduces the principles of One Health, the interface of human health, animal health and environmental health. Examines the methods and tools for the conduct of One Health studies and the design of One Health programs. Uses a systems thinking approach to explore multiple topics including food systems, food and animal policies, One Health governance, and stakeholder engagement.

Upon successfully completing this course, students will be able to:

1. Define the three One Health domains
2. Explain why a One Health perspective is important to the control of human disease
3. Describe how stakeholder engagement contributes to the success of One Health studies or programs
4. Apply One Health principles to research or government policy-making

Method of Assessment

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<tr>
<td>Participation</td>
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<tr>
<td>Final Exam</td>
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Method of Assessment Detail:

Email: mdavis65@jhu.edu

Days & Times with Start & End Dates: Mar 23, 2020 - Apr 19, 2020
Enrollment: Minimum 6, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Satisfactory/Unsatisfactory

552.621.81 Basic Resources Management For Public Health

Provides an overview of budgeting and resource management for public health practitioners working in health settings. Discusses the role and functions of governing bodies. Considers the types and categories of performance problems as well as how to determine causes of performance deviations and approaches for remedying them. Explores the tools and resources of budget and resource management.

Upon successfully completing this course, students will be able to:

1. Explain the role and importance of various types of budgets in organizations
2 Describe the role and functions of governing bodies
3 Identify the types or categories of performance problems
4 Discuss approaches to determining causes of performance deviations and approaches to remedy them
5 Implement remedial plans to mitigate performance deviations

Email: wwardjr1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite:

552.622.81 Creating, Implementing And Monitoring Budgets For Projects And Programs
1 credits - Course offered this year - Internet
Martin, Pamala
Addresses strategies for creating budgets for projects and programs. Stresses the essential role of budgets in promoting the health of organizations and resource management. Explores how budgets are used to facilitate project and program management, including assessing whether high-quality outcomes are being achieved on time and within resource constraints or whether changes to the work plan, budget, or available resources are needed.

Upon successfully completing this course, students will be able to:
1 Explain the basic principles of budget and resource management
2 Explain how to create and implement a work plan
3 Apply cost-benefit principles
4 Evaluate productivity monitoring tools
5 Evaluate the strengths of budgets and budget justifications

Method of Assessment

| 1. Participation | 20 |
| 2. Synthesis Assignments | 80 |

Method of Assessment Detail:
Participation: 20%; Synthesis Assignments 1 & 2: 80%

Email: pcmartin@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Jointly offered with PFRH

552.623.81 Principles Of Negotiation And Mediation For Public Health Professionals
0.5 credits - Course offered this year - Internet
Lynch, Susan
Examines the theory and principles of negotiation and mediation. Through readings and didactic instruction, explores negotiation and mediation processes, models and techniques. Investigates verbal and nonverbal communication and persuasion as well as other factors that influence successfully negotiated compromises of complex public health issues.

Upon successfully completing this course, students will be able to:
1 Describe the theories, principles, and models of negotiation and mediation
2 Explain the art of negotiation and how to explore issue positions, the needs and strategic positions of other parties, and why and how various negotiation strategies and techniques work
3 Explain strategies in verbal and non-verbal communication and persuasion
4 Identify and analyze ethical issues in negotiation

Method of Assessment

| 1. Participation | 20 |
| 2. Quizzes | 40 |
| 3. Final Exam | 40 |

Method of Assessment Detail:

Email: slynch5@jhu.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 77 of 202
552.624.81 Applications Of Negotiation And Mediation For Public Health Professionals
0.5 credits - Course offered this year - Internet
Lynch, Susan

Offers students opportunities to apply negotiation and mediation principles and models to “get to yes” in their public health negotiation simulations. Uses a negotiation and mediation simulation that will enable students to practice the art of negotiating and examine their personal strengths and weaknesses in these processes.

Upon successfully completing this course, students will be able to:

1. Apply mediation and negotiation theory to the practice of skillful mediation and negotiation
2. Analyze how mediation and negotiation models work for each student personally in the course simulation
3. Address ethical issues in negotiation and mediation in public health problem simulations

Method of Assessment

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<tr>
<td>Negotiation and mediation simulation</td>
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<tr>
<td>Reflection</td>
<td>40</td>
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Method of Assessment Detail:

Email: slynch5@jhu.edu

552.626.81 Systems Thinking: Concepts And Methods
0.5 credits - Course offered this year - Internet
Bishai, David; Paina, Ligia

Provides students with an understanding of how to apply systems thinking in public health. Trains students on the fundamentals of systems thinking theory and offers opportunities to apply key methods and approaches to health policy and health questions. Prepares students to ask relevant research questions and apply systems thinking to describe, understand, and anticipate complex behavior. Examines how systems models can be critically appraised and communicated with others so public health policymakers can exercise a greater degree of wisdom and insight.

Upon successfully completing this course, students will be able to:

1. Identify characteristics of a system and critically appraise systems models
2. Identify unintended consequences of public health system changes
3. Assess strengths and weaknesses of applying the systems approach to public health problems
4. Use systems diagrams and figures to show how feedback loops might lead to unanticipated consequences

Method of Assessment

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<td>Quizzes</td>
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Method of Assessment Detail:

Email: dbishai1@jhu.edu

552.622.81 Health Behavior and Society
4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 78 of 202
410.606.81 Local And Global Best Practices In Health Equity Research Methods

2 credits - Course offered this year - Internet

Cooper, Lisa A.; Purnell, Tanjala

Introduces students to innovative methods, practical tools, and skills required to conduct evidence-based research that promotes local and global health equity. Theoretical frameworks draw on fundamental values and principles, including human rights, social justice, the value of diverse ideas and perspectives, inclusiveness, trustworthiness, behavioral and implementation science, and participatory decision-making. Includes lectures, interactive panel discussions, case-based examples, and opportunities to obtain feedback on research ideas from experienced investigators.

Upon successfully completing this course, students will be able to:
1. Understand how local factors drive health inequities and compare these phenomena around the world
2. Apply strategies for building local and global partnerships to enhance health equity research
3. Describe behavioral methods used to develop health equity interventions that address local needs while leveraging solutions that have worked around the globe
4. Identify public health frameworks and measures for local and global health equity research

Method of Assessment

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<td>3. Reflection</td>
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Method of Assessment Detail:
Midterm (30%), Final (40%), Online journal article discussions (20%), and individual reflection (10%)

Email: lisa.cooper@jhmi.edu

Enrollment: Minimum 10, Maximum 60, Waitlist Enabled: Yes

Grading Options: Letter Grade or Pass/Fail

Prerequisite:
410.611.01 Under Pressure: Health, Wealth & Poverty

3 credits - Course offered this year - East Baltimore

Butter, Amelia

Explores the relationship between health, wealth, poverty, and public policy in the U.S. as well as internationally; assesses past and future strategies to remedy inequities in health and health care. Addresses theories of social class; distribution of poverty across gender, age, and ethnic/racial groups; antipoverty programs and their effects; effects of changes in health care organization on the poor; and possible modifications to provide greater equity. Investigates how a dramatically changing media landscape influences patterns of belief about the causes of poverty and its remedies. Synthesizes scientific evidence with a variety of genres and disciplines including: history, psychology, political science, religious thought, philosophy, geography, literary theory, popular culture, film/media studies, and music.

Upon successfully completing this course, students will be able to:
1. Summarize competing definitions of health, wealth, poverty, class, & culture, how they originated, and each definition’s impact on public policy
2. Describe current social science and public health approaches to understanding poverty
3. Provide examples of how poverty, wealth, and health status are related to one another in the U.S. and internationally, particularly with respect to uneven development
4. Critique/appraise historical strategies, policies and programs undertaken to address the problems of the poor
5. Evaluate past, current, and future political strategies aimed at improving the health of poor and marginalized populations
6. Propose social programs and policies that target health disparities associated with social class
7. Explain how ideology conditions patterns in the ways groups of people filter and interpret evidence
8. Identify specific populations at risk of poverty and understand why they are specifically at risk

Email: abuttre1@jhu.edu

Lecture: TH 1:30 PM - 4:20 PM

Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes

Grading Options: Letter Grade or Pass/Fail

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 79 of 202
410.617.01 Foundations Of University Teaching And Learning
3 credits - Course offered this year - East Baltimore
Lee, Krystal; Derreth, Tyler

This eight-week course will prepare participants to be effective University teachers who:
1. Are knowledgeable about how learning takes place
2. Can develop and use appropriate active learning strategies in their University classrooms
3. Can propose ways to make University classrooms more inclusive and equitable

Upon successfully completing this course, students will be able to:
1. Define key terminology relevant to educational theory and University teaching practice
2. Identify and describe theories of learning and frameworks of teaching (e.g. sociocultural theory, critical pedagogy, backwards design, universal design for learning)
3. Reflect on the radical, active and inclusive models of education/learning in a University setting
4. Describe how students learn
5. Describe strategies that facilitate active learning
6. Compose learning outcomes and identify appropriate learning strategies to achieve them
7. Illustrate the skill of facilitating discussion among learners
8. Practice reflection, self-evaluation and providing constructive feedback
9. Describe the elements of inclusive and equitable classrooms
10. Describe and put in context how teaching and learning can be practices in justice

Method of Assessment

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<td>4. Reflection</td>
<td>15</td>
</tr>
<tr>
<td>5. Written Assignment(s)</td>
<td>40</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:
Draft Teaching Philosophy (15%)
Revised Teaching Philosophy (25%)
Weekly reflections (15%)
Student facilitated discussions (15%)
Lesson design and presentation (25%)
Attendance and participation (5%)

Email: krystal.lee@jhu.edu
Lecture: T TH 9:00 AM - 10:20 AM
Enrollment: Minimum 6, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: n/a

410.620.81 Program Planning For Health Behavior Change
3 credits - Course offered this year - Internet
Kennedy, Ryan

Provides an overview of the breadth of programs and diversity of settings in the field of health education in health promotion, and an opportunity to develop skills in program planning. Explains the importance of health behavior as a contributor to current public health problems and the role of health education and health promotion programs in addressing them, drawing examples from the literature on community-based health education, patient education, school health, and work-site health promotion. Also discusses issues of ethical standards and quality assurance in health education and health promotion.

Upon successfully completing this course, students will be able to:
1. Explain the importance of health behavior as a contributor to current public health problems
2. Describe the elements of at least two behavior change theories and their applicability to developing health education/health promotion programs
3. Describe at least three intervention methods and their applicability to successful health education/health promotion programs
4 Demonstrate skills in planning a health behavior change program by successfully completing a written needs assessment

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1. Assignments</td>
<td>40</td>
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<td>2. Discussion Board</td>
<td>20</td>
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<td>3. Quizzes</td>
<td>20</td>
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<td>4. Peer-feedback</td>
<td>10</td>
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<tr>
<td>5. Participation</td>
<td>10</td>
</tr>
</tbody>
</table>

Email: rd kennedy@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.

Learning Materials:
- (Book) Health Behavior and Health Education: Theory, Research, and Practice
  Glanz, Karen
  Amazon $61.00

410.625.01 Injury And Violence Prevention: Behavior Change Strategies (Cancelled - Department)
2 credits - Course offered this year - East Baltimore
Gielen, Andrea
Expands students’ understanding of, and skills in planning, implementing, and evaluating injury and violence prevention programs and intervention trials. Both unintentional and intentional injuries have been the focus of a considerable body of behavioral science research and behavior change interventions. Students read and discuss selected examples of this work and enhance their skills in applying behavioral science principles and best practices to an injury or violence area of interest to them. Topics include historical overview of behavior change and the injury prevention field, as well as examples of behavior change theories, strategies, and methods that have been applied to selected injury and violence problems.

Upon successfully completing this course, students will be able to:
1. Describe the role of behavioral sciences and behavior change within a comprehensive approach to preventing unintentional injury and violence
2. Critically examine a selection of work that has been done applying behavioral sciences to the problems of injury and violence
3. Apply behavior change principles and best practices to designing injury prevention programs and/or research to address an injury or violence problem

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<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<td>1. Discussion</td>
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<td>2. Participation</td>
<td>25</td>
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<td>3. Final Paper</td>
<td>50</td>
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</table>

Email: agielen1@jhu.edu
Lecture: M 3:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: None

410.630.01 Implementation And Sustainability Of Community-Based Health Programs
3 credits - Course offered this year - East Baltimore
Ibe, Chidinma
Uses projects primarily from domestic settings to illustrate and evaluate the program component delivery process and continuation or sustainability of activities and benefits of community-based disease prevention and health promotion programs after initial funding ends. Covers theories of innovation and organizational change; community participation and involvement; programmatic, cost-benefit, and ethical considerations related to the goal of sustainability; program characteristics associated with sustainability; and the relationships between investments in health and overall community development.
Upon successfully completing this course, students will be able to:

1. Describe the fundamental concepts, approaches and limitations of community health programs.
2. Describe concepts for the implementation of effective health interventions and discuss the importance of these concepts to health outcomes.
3. Demonstrate increased understanding of the types, usages, and importance of evaluation particularly as it relates to program implementation.
4. Recognize the indicators of the capacity to maintain health interventions through sustainable programs.
5. Through the completion of course assignments, examine, discuss with other students, and apply factors related to the implementation, evaluation, and sustainability of community-based health interventions.

**Method of Assessment**

<table>
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<th>Percentage</th>
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<tbody>
<tr>
<td>1. Lab Assignments</td>
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<tr>
<td>2. Participation</td>
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</tbody>
</table>

Email: cibe2@jhu.edu

Lecture: M W 9:00 AM - 10:20 AM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite:

**410.639.01 Scientific Writing In Health Sciences: Developing A Manuscript For Publication II** *(Cancelled - Department)*

3 credits - Course offered this year - **East Baltimore**

Neelon, Sara

This course guides students in the writing of scientific manuscripts for publication in an area related to social and behavioral sciences. The goal of the course is to facilitate more effective writing of research articles using practical examples and peer feedback. Topics include: completion of the manuscript; drafting a cover letter; the process of peer review; revising a manuscript; and proofs and ultimate publication. Students end the course with a completed manuscript for ready for submission to a journal for publication.

Upon successfully completing this course, students will be able to:

1. Practice principles of good scientific writing
2. Evaluate and critique scientific writing of peers
3. Identify relevant ethical issues in authorship and publishing
4. Write the introduction, discussion, and conclusion sections of scientific manuscripts for publication
5. Write a cover letter for scientific manuscripts
6. Submit manuscripts for publication

Email: sara.neelon@jhu.edu

Lecture: W 3:30 PM - 6:20 PM

Enrollment: Minimum 5, Maximum 12, Waitlist Enabled: Yes

No undergraduates

Grading Options: Pass/Fail

Consent required for some students; Master's-level students with permission of the instructor.

Prerequisite: None

**410.652.01 Interpersonal Influence In Medical Care**

2 credits - Course offered this year - **East Baltimore**

Roter, Debra

Focuses on the patient-provider relationship and its social, cognitive, attitudinal, behavioral, and clinical correlates. Discusses communication during the medical encounter; professional preparation and socialization; patient expectations for care and emerging consumerist trends; and evaluation of physician performance in relation to patient and provider outcomes. Emphasizes patient recall, compliance, utilization, and clinical outcomes.
Upon successfully completing this course, students will be able to:

1. Discuss theoretical models of the patient-provider relationship
2. Describe the effect of patient identity characteristics, such as gender, ethnicity and culture, age, health status and literacy on physician-patient communication
3. Describe the effect of physician identity characteristics, such as gender, ethnicity and culture, and experience on physician-patient communication
4. Gain insight into the lived experience of patients and physicians through the reading of a “patient pathography” and analysis of the power of narratives
5. Explain the structure and functions of the medical visit and the nature of the medical dialogue in routine medical care from both a qualitative and quantitative perspective
6. Discuss patient and physician interventions to enhance the medical dialogue and effectiveness of care

Email: droter1@jhu.edu
Lecture: M 1:30 PM - 3:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 410.655.01 Health Communication Programs II: Implementation And Evaluation

**410.655.01 Health Communication Programs II: Implementation And Evaluation**

4 credits - Course offered this year - East Baltimore
Storey, Douglas
Focuses on the design, implementation, evaluation, and critique of communication interventions and campaigns designed to change behavior. Emphasizes background analysis (including situation and program analysis; policy, media, and service review; and audience analysis); strategic program design; message development; pretesting; materials production; developing and implementing a research-based distribution plan; monitoring; evaluation; and interpersonal communication and use of mass media, including “entertainment education” projects, as an integral part of health communication interventions. Involves lectures, readings, and computer exercises.

Upon successfully completing this course, students will be able to:

1. Discuss the steps involved in developing, implementing and evaluating a health communication project, intervention or campaign
2. Describe the types of research necessary to develop a health communication strategy and design a project
3. Develop a work plan for a health communication project
4. Design and carry out a sample survey to identify pre- and post-intervention discuss, attitudes and behaviors
5. Develop communication messages and materials consistent with a health communication strategy
6. Describe appropriate monitoring and evaluation techniques used to track and assess health communication processes and effects
7. Describe the elements that make a health communication project effective and critique designs and materials used by actual health communication interventions

Email: dstorey@jhu.edu
Lecture: T 1:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 410.654
Multi-term with 410.654

**410.657.01 Communication Strategies For Sexual Risk Reduction**

3 credits - Course offered this year - East Baltimore
Babalola, Stella
Strengthens students’ understanding of adolescent sexual risk-taking. Provides a solid foundation in behavior change strategies for sexual risk-reduction from an international perspective. The literature and examples emphasize HIV, STI and teen pregnancy risk reduction. Students work in groups to perform data analysis and/or review literature. Each group develops a behavior change strategy based on evidence and with a focus on behavior change. Students select a country and a health topic by the second week of class.

Upon successfully completing this course, students will be able to:

1. Describe the antecedents of sexual risk-taking among adolescents especially in developing countries

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 83 of 202
2 Define the characteristics of effective sexual risk-reduction communication strategies
3 Apply leading theories and models of sexual risk reduction from a communication perspective
4 Identify programmatic implications of empirical data on sexual risk-taking
5 Develop an evidence-based and theory-informed communication strategy for adolescent sexual risk-reduction

Method of Assessment

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<th>Method</th>
<th>Percentage</th>
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<td>Participation</td>
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<tr>
<td>Written Assignment(s)</td>
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<tr>
<td>Final Project</td>
<td>30</td>
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<tr>
<td>Group Presentation</td>
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<tr>
<td>Group Work</td>
<td>15</td>
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</table>

Email: stellababalola@jhu.edu
Lecture: M W 10:30 AM - 11:50 AM
Enrollment: Minimum 5, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: None but familiarity with a data analysis software and/or ability to conduct literature review will be useful.

410.660.01 Latino Health: Measures And Predictors
3 credits - Course offered this year - East Baltimore
Carrasco, Maria; Grieb, Suzanne
Examines the measures and predictors of health for the U.S. Latino population. Students develop a conceptual model to better understand how psychosocial and other individual-level factors, as well as socio/political, community, and health care delivery factors, influence an individual’s success in accessing the health care system in a sustainable manner. Using case studies that take into consideration the heterogeneity of the Latino population, students learn key steps to design, implement, and evaluate health care programs to decrease the health disparities gap.

Upon successfully completing this course, students will be able to:
1 Understand health disparities affecting the U.S. Latino population
2 Identify the measures and predictors of health for the U.S. Latino population

Email: Mcarras5@jhu.edu
Lecture: F 1:30 PM - 4:20 PM
Enrollment: Minimum 5, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

410.663.01 Media Advocacy And Public Health: Theory And Practice
3 credits - Course offered this year - East Baltimore
Eck, Raimee
Broadens students’ understanding of health communication to include the strategic use of the news media to support community organizing to change public health policy. Builds on theoretical and empirical work in mass communications, and uses case examples in a number of health policy areas to show how the strategies and tools of media advocacy may be applied to specific public health policy campaigns. Ample opportunities are provided for students to practice media advocacy, in the form of writing letters to the editor and opinion pieces, role-playing interviews, and so on. Introduces students to research literature about news media forms and practices; to framing techniques to influence news content and gain access to news channels; and to the relationship between media advocacy and other forms of health communication.

Upon successfully completing this course, students will be able to:
1 View news coverage critically, and discuss and identify how different story frames direct attention to different kinds of solutions to social and health problems
2 Grasp from a theoretical and practical perspective newsroom practices and constraints, and their impact on public health policy and practice
3 Shape news stories to maximize the possibility that they will not only attract news coverage but also move forward public debate in ways that are consistent with public health goals
4 Participate in public debate in the news media through vehicles such as pitching stories, writing letters to the editors and interviewing
5 Apply principles of framing to the process of preparing for and participating in public and media debates about public health policies
410.675.01 Critical Analysis Of Popular Diets And Dietary Supplements (Discontinued)

Focuses on the dietary supplements and diets purporting to promote health, induce weight loss, or treat specific health concerns are widely used by Americans, which are often minimally regulated. Students apply the tools of nutritional science to a critical analysis of popular diets and supplements. Students explore the following: nutrient analysis, dissecting several example diets and supplements in class discussions, preparing a comprehensive written analysis of a specific diet or supplement of their choosing, and presenting their findings orally.

Upon successfully completing this course, students will be able to:

1. Describe the complex interrelationships that control appetite and feeding in humans
2. Critically appraise the scientific literature pertaining to both diets and dietary supplements, and provide an opinion based on the evidence as to whether the diet or supplement is worthy of recommendation

410.678.60 Theory And Practice In Campaigning And Organizing For Public Health II

Provides a practical introduction to campaigning and organizing for public health. Combines experiential learning (through participation in an actual campaign) with traditional learning (online lectures, in-class discussions and readings). Uses case studies to review the history of organizing for public health. Introduces campaign planning and management, discusses the role of research and coalition-building, and explores different types of organizing. Part of a two-term sequence that prepares students to participate in and critically assess public health campaigns to change the policies and structures that set the contexts in which people make their decisions about health.

Upon successfully completing this course, students will be able to:

1. Describe the role and history of campaigning and organizing in public health
2. Identify the purpose and methods of campaign planning and execution
3. Describe the role and types of research in public health campaigning and organizing
4. Describe campaigning and organizing principles as they apply to real world situations
5. Explain the restrictions on lobbying for recipients of federal and state funding
6. Identify the strengths and weaknesses of coalition-building as a strategy for engaging partners
7. Critically analyze grassroots and grasstops approaches to organizing
8. Evaluate a specific approach to a campaign and/or organizing strategy to address a real-world public health problem

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 85 of 202
This course blends traditional classroom time with outside-of-class time with a corresponding reduction in class sessions. This class will meet once a week. Students are expected to participate in a 6-hour per week practicum in addition to other course work (online lectures, readings, and assignments). Students may not enroll in both 410.672.81 Introduction to Campaigning & Organizing for Public Health and this course.

410.680.01 Social Ecological Approaches To Health Regimen Adherence In Chronic Conditions
3 credits - Course offered this year - East Baltimore
Knowlton, Amy;Eng, Maria
Addresses social approaches to promoting sustained adherence to health regimens among persons living with chronic conditions. Addresses prescribed use of medications, lifestyle changes, and retention in healthcare over time among persons living with HIV/AIDS, hypertension, and other chronic conditions. Enables students to: (1) assess adherence to health regimens, (2) identify correlates of adherence at the individual, interpersonal, and social network levels, and (3) assess major approaches and components of medical adherence interventions, and their linkage to theories of behavior change. Explores social factors impacting vulnerable populations’ medical adherence and health disparities, drawing examples from both domestic and international contexts.

Upon successfully completing this course, students will be able to:
1. Assess medical adherence among persons living with specific chronic health conditions, including co-occurring behavioral (drug use or mental) health problems
2. Identify correlates of medical adherence at the intrapersonal, interpersonal, and social network levels from various stakeholder perspectives
3. Identify empirically-based prosocial components of adherence interventions for various populations or health conditions
4. Distinguish community empowerment (as compared to non-empowering or disempowering) approaches to adherence intervention for chronic conditions

Method of Assessment

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<th>Percentage</th>
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<tr>
<td>Participation</td>
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<tr>
<td>Self-assessments</td>
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<tr>
<td>Homework</td>
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<tr>
<td>Final Presentation</td>
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Email: aknowlt1@jhu.edu
Lecture: TH 1:30 PM - 4:20 PM
Enrollment: Minimum 7, No maximum enrollment required, Waitlist Enabled: No
Graduate students
Grading Options: Letter Grade or Pass/Fail

410.682.01 Integrating Children'S Mental Health And Primary Care: A Social And Behavioral Science Perspective (Discontinued)
3 credits - Course offered this year - East Baltimore
Wissow, Lawrence
Examines integration of mental health and primary care as both a solution to chronic shortfalls in the provision of children's mental health services and an example of the processes involved in making change in complex systems. Frames the change process as taking place at three social-ecologic levels: how care is designed to bring about health behavior change at the client/patient/consumer level; how interventions are implemented to influence staff/clinician behavior at the organizational level; and incentives and barriers at the inter-organizational and health systems level. Uses this three-level framework to analyze a range of integration models (the medical home, collaborative and stepped care, task shifting, screening and brief intervention, and co-location of services). Uses examples largely from both ongoing programs in Maryland, Massachusetts, and Ohio with which the instructors are involved, as well as international programs.

Upon successfully completing this course, students will be able to:
1. Define “integration” and identify some of the facilitators of and barriers to child and adolescent mental health care that integration initiatives seek to address
2. Explore and differentiate common models for integration of child mental health and primary care
3. Articulate key domains and principles of change in complex systems and apply these concepts to changing children’s primary care to accommodate a greater role in mental health services
4. Select appropriate methods for assessing primary care readiness for mental health services and for measuring the process and outcomes of integration

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 86 of 202
410.686.60 Advanced Quantitative Methods In The Social And Behavioral Sciences: A Practical Introduction
4 credits - Course offered this year - East Baltimore
Weir, Brian
Presents advanced analytic methods relevant to the social ecological model and other theoretical frameworks common in the social and behavioral sciences. Emphasizes multilevel analyses, longitudinal analyses, and propensity score methods. Introduces factor analysis, analysis of experimental studies, structural equation modeling, and complex surveys. Explores the suitability of these methods to address different research questions and study designs. Provides discussions of underlying concepts and assumptions and presents key issues in their application. Illustrates methods through critical review of published articles and by working through examples in Stata. Presents resources for continued advanced study, including methods courses offered through the school.
Upon successfully completing this course, students will be able to:
1. Describe statistical methods which can address the challenges of conducting social and behavioral public health research
2. Critically evaluate the use of advanced statistical methods in the literature
3. Propose appropriate methods for addressing complex research questions
4. Develop graphic representations of causal models and measurement models for specific hypotheses
5. Analyze data using advanced methods
6. Identify resources for continued training in advanced statistical methods

Method of Assessment Percentage
1. Participation 10
2. Paper(s) 40
3. Assignments 50

410.711.01 Doctoral Seminar In Mixed Methods For Public Health Research
German, Danielle

Introduces doctoral students to emerging discussions and interdisciplinary applications of mixed methods research in public health. Explores mixed methods as a third research paradigm that involves the utilization of both quantitative and qualitative methods within a single inquiry to enhance the researcher’s ability to understand the problem at hand. Fosters synthesis of and engaged reflection on qualitative and quantitative research training. Specific topics include: history and language of mixed methods research; relevant paradigms and epistemological debates; mixed methods design and research questions; and analysis and dissemination considerations.

Upon successfully completing this course, students will be able to:

1. Interpret and use the language of mixed methods alongside the terminology of qualitative and quantitative designs
2. Explain the paradigms that have informed the development of mixed methods research and to assess how those paradigms might influence the student's own work
3. Discuss the philosophical aspects of a variety of research approaches as a means to enhance their development as independent researchers
4. Demonstrate an understanding of several typologies of mixed methods research
5. Choose an appropriate mixed-methods design and analytic strategy to address a relevant public health problem
6. Identify and understand relevant resources in the academic literature in order to continue learning new ideas and approaches for mixed methods research
7. Apply mixed methods to an idea of professional interest and to develop a mixed methods research proposal related to that idea

Email: danielle.german@jhu.edu
Lecture: F 9:00 AM - 11:50 AM

Enrollment: Minimum 7, Maximum 20, Waitlist Enabled: Yes
See consent note.
Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Postdoctoral and doctoral students who have not fulfilled these specific requirements, as well as master's students who have taken the prerequisite courses, should contact the instructor for permission to register.

Prerequisite: At least one of the following qualitative research methods courses: 410.710, 410.690, 224.690. And at least one course in quantitative research design and analysis.

Weekly half-page written reflection on the relevance of the readings for the development of the student’s future research; preparation as discussant for one class period (small group assignment); annotated outline of the content of a research proposal involving the application of a mixed methods approach to a research question of interest to the student; and class participation.

410.712.01 Theory And Practice In Qualitative Data Analysis And Interpretation For The Social And Behavioral Sciences (Cancelled - Department)

Owczarzak, Jill

Prepares students to articulate and address core theoretical and methodological issues of qualitative inquiry. Develops students’ capacity to engage in critical qualitative research, including understanding the role of power and social position (race, gender, health status) in data collection, analysis, and interpretation. Introduces narrative, content, discourse, and life history analysis, and institutional ethnography. Considers analysis of both textual (e.g., interview transcripts) and visual (e.g., observations, images) data. Preparers students to select an analytic approach that is appropriate for particular research questions. Explores multiple ways in which health-related phenomena can be analyzed and interpreted. Uses a publicly available data set on women and substance use to provide students with hands-on data analysis and interpretation experience. Introduces students to MAXQDA, a qualitative data management and analysis software.

Upon successfully completing this course, students will be able to:

1. Explain the relationship between qualitative research questions, data collection, analytic method, and interpretative approach
2. Distinguish different qualitative analytic traditions
3. Conceptualize the role of the researcher in data analysis and interpretation
4. Justify a decision regarding use (or not) of a qualitative analysis software package
5. Develop and apply a coding framework to qualitative data
6. Evaluate the quality and rigor of published qualitative research
7. Explain how data collection, transformation, and management processes affect data analysis and interpretation
Method of Assessment | Percentage
--- | ---
1. Participation | 21%
2. Paper(s) | 10%
3. Interview Transcript Summaries - 10%;
   Coding Scheme and Coded Transcripts - 24%; OSOP Exercise -
   15%; Data Analysis Plan and
   Reflective Essay - 20%

Method of Assessment Detail:
- Class Participation - 21%
- Transcription Reflection Paper - 10%
- Interview Transcript Summaries - 10%
- Coding Scheme and Coded Transcripts - 24%
- OSOP Exercise - 15%
- Data Analysis Plan and Reflective Essay - 20%

Email: jillowczarzak@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Students who did not complete the prerequisite course but can demonstrate qualitative methods training may be permitted to take the course
Prerequisite: 410.710 Concepts in Qualitative Research for Social and Behavioral Sciences

Learning Materials:
- (Book) Addicted. Pregnant. Poor.
  Knight, Kelly R.
  Duke University Press $25.95

410.721.01 Translating Research Into Public Health Programs And Policy
3 credits - Course offered this year - East Baltimore
Neelon, Sara
Examines how behavioral research (especially intervention research) is used, and not used, by policy makers and program administrators to determine what public health services are delivered. Defines the major types of decisions made in determining services to deliver in public health programs and major decision analytic methods used to aid these selections. Types of decisions include (1) how much to invest in service for one disease area relative to another, (2) determining if an intervention is affordable for large-scale delivery, and (3) choosing how much to invest in each of several different types of services within one disease area. Methods include decision tree analysis, cost analysis, and cost-utility analysis.
Upon successfully completing this course, students will be able to:
1. Identify the roles behavioral research can play in informing program and policy decisions and ways to make research more applicable
2. Identify ways to make behavioral research more applicable to public health programs and policies
3. Describe the ways in which each of the decision analytics methods have been used or not used in public health settings;
4. Explain the critical importance of empirical evidence in advancing public health knowledge;
5. Evaluate policies for their impact on public health and health equity;
6. Discuss the dimensions of the policy-making process, including the roles of research and ethics;
7. Interpret results of data analysis for public health research, policy, or practice;
8. Describe ways that research has been used to inform public health programs and policies related to obesity, marijuana, and HIV/AIDS
9. Identify and conduct decision analytics that can be used to inform public health programs and policies;
FOURTH TERM COURSE SCHEDULE 2019-2020 -- March 23 - May 15, 2020

Email: sara.neelon@jhu.edu
Lecture: T TH 9:00 AM - 10:20 AM
Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

**410.722.01 Translating Research Into Public Health Programs II (Cancelled - Department)**

2 credits - Course offered this year - East Baltimore
Holtgrave, David; Weir, Brian
Examines how behavioral research (especially intervention research) is used, and not used, by policy makers and program administrators to determine what public health services are delivered. Defines the major types of decisions made in determining services to deliver in public health programs and major decision analytic methods used to aid these selections. Types of decisions include (1) how much to invest in service for one disease area relative to another, (2) determining if an intervention is affordable for large-scale delivery, and (3) choosing how much to invest in each of several different types of services within one disease area. Methods include decision tree analysis, cost analysis, and cost-utility analysis.
Upon successfully completing this course, students will be able to:

1. Identify key decisions that must be made in determining what interventions to use in applied public health programs
2. Identify the roles behavioral research can play in informing this decision making
3. Identify ways to make behavioral research more applicable to this decision making
4. Identify key decision analytic methods that can be used to aid policy makers and program administrators who must make these decisions
5. Conduct a basic decision tree analysis
6. Conduct a basic threshold analysis
7. Conduct a basic cost analysis
8. Conduct a basic cost-utility analysis
9. Describe the ways in which each of the decision analytic methods has been used (or failed to be used) in a real public health policy situation
10. Apply the methods to a public health area of interest to the learner

Email: david.r.holtgrave@jhu.edu
Lecture: T 8:30 AM - 10:20 AM
Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 410.721
Multi-term with 411.721
Final grade applies to all terms

**410.800.01 MPH Capstone Health, Behavior And Society**

2 credits Number of credits depends upon the scope and nature of their project. - Course offered this year - East Baltimore
Departmental Faculty
The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.
Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.

*4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 90 of 202*
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

410.810.01 Field Placement Health Behavior And Society
variable credits up to 16 credits - Course offered this year - East Baltimore
McDonald, Eileen
N/A
Upon successfully completing this course, students will be able to:
1. The selected Course currently does not have any Learning Objectives.

Email: emcdona1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

410.820.01 Thesis Research In Health Behavior And Society
variable credits - Course offered this year - East Baltimore

Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

410.830.01 Postdoctoral Research In Health Behavior And Society
variable credits - Course offered this year - East Baltimore

Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

410.840.01 Special Studies And Research In Health Behavior And Society
variable credits - Course offered this year - East Baltimore

Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

410.850.01 MHS Research Practicum In Health Behavior And Society
variable credits Can vary per term depending on hours spent on research practicum - Course offered this year - East Baltimore
German, Danielle
Introduces MHS Social Factors students to hands-on social science research for public health. Provides an opportunity to work extensively with a doctorally trained research mentor. Prepares students to participate in social science research initiatives. Builds students' research knowledge and skills.
Upon successfully completing this course, students will be able to:
1. Participate in a social factors research initiative

Method of Assessment Percentage
1. Final Paper 99

Email: danielle.german@jhu.edu
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
HBS MHS students
Grading Options: Pass/Fail

410.860.01 Graduate Seminar In Social And Behavioral Sciences
2 credits - Course offered this year - East Baltimore
Tobin, Karin
Explores and debates theoretical concepts and orientations in the social and behavioral sciences and their application to public health research and practice through readings, discussion, and writing assignments.

Upon successfully completing this course, students will be able to:
1. Critically discuss theoretical concepts and orientations in the social and behavioral sciences
2. Present syntheses and critiques of foundational social and behavioral science texts
3. Develop a theoretically driven argument in the form of an original essay or manuscript

Method of Assessment

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<th>Percentage</th>
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<tr>
<td>1. Participation</td>
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<td>2. Written Assignment(s)</td>
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</tbody>
</table>

Email: ktobin2@jhu.edu
Lecture: TH 1:30 PM - 3:20 PM
Enrollment: Minimum 5, Maximum 20, Waitlist Enabled: Yes
Restricted to HBS doctoral students
Grading Options: Letter Grade or Pass/Fail

410.861.01 Graduate Seminar In Community-Based Research

1 credits - Course offered this year - East Baltimore
Bone, Lee; Bowie, Janice
Explores faculty-community partnership in community-based research (CBPR), education, and practice. Seminar topics may include CBPR principles and ethics, coalition and partnership building, implementation, dissemination, translation and sustainability, media and marketing, advocacy, policy, cultural diversity, collaborative grant writing, and publishing. Speakers include faculty and also community patrons.

Upon successfully completing this course, students will be able to:
1. Engage with students, faculty, scholars, and community members from different disciplines and backgrounds in scholarly exchange on issues of community-based research.
2. Apply CBPR principles across the continuum of the research process, including planning, implementation, evaluation, dissemination and policy implications.
3. Explain the need for and added value of using CBPR.
4. Discuss the strengths and challenges associated with community-university partnerships, as well as the successful co-development and impact of interventions to address community issues.

Method of Assessment

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<tbody>
<tr>
<td>1. Participation</td>
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<tr>
<td>2. Written Assignment(s)</td>
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</table>

Email: lbone1@jhu.edu
Lecture: M 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
This seminar is open to all divisions in the University and community.

410.863.01 Doctoral Seminar In Social And Behavioral Research And Practice

1 credits - Course offered this year - East Baltimore
Smith, Katherine Clegg
Explores and critiques social and behavioral sciences research and practice, emphasizing key constructs and methods of department faculty through presentations, readings, and group discussions.

Upon successfully completing this course, students will be able to:
1. Discuss key social and behavioral science theoretical constructs and methods used by department faculty in their research and practice
2. Develop and model oral presentation skills in social and behavioral sciences

Email: ksmith103@jhu.edu
Lecture: TH 12:00 PM - 1:20 PM
Enrollment: Minimum 7, No maximum enrollment required, Waitlist Enabled: No
HBS students only
Grading Options: Pass/Fail

410.864.01 Critical Issues In Health Disparities
1 credits - Course offered this year - East Baltimore
Thorpe, Roland
Provides an opportunity for students, postdoctoral trainees, and faculty to present scientific papers from the current and/or classic health disparities literature. Emphasizes presentation skills and the ability to critically evaluate scientific papers. Requires participants to read and discuss the assigned material.
Upon successfully completing this course, students will be able to:
1 Read and critically evaluate scientific papers
2 Lead discussions and present research related to health and/or healthcare disparities
3 Describe patterns of health outcomes by race, geography, and socioeconomic status

Email: rthorpe@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

410.884.01 MHS Seminar In Social Factors In Health IV
1 credits - Course offered this year - East Baltimore
German, Danielle
Advances students' understanding of the relationship between social factors and health outcomes and experiences. Exposes students to research pertinent to social factors in health. Provides MHS students with opportunities to explore applications of public health research skills in a variety of research and practice settings.
Upon successfully completing this course, students will be able to:
1 Discuss the design and implementation of research to examine social factors in health
2 Identify agencies and programs where social and behavioral research is conducted and applied for the promotion of public health
3 Critically examine and discussion the strengths and limitations of social scientific and behavioral research in public health

Email: danielle.german@jhu.edu
Lecture: W 12:00 PM - 1:20 PM

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: MHS in Social Factors in Health Seminars I-III

410.895.01 MPH Practicum: Health Behavior And Society
variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.
Upon successfully completing this course, students will be able to:
1 Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

415.614.92 Introduction To Medical Genetics II
2 credits - Course offered this year - NIH - Bethesda, MD
Hart, Suzanne
Builds upon the material in 415.613, and emphasizes other organ systems. Includes a patient panel where individuals discuss the impact of a genetic disorder on their lives and the lives of their family. Includes the following topics: neurogenetics, cardiac defects, cancer genetics, orofacial clefting, genitourinary disorders, skeletal dysplasias, connective tissue disorders because knowledge of the genetic contribution to disorders within these categories is critical to the work of genetic counselors and medical geneticists. Prepares students for the board certification exam given by the American Board of Genetic Counseling upon completion of the ScM in genetic counseling.

Upon successfully completing this course, students will be able to:

1. Explain genetics in neurogenetics, cardiac defects, cancer genetics, orofacial clefting, genitourinary disorders, skeletal dysplasias, connective tissue disorders
2. Discuss impact of a genetic disorder upon an individual and their family
3. Compile differential diagnoses based upon major findings of a patient
4. Distinguish among genetic conditions specific to a body system
5. Differentiate the features of the more common genetic disorders
6. Target family and medical histories to disease systems

Email: shart@mail.nih.gov
Lecture: T 5:30 PM - 7:30 PM
Enrollment: Minimum 5, Maximum 50, Waitlist Enabled: Yes
No undergraduates
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for students other than ScM in Genetic Counseling students
Prerequisite: 415.611, 415.612, and 415.613
Jointly offered with NIH

415.619.92 New Genetic Technologies And Public Policy
3 credits - Course offered this year - NIH - Bethesda, MD
Departmental Faculty
Examines the potential for harmful effects of usage of genetic technologies. Considers the role of patent policy, the biotechnology industry, the media, and other forces in disseminating new discoveries as well as policies for assuring the safety and effectiveness of new genetic technologies.

Upon successfully completing this course, students will be able to:

1. Identify and analyze complex public policy issues related to genetics and genomics
2. Discuss the history of genetics related to public policy
3. Discuss the federal legislative and regulatory process related to biomedical research issues
4. Evaluate the pros and cons of various public policy options
5. Explain the basic concepts of genetic counseling to a lay or policy audience

Lecture: F 12:00 PM - 1:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: none

415.624.01 Ethical, Legal And Social Implications In Genetics And Genomics Over Time
3 credits - Course not offered until 2020 - 2021 - East Baltimore
Mathews, Debra
Examines the ethical, legal and social implications (ELSI) of human genetics and genomics through the lens of significant and field-defining periods and events in the history of the field. Examines the ELSI raised by those events, and how the events have shaped and defined the current state of the science and emerging scientific, ethical, policy and public health issues.

Upon successfully completing this course, students will be able to:

1. Identify some of the defining moments in the ELSI history of human genetics, and discuss why they are important
2. Analyze the ethical, legal and social issues at play during these moments in history
3. Discuss how these defining moments have influenced contemporary and emerging issues in the genetic sciences

Email: dmathews@jhu.edu
Lecture: TH 3:30 PM - 6:20 PM  
Enrollment: Minimum 8, Maximum 30, Waitlist Enabled: Yes  
Grading Options: Letter Grade or Pass/Fail  
Consent required for some students; Consent required for students not in ScM in Genetic Counseling program  
Prerequisite: It is recommended, though not required, that students have taken a genetics course.

415.630.92 Therapeutic Genetic Counseling I  
2 credits - Course offered this year - NIH - Bethesda, MD  
Erby, Lori  
Equips graduate students enrolled in the JHU/NHGRI Genetic Counseling Program with an applied psychological paradigm for genetic counseling. Defines and illustrates goals and the process of genetic counseling. Teaches students skills to assess clients' cognitive and affective responses to the genetic contribution to disease and risk. Defines components of a therapeutic relationship. Allows opportunities to practice establishing and acting on a therapeutic relationship.

Upon successfully completing this course, students will be able to:
1. Conduct a client psychological assessment  
2. Relate the process of genetic counseling to counseling goals  
3. Demonstrate skills in establishing a therapeutic relationship with a client  

Method of Assessment Percentage  
1. Participation 50  
2. Paper(s) 50  

Email: lorierby@jhu.edu  
Lecture: F 11:00 AM - 12:50 PM  
Enrollment: Minimum 4, No maximum enrollment required, Waitlist Enabled: No  
Grading Options: Letter Grade or Pass/Fail  
Prerequisite: Must be enrolled in ScM in Genetic Counseling Program  
Jointly offered with NIH

415.675.01 Cancer Genetics: Managing The Risks Through Testing And Counseling  
2 credits - Course offered this year - East Baltimore  
Erby, Lori  
Equips graduate students enrolled in the JHU/NHGRI Genetic Counseling Program and medical genetics fellows with the genetic principles of common, complex disease using cancer as the example. Introduces key concepts throughout the course through case-based learning. Provides background for future clinical cancer genetics rotations.

Upon successfully completing this course, students will be able to:
1. Explain the principles of genetic components to common disease using cancer as the example  
2. Explain the contribution of major gene mutations to the development of cancer  
3. Describe the multi-faceted aspects of genetic testing for cancer susceptibility  
4. Use case examples to assess cancer risk  
5. Explain the psychological aspects of living at increased risk for cancer  

Method of Assessment Percentage  
1. Assignments 50  
2. Exam(s) 50  

Method of Assessment Detail:  
Assignments and Exams  
Email: lorierby@jhu.edu  
Lecture: T TH 1:30 PM - 2:50 PM  
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No  
Grading Options: Letter Grade or Pass/Fail

415.675.92 Cancer Genetics: Managing The Risks Through Testing And Counseling
Upon successfully completing this course, students will be able to:

1. Explain the principles of genetic components to common disease using cancer as the example
2. Explain the contribution of major gene mutations to the development of cancer
3. Describe the multi-faceted aspects of genetic testing for cancer susceptibility
4. Use case examples to assess cancer risk
5. Explain the psychological aspects of living at increased risk for cancer

Lecture: T 1:00 PM - 2:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

**415.820.92 Thesis Research: Genetic Counseling**

variable credits - Course offered this year - NIH - Bethesda, MD

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Jointly offered with NIH

**415.840.92 SS/R: Genetic Counseling**

variable credits - Course offered this year - NIH - Bethesda, MD

Information not required for this course type

Lecture: TBA

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

**415.851.92 Supervised Clinical Rotations: Genetic Counseling**

variable credits Students should register for 4 credits in terms 1-4 and 2 credits in the summer term. - Course offered this year - NIH - Bethesda, MD

Cho, Megan

Offers clinical placements in adult, pediatric, and prenatal genetic centers in the Baltimore-Washington area. Provides opportunity to learn about genetic conditions by their impact on individuals and their families, and about roles of the genetic counselor. Provides a wide range of clinical experiences over the course of multiple placements.

Upon successfully completing this course, students will be able to:

1. Demonstrate skills required to practice in a clinical genetic counseling setting
2. Critique developing counseling skills

**Method of Assessment**

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<tr>
<th>Method</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>80</td>
</tr>
<tr>
<td>Reflection</td>
<td>10</td>
</tr>
<tr>
<td>Self-assessments</td>
<td>10</td>
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</tbody>
</table>

Email: megan.cho@nih.gov

Enrollment: Minimum 10, Maximum 15, Waitlist Enabled: Yes
Grading Options: Pass/Fail

Prerequisite: Must be enrolled in ScM in Genetic Counseling Program
Jointly offered with NIH

**415.861.92 Genetic Counseling Seminar: Topics In The Field**
2 credits - Course offered this year - NIH - Bethesda, MD

Erb, Lori

Offers a dynamic forum for discussion that focuses on genetic counseling research, policy, and education and their impact on clinical practice. Invites a diverse group of professionals to present topics well suited for class discussion. Includes student-led case presentations to highlight the psychological, social, and ethical issues in genetic counseling. Exposes students to a variety of client attitudes, reactions, and experiences by including clients who have personal experience with a genetic condition or familial risk as speakers.

Upon successfully completing this course, students will be able to:
1. Present concise case summaries and exchange impressions of the psychological, social, and ethical aspects of genetic counseling
2. Establish relationships with other students to facilitate mentoring, strategizing, and camaraderie
3. Describe provocative issues in the field of genetic counseling
4. Explain the types of cases and professional issues encountered by genetic counselors
5. Describe the variety of genetic counseling research topics
6. Describe programs in policy and ethics related to genetic counseling
7. Describe the personal experiences of those with genetic conditions or living at increased risk

Email: lorierby@jhu.edu

Lecture: F 1:30 PM - 3:20 PM

Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes

ScM in Genetic Counseling students

Grading Options: Pass/Fail

Consent required for some students; Consent required for non-ScM in Genetic Counseling students.

Prerequisite: Must be enrolled in ScM in Genetic Counseling Program

Multi-term with 415.861

Jointly offered with NIH

ScM in Genetic Counseling students must register for all four terms. Non-ScM in Genetic Counseling students are only required to register for either the two fall or two spring terms.

**415.867.92 Current Topics In Molecular Genetics II**
1 credits - Course offered this year - NIH - Bethesda, MD

Hart, Suzanne

Builds upon the material presented in 415.866. Provides a review of molecular diagnosis of common hereditary or neoplastic disorders for which DNA-based diagnosis is now in routine use, including FGFR3 disorders, fetal blood typing, thrombophilies, hemochromatosis, fragile X syndrome, polyglutamine disorders, hereditary breast cancers, Charcot Marie Tooth and spinal muscular atrophy, PraderWilli and Angelman syndromes, mitochondrial diseases, Duchenne and Becker muscular dystrophy, cystic fibrosis, and Smith-Lemli-Opitz Syndrome. Includes instruction in genetic risk prediction, using linkage and Bayesian analysis as well as DNA forensics and paternity testing.

Upon successfully completing this course, students will be able to:
1. Compare the types of techniques used in molecular genetic diagnostic laboratories, including the limitations of each assay
2. Discuss the issues underlying molecular diagnosis for a variety of disorders, including Fragile X syndrome, cystic fibrosis, achondroplasia, fetal Rh typing, colorectal cancer, and thrombophilies
3. Calculate residual risks after molecular testing
4. Discuss the issues underlying molecular diagnosis for a variety of disorders
5. Discuss how to interpret molecular genetic results

Email: shart@mail.nih.gov

Lecture: W 4:00 PM - 4:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 97 of 202
Prerequisite: 415.610-.613; Must be enrolled in ScM in Genetic Counseling Program
Multi-term with 415.866
Final grade applies to all terms
Jointly offered with NIH

415.870.01 Genetic Counseling Clinical Supervision (Discontinued)
1 credits - Course offered this year - East Baltimore
Biesecker, Barbara
Assists the student in recognizing the impact of personal styles and biases on the counseling process through individual supervision sessions. Uses audiotapes and/or videotapes of student counseling sessions to review, analyze, and process student-client interactions throughout the student's clinical rotations, and develop strategies for addressing barriers in the counseling process.

Upon successfully completing this course, students will be able to:
1. Demonstrate professional growth in establishing a therapeutic relationship with clients
2. Recognize the impact of personal styles and biases on the counseling process
3. Demonstrate strategies to best meet each individual client's needs
4. Provide genetic counseling services using techniques that are consistent with the student's developing personal style

Email: barbarab@mail.nih.gov

Enrollment: Minimum 10, Maximum 15, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Prerequisite: Must be enrolled in ScM in Genetic Counseling Program; students must register for four terms.
Jointly offered with NIH

415.870.92 Genetic Counseling Clinical Supervision
1 credits - Course offered this year - NIH - Bethesda, MD
Erby, Lori
Assists the student in recognizing the impact of personal styles and biases on the counseling process through individual supervision sessions. Uses audiotapes and/or videotapes of student counseling sessions to review, analyze, and process student-client interactions throughout the student's clinical rotations, and develop strategies for addressing barriers in the counseling process.

Upon successfully completing this course, students will be able to:
1. Demonstrate professional growth in establishing a therapeutic relationship with clients
2. Recognize the impact of personal styles and biases on the counseling process
3. Demonstrate strategies to best meet each individual client's needs
4. Provide genetic counseling services using techniques that are consistent with the student's developing personal style

Email: lorierby@jhu.edu

Enrollment: Minimum 10, Maximum 15, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Prerequisite: Must be enrolled in ScM in Genetic Counseling Program; students must register for four terms.
Jointly offered with NIH

415.880.01 Genetic Counseling Program Thesis Proposal Development I
2 credits - Course offered this year - East Baltimore
Roter, Debra; Erby, Lori
Discusses the primary elements that comprise a research proposal; how topics for research are selected, pursued, and justified; and how study hypotheses are derived from the existing literature. Includes discussion of the conceptual elements of primary research articles. Provides skills necessary to support the development of a research proposal.

Upon successfully completing this course, students will be able to:
1. Conduct literature review to support a social science research proposal
2. Critique published research

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 98 of 202
415.880.92 Genetic Counseling Program Thesis Proposal Development I (Discontinued)
2 credits - Course offered this year - NIH - Bethesda, MD
Erby, Lori
Examines the primary elements that comprise a research proposal; how topics for research are selected, pursued, and justified; and how study hypotheses are derived from the existing literature. Includes discussion of the conceptual elements of primary research articles. Provides skills necessary to support the development of a research proposal.

Upon successfully completing this course, students will be able to:
1. Conduct literature review to support a social science research proposal
2. Critique published research
3. Identify gaps in scientific knowledge
4. Demonstrate skills necessary to conduct an independent research project
5. Analyze a research problem
6. Develop a rationale for a research question

300.651.81 Introduction To The U.S. Healthcare System
4 credits - Course offered this year - Internet
Herring, Bradley; Pollack, Craig
Focuses on the organization, financing, and delivery of healthcare in the U.S. Examines the effects of market competition and government regulation. Examines the ways that medical providers are paid, and explores the major issues currently facing physicians, hospitals, and the pharmaceutical industry. Also discusses several potential small and large scale reforms to the U.S. healthcare system and evaluates their likely effects on healthcare spending, quality of care, and access to care.

Upon successfully completing this course, students will be able to:
1. Apply basic economic concepts related to health insurance coverage
2. Explain how both private health insurance and public health insurance are financed
3. Evaluate the ways in which private and public health insurers reimburse medical providers
4. Assess private and public models of financing and delivery of healthcare services
5. Analyze various aspects of the hospital, physician, and pharmaceutical drug sectors
6. Explain how nonprofit status, competition, quality, and safety affect medical providers
7. Identify the various determinants of access to care for low-income and vulnerable populations
8. Evaluate how specific policy proposals will likely affect access to care and healthcare spending
9. Critique how the political process affects how healthcare reform is undertaken in the U.S.
Method of Assessment | Percentage
--- | ---
1. Quizzes | 60
2. Final Exam | 40

Email: herring@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.

300.652.01 Politics Of Health Policy

4 credits - Course offered this year - East Baltimore
Navarro, Vicente

Analyzes the politics of health policy according to the dictum of one of the founders of public health, R. Virchow, “Public Health is a Social Science and Politics is Public Health in its most profound sense.” Focuses on the political reasons for the underdevelopment of health and health care in the U.S. and in the world. Looks at how economic, social, and political power are reproduced through political institutions, and the consequences on the level of health and type of health care that countries have. Analyzes the role of national and international agencies such as the WTO, World Bank, IMF, and WHO in facilitating and/or hindering development of health. Also focuses on U.S. governmental policies that diminish or increase the maldistribution of power outside and within the health sector.

Upon successfully completing this course, students will be able to:
1. Identify the dynamics of political and economic forces on health
2. Analyze how power - namely class, race, and gender power - is reproduced in society, nationally and internationally, and how power affects the health and well-being of populations
3. Discuss the causes of underdevelopment and the reasons for the growth in social inequalities, both worldwide and within nations

Email: vnavarr2@jhu.edu

Lecture: F 8:00 AM - 11:50 AM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
undergraduates not permitted
Grading Options: Letter Grade or Pass/Fail

300.724.01 Foundations In Health Policy IV

1 credits - Course offered this year - East Baltimore
Castillo, Renan

Helps HPM doctoral students synthesize course content from their first year with a specific focus on problem identification and the development of testable hypotheses; how to develop a conceptual model; approaches for conducting a literature review and synthesis. Provides an overview of the HPM Department Qualifying Examination.

Upon successfully completing this course, students will be able to:
1. Identify a public health problem and develop testable hypotheses
2. Develop conceptual models
3. Conduct literature reviews and synthesis
4. Understand the components of the HPM Department qualifying exam

Email: rcastil1@jhu.edu

Lecture: T 9:00 AM - 10:20 AM

Enrollment: Minimum 5, Maximum 12, Waitlist Enabled: Yes
HPM 1st year PhD students only
Grading Options: Pass/Fail
Course is taught in departmental space, room 461 Hampton House

300.800.01 MPH Capstone Health Policy And Management

2 credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:
1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

300.830.01 Postdoctoral Research Health Policy And Management
variable credits credit registration is negotiated with faculty mentor - Course offered this year - East Baltimore
Departmental Faculty
Information not required for this course type
Lecture: TBA
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

300.840.01 Special Studies And Research In Health Policy And Management
variable credits student and faculty determine appropriate number of credits for each registration period - Course offered this year - East Baltimore
Not required for this course type
Upon successfully completing this course, students will be able to:
1. Not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
For MPH students who register for SS/R in HPM.
Grading Options: Pass/Fail
For non-departmental students who register for SS/R in HPM.

300.862.81 Current Issues In Public Health
1 credits - Course offered this year - Internet
McGinty, Meghan D.
Faculty experts present public health topics of current interest such as health promotion and disease prevention, U.S. health care delivery systems, environmental problems and the spectrum of factors influencing the health status of diverse populations and communities.
Upon successfully completing this course, students will be able to:
1. Advocate for political, social or economic policies and programs that will improve health in diverse populations
2. Select communication strategies for different audiences
3. Communicate audience-appropriate public health content, in writing and orally

Method of Assessment Percentage
0. Discussion Board 10
1. LiveTalks 10
2. Peer-feedback 10
3. Assignments 60
4. Lectures 10

Email: mmcginty@jhu.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 101 of 202
FOURTH TERM COURSE SCHEDULE 2019-2020 -- March 23 - May 15, 2020

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: Introduction to Online Learning

**300.871.01 The Research And Proposal Writing Process II**
2 credits - Course offered this year - East Baltimore
Reider, Lisa; Kasper, Judith
Assists doctoral students in preparing their dissertation proposal through presentations on their progress and faculty lectures on relevant topics, such as identifying research questions and writing hypotheses; reviewing the literature; sources of funding; protocol construction; and the Committee on Human Research.

Upon successfully completing this course, students will be able to:
1. Describe the essential elements of dissertation proposal development and the preliminary oral exam process
2. Constructively critique a dissertation proposal
3. Make progress on writing their dissertation proposals
4. Involve one's faculty advisor to assist in achieving the objectives above

Email: lsemani1@jhu.edu
Lecture: W 1:30 PM - 3:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to 2nd year HPM doctoral students, or consent of department.
Grading Options: Pass/Fail
Prerequisite: 300.870
Final grade applies to all terms

**300.895.01 MPH Practicum: HPM**
variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:
1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

**301.645.01 Health Advocacy**
3 credits - Course offered this year - East Baltimore
Horwitz, Josh
Prepares health professionals, (from government health officials, business leaders, non-profit organization representatives to scientists) to advance public health policy improvements. Through lectures, extensive group exercises and a "mock" congressional hearing, students develop the skills to evaluate the policymaking process, create opportunities to inform and influence policymaking, and become more effective in translating and communicating in a policymaking environment.

Upon successfully completing this course, students will be able to:
1. Assess a public health problem and determine tactically when to solve the problem with policy strategies versus behavioral education
2. Analyze the legislative, administrative and judicial intervention points for policymaking and identify where to effectively target advocacy efforts
3. Identify and evaluate advocacy strategies, such as coalitions, grassroots, and paid and earned media outreach, in order to create specific advocacy campaigns
4. Dissect policy-oriented communications and develop personal skills to effectively translate and advocate for public health improvements to policymakers, the press and the public

Method of Assessment

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Written Assignment(s)</td>
<td>90</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
</tbody>
</table>

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsp.edu/courses - Page 102 of 202
301.820.01 Thesis Research In Health Policy And Management
variable credits students and faculty determine appropriate number of credits of registration for each term - Course offered this year - East Baltimore
PhD students register after successful passing of the school-wide preliminary oral exam to conduct their dissertation work.
Upon successfully completing this course, students will be able to:
1 Information not required for this course type

301.861.01 Graduate Seminar In Health And Public Policy
1 credits - Course offered this year - East Baltimore
McInty, Beth
Reviews and critiques current literature in health and public policy and evaluates studies from a methodological and conceptual basis.
Upon successfully completing this course, students will be able to:
1 Knowledgeable of the faculty of Health and Public Policy and their research and practice interests
2 Familiar with the literature that pertains to HPP subject areas
3 Provided with a forum for discussing that literature and for understanding relationships between health policy and other areas within public health
4 Exposed to an environment that welcomes and promotes a strong, engaged cohort of doctoral students within the HPP faculty
5 Identify and develop skills that facilitate the translation of public health research into policy and practice

305.607.81 Public Health Practice
4 credits - Course offered this year - Internet
Resnick, Beth A.
Builds on the course prerequisite and satisfies the MPH practicum requirement through hands-on application of knowledge and skills to real-world practice concerns and settings in collaboration with a public health practice organization. Students engage in a significant experience through addressing public health priority areas pre-identified by the collaborating organization. All practicum work is shared with the collaborating organization for use at their discretion. Students complete the public health practicum under the direction and supervision of the course faculty. Practicum work is designed with a pre-identified collaborating organization around pre-identified priority areas and projects; students are not able to select topics/projects outside of the pre-identified options. This course does not offer the option for students to identify their own collaborating organizations or develop their own projects.
Upon successfully completing this course, students will be able to:
1 Assess population health of a specific jurisdiction
2 Develop strategies and approaches to address public health priorities
3 Apply public health and social determinants of health knowledge and theory to address specific public health challenges
4 Assess and develop public health communications to targeted audiences
5 advance personal career growth and development, using the core competencies for public health professionals as a framework
Email: blippy@cpwr.com

Lippy, Bruce

Provides a link between the public health approach to injury prevention, the traditions of safety science and engineering, and their relationship with ergonomics and biomechanics. Topics covered include identifying the injury problem; using surveillance and record-keeping systems; preventing injuries by government, unions, health departments, and industry; and comparing safety sciences and a public health approach to injury prevention.

Upon successfully completing this course, students will be able to:
1. Develop strategies for preventing occupational injuries based on the scientific literature
2. Describe a public health approach to occupational injury prevention
3. Describe the roles of industry, government, public health professionals, labor unions, consensus organizations and the media in preventing occupational injuries
4. Apply the hierarchy of controls to develop intervention strategies for occupational injury prevention
5. Explain and apply several hazard assessment tools used by safety professionals to prevent injuries
6. Review the literature on a specific hazard for a target population and propose research to measure the impact of a public health intervention

Email: blippy@cpwr.com

Lecture: T 3:30 PM - 5:20 PM

Enrollment: Minimum 8, No maximum enrollment required, Waitlist Enabled: No

undergraduate students are not permitted in this course

Grading Options: Letter Grade or Pass/Fail

Prerequisite: At least one occupational health or injury prevention course.

305.615.81 Occupation Injury Prevention And Safety Policy And Practice
2 credits - Course offered this year - Internet

Lippy, Bruce

Provides a link between the public health approach to injury prevention, the traditions of safety science and engineering, and their relationship with ergonomics and biomechanics. Topics covered include identifying the injury problem; using surveillance and record-keeping systems; preventing injuries by government, unions, health departments, and industry; and comparing safety sciences and a public health approach to injury prevention.

Upon successfully completing this course, students will be able to:
1. Develop strategies for preventing occupational injuries based on the scientific literature
2. Describe a public health approach to occupational injury prevention
3. Describe the roles of industry, government, public health professionals, labor unions, consensus organizations and the media in preventing occupational injuries
4. Apply the hierarchy of controls to develop intervention strategies for occupational injury prevention
5. Explain and apply several hazard assessment tools used by safety professionals to prevent injuries
6. Review the literature on a specific hazard for a target population and propose research to measure the impact of a public health intervention

Email: blippy@cpwr.com
Prerequisite: Introduction to Online Learning and at least one occupational health or injury prevention course.

305.630.01 Transportation Policy And Health (Discontinued)

2 credits - Course offered this year - East Baltimore

Ehsani, Johnathon P.

Provides an overview of the significant effect of transportation on health in terms of safety, air quality, physical activity, noise pollution, and equitable access to opportunities, and importance of this sector for public health. Covers topics including transportation policies that (a) promote safe travel by vehicle, aviation, and rail, (b) foster active transportation (e.g., walking, bicycling), (c) expand public transportation, (d) address air quality and the built environment; and (e) promote equitable access. Uses case studies to highlight transportation policies that have been developed and implemented at the federal, state, and local levels, and describes how they have promoted health or had the unintended consequence of adversely affecting health.

Upon successfully completing this course, students will be able to:

1. Summarize the significant effects of transportation on public health
2. Explain how transportation policies at the local, state, and federal levels can maximize the health-promoting aspects of transportation and mitigate its adverse health impacts
3. Analyze a specific transportation policy and its effects on health

Method of Assessment

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
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<td>Paper(s)</td>
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<tr>
<td>Presentation addressing a transportation policy issue</td>
<td>20</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:

Email: Johnathon.ehsani@jhu.edu

Lecture: T 1:30 PM - 3:20 PM

Enrollment: Minimum 8, No maximum enrollment required, Waitlist Enabled: No

Undergraduates require consent of instructor prior to registering

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Undergraduates require consent of instructor prior to registering

305.630.81 Transportation Policy And Health

2 credits - Course offered this year - Internet

Ehsani, Johnathon P.

Provides an overview of the significant effect of transportation on health in terms of safety, air quality, physical activity, noise pollution, and equitable access to opportunities, and importance of this sector for public health. Covers topics including transportation policies that (a) promote safe travel by vehicle, aviation, and rail, (b) foster active transportation (e.g., walking, bicycling), (c) expand public transportation, (d) address air quality and the built environment; and (e) promote equitable access. Uses case studies to highlight transportation policies that have been developed and implemented at the federal, state, and local levels, and describes how they have promoted health or had the unintended consequence of adversely affecting health.

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<tr>
<td>Presentation addressing a transportation policy issue</td>
<td>20</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:

Email: Johnathon.ehsani@jhu.edu

Enrollment: Minimum 8, No maximum enrollment required, Waitlist Enabled: No

Undergraduates require consent of instructor prior to registering

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 105 of 202
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduates require consent of instructor prior to registering
Prerequisite: Introduction to Online Learning

305.861.01 Graduate Seminar In Injury Research And Policy
1 credits - Course offered this year - East Baltimore
Crifasi, Cassandra
Students attend weekly seminars sponsored by the Center for Injury Research and Policy that advance one’s understanding of injury, violence, and resulting disability as public health problems. Seminar topics include methodological approaches, occupational injury, violence prevention, disability, and emerging topics, as well as the application of policy, law, and practice for injury and violence prevention. Students hear from leading experts in the field and read literature provided to accompany each presentation.

Upon successfully completing this course, students will be able to:
1. Explain the epidemiology of specific injuries and related consequences in the population
2. Identify effective or promising strategies for preventing injury and disability
3. Describe how injury research informs policy and practice to reduce the burden of injury in the population

Method of Assessment
1. Participation 30%
2. Seminar critiques 70%

Email: crifasi@jhu.edu
Lecture: M 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

306.660.01 Legal And Public Health Issues In The Regulation Of Intimacy
3 credits - Course offered this year - East Baltimore
Rosen, Joanne
Examines the ways in which the state regulates intimate and private relations and the justifications for such regulation. Particularly focuses on the attention paid to the public health and morality justifications offered by the state for the enactment and enforcement of privacy laws. Topics include: when state regulation of intimate decisions, actions and relationships is justified; the regulation of consensual sexual activity; the regulation of contraception and abortion; the regulation of same-sex sexual activity; and the regulation of same-sex marriage.

Upon successfully completing this course, students will be able to:
1. Define the constitutional concept of “privacy” as protected by the 14th Amendment of the Constitution
2. Evaluate the state justifications for regulating intimate and private decisions, actions and relations
3. Describe the complex relationship between individual autonomy and the public good
4. Analyze the substantive law on privacy topics, including abortion, contraception, marital and non-marital intimate relations, same-sex intimate relations and same-sex marriage
5. Evaluate the reasoning of judicial opinions on privacy topics

Method of Assessment
1. Participation 10%
2. Paper(s) 50%
3. Written comments 40%

Email: jrosen55@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Priority given to MPH students; open to undergraduates when space is available
Grading Options: Letter Grade or Pass/Fail

306.662.01 Public Health Agencies: Law, Policy And Practice (Discontinued)
3 credits - Course offered this year - East Baltimore
Rutkow, Helaine
Explores the important and expanding role that regulatory or administrative agencies, such as FDA and EPA, play in protecting and promoting the public’s health. Examines agencies’ ability to create and implement health policy, and discusses the legal limits on agency powers. Discusses how agencies develop regulations and employ other regulatory tools. Uses case studies to illustrate key concepts, such as the role of science in the regulatory process and the influence of politics on agency actions. Class sessions involve the interpretation and analysis of judicial opinions, regulations, and other administrative materials. Focuses on U.S. regulatory policy, but also examines examples and implications for international health policy. This course builds on the skills introduced in 306.650, and exposes students to new public health law and policy topics relevant to regulatory agencies.

Upon successfully completing this course, students will be able to:
1. Explain the role of governmental agencies and actions they may take to promote the public’s health
2. Identify and interpret public health regulations and other administrative materials
3. Prepare materials suitable to be submitted in the notice and comment process
4. Analyze examples of how the law facilitates or limits governmental agencies’ activities
5. Assess how politics may influence governmental agencies’ development and implementation of health policy

Email: lrutkow@jhu.edu
Lecture: M W 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; undergrads permitted with consent of instructor
Prerequisite: Public Health and the Law (306.650) or consent of instructor

306.663.01 Legal And Ethical Issues In Health Services Management
3 credits - Course offered this year - East Baltimore
Lee, Stacey
Provides students with an overview of the legal environment as it affects medicine and business. Utilizes cutting-edge cases as students explore medical malpractice, negligence, liability (physician, product, and corporate), the changing physician-patient relationship, the care of vulnerable and high-risk populations, intellectual property, criminal aspects of health care, patient consent and rights, and health care reform.

Upon successfully completing this course, students will be able to:
1. Identify how business law affects health services delivery, including choice of corporate form, imposition of liability for clinical decision making and regulated financial practices (e.g., health care fraud) on the various elements of the delivery system and the legal and ethical implications of health service delivery through tax-exempt and for profit corporate structures.
2. Summarize the legal and ethical conflicts arising in the current health care delivery system, including the manner in which particular financial arrangements and management theories create conflict between different legal and ethical principles
3. Cite legislative and judicial responses to conflicts in health care as an expression of public policy and societal concerns
4. Explain the inherent limitations of the legal system to address and resolve conflict and the role of ethical analysis
5. Identify the differences between legal and ethical issues
6. Analyze ethical issues within the context of individuals and collective value systems and the organizational structure, mission and culture of health care delivery systems
7. Utilize different methods of ethical analysis, problem solving, and conflict resolution for ethical disputes

Email: StaceyB.Lee@jhu.edu
Lecture: T 8:00 AM - 10:20 AM
Enrollment: Minimum 12, Maximum 40, Waitlist Enabled: Yes
undergraduates are not permitted in this course
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; All students must receive consent to register.

306.663.93 Legal And Ethical Issues In Health Services Management (Cancelled - Department)
3 credits - Course offered this year - Beijing, China
Departmental Faculty
Provides students with an overview of the legal environment as it affects medicine and business. Utilizes cutting-edge cases as students explore medical mal-practice, negligence, liability (physician, product, and corporate), the changing physician-patient relationship, the care of vulnerable and high-risk populations, intellectual property, criminal aspects of health care, patient consent and rights, and health care reform.

Upon successfully completing this course, students will be able to:

1. Identify how business law affects health services delivery, including choice of corporate form, imposition of liability for clinical decision making and regulated financial practices (e.g., health care fraud) on the various elements of the delivery system and the legal and ethical implications of health service delivery through tax-exempt and for profit corporate structures.

2. Summarize the legal and ethical conflicts arising in the current health care delivery system, including the manner in which particular financial arrangements and management theories create conflict between different legal and ethical principles.

3. Cite legislative and judicial responses to conflicts in health care as an expression of public policy and societal concerns.

4. Explain the inherent limitations of the legal system to address and resolve conflict and the role of ethical analysis.

5. Identify the differences between legal and ethical issues.

6. Analyze ethical issues within the context of individuals and collective value systems and the organizational structure, mission and culture of health care delivery systems.

7. Utilize different methods of ethical analysis, problem solving, and conflict resolution for ethical disputes.

Days & Times with Start & End Dates: Apr 17, 2020 - Apr 19, 2020
Lecture: F SA 8:30 AM - 5:20 PM
Enrollment: Minimum 12, Maximum 35, Waitlist Enabled: Yes
Part-time DrPH students in the Tsinghua cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; enrollment restricted to students in the Tsinghua DrPH cohort.
This course is offered over a period of 3 days in Beijing China. Students are required to complete readings and assignment prior to the in-person session.

306.861.01 Graduate Doctoral Seminar In Bioethics
1 credits - Course offered this year - East Baltimore
Rieder, Travis

Familiarizes students with contemporary and classic literature in bioethics and demonstrates how to rigorously critique empirical and normative writings in the field of bioethics. Readings for the seminar include recent publications in bioethics and some classic pieces in the field. Students are primarily responsible for selection of articles and for presentation of articles for discussion.

Upon successfully completing this course, students will be able to:

1. Understand the literature in bioethics and public health.

2. Analyze arguments in existing bioethics literature and respond to them independently.

3. Synthesize literature across different content areas of bioethics in order to provide linkages in the field.

4. Critique one another's work and scholarly arguments.

Email: trieder@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Non HPM PhD bioethics students must obtain instructor consent to register
Grading Options: Pass/Fail
Prerequisite: There is no formal prerequisite for the course, although it is recommended that students have taken Public Health and the Law, 306.650, Ethical Issues in Public Health, 306.655, and/or Legal and Ethical Issues in the Evolving Health Care System, 306.663.

306.864.01 Fogarty Bioethics Fellows Seminar (Discontinued)
1 credits - Course offered this year - East Baltimore
Kass, Nancy; Hyder, Adnan; Ali, Joseph

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 108 of 202
Provides a small, interactive setting for discussion of research ethics, ethics committees, and ethics concepts among the trainees and between trainees and affiliated faculty. Sessions are divided among the following activities: reviewing and critiquing journal articles related to research ethics; trainees' individual presentations on practicum research progress; guest speakers related to research ethics cases and/or concepts; and development and presentation of original case studies by each trainee. Topics include standard of care, justice, inducements, research ethics committees, informed consent, and gender roles in research decisions.

Upon successfully completing this course, students will be able to:
1. Discuss key literature in international research ethics
2. Critically analyze case studies in research ethics
3. Present research ethics cases and original research proposals
4. Identify ethics issues in cases related to ethics and research

Email: nkass@jhsph.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Fogarty African Bioethics Training Program Fellows

Grading Options: Pass/Fail

Consent required for all students; to ensure students have prerequisites

Prerequisite: Prior or concurrent enrollment in:
306.665 and 306.655

Jointly offered with IH

Course is held in Deering Hall.

308.610.01 The Political Economy Of Social Inequalities And Its Consequences For Health And Quality Of Life

Navarro, Vicente

Focuses on the economic, financial, political, and social causes for the growth of social inequalities, in both developed and underdeveloped countries, and its consequences for health and quality of life. Emphasizes the analysis of public policies that have been developed by national and international agencies and how they have impacted the growth of those inequalities. Analyzes social class, race, and gender inequalities and their reproduction through national and international policies. Also emphasizes the increasing concentration of power and the way it appears in health and vital statistics. Requires active participation of the students in the discussion of the issues involved.

Upon successfully completing this course, students will be able to:
1. Understand how globalization impacts the economy
2. Distinguish the difference between the globalization and regionalization of economies
3. Identify what changes are occurring in public health and social policies that are attributable to the process of globalization
4. Identify the causes of the recent growth in social inequalities
5. Distinguish what are the health and social consequences of greater inequality

Email: vnavarr2@jhu.edu

Lecture: T 5:30 PM - 8:00 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for all students; All students must obtain consent of instructor prior to registering for this class. Undergrads can register but must obtain instructor permission provided space is available.

308.630.01 U.S. Pharmaceutical Policy

Socal, Mariana

Examines the pharmaceutical market and addresses the core issues related to pharmaceutical policy within the US health care system, such as drug pricing, regulation, and financing, drug coverage decisions, and ethical aspects of drug regulation. Considers the role of multiple health care system actors involved in and affected by pharmaceutical policy: drug manufacturers, drug regulation agencies, insurers, pharmaceutical benefits managers, health care providers, patients, families, and others. Provides an in-depth analysis of drug pricing strategies, coverage decisions, and access and affordability issues.

Upon successfully completing this course, students will be able to:
1. Identify the role of the multiple actors involved in the US pharmaceutical market
2. Explain how each actor in the market influences and is affected by pharmaceutical policies
3. Differentiate between regulations for off-patent and patented pharmaceutical products
4. Explain how pharmaceuticals are priced and financed in the US health care system
5. Analyze pros and cons of alternative pharmaceutical pricing policies
6. Propose and employ criteria to evaluate pharmaceutical policy options

Email: msocal1@jhu.edu
Lecture: M W 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

308.810.01 Field Placement Health Policy-MSPH
variable credits most students will register for 16 credits but on occasion, with program permission, fewer credits may be registered for - Course offered this year - East Baltimore
Resnick, Beth A.
Provides students with an intensive “hands on” extension of their academic training under the guidance of one or two senior level health policy professionals and program faculty. Students gain a deeper understanding of how health policies affect the public’s health and further develop their professional health policy skills.
Upon successfully completing this course, students will be able to:
1. Contribute to the organization by participating in and completing all assigned work.
2. Discern their own role in the organization and explain how their work contributes to the mission of the organization
3. Recognize the role of the host organization within the health policy arena and how the organization fits into the “big picture” of health policy

Email: bresnick@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
matriculated MSPH/HP students
Grading Options: Pass/Fail

308.851.01 Phase Internship
variable credits credits are negotiated individually with each student depending on the internship placement and time commitment - Course offered this year - East Baltimore
Resnick, Beth A.; Mui, Paulani
Public Health Applications for Student Experience (PHASE), offers students the opportunity to gain real world public health practice experience. PHASE internships require students to synthesize, integrate and apply academic theory in public health practice settings. By working on-site, students see first-hand how public health agencies function and engage in public health decision-making on a daily basis.
Upon successfully completing this course, students will be able to:
1. Apply academic knowledge and theory in a real world public health practice setting
2. Write a concept paper outlining the project aims, objectives, timeline, and specific deliverables
3. Perform background research and data analysis as necessary
4. Synthesize the PHASE experience and project findings in a final paper
5. Present the project at the PHASE symposium

Email: bresnick@jhu.edu
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
undergraduates not permitted
Grading Options: Pass/Fail
Consent required for all students; all students must obtain consent.

308.851.02 Phase Internship
variable credits credits are negotiated individually with each student depending on the internship placement and time commitment - Course offered this year - East Baltimore
Resnick, Beth A.
Public Health Applications for Student Experience (PHASE), offers students the opportunity to gain real world public health practice experience. PHASE internships require students to synthesize, integrate and apply academic theory in public health practice settings. By working on-site, students see first-hand how public health agencies function and engage in public health decision-making on a daily basis.

Upon successfully completing this course, students will be able to:
1. Apply academic knowledge and theory in a real world public health practice setting
2. Write a concept paper outlining the project aims, objectives, timeline, and specific deliverables
3. Perform background research and data analysis as necessary
4. Synthesize the PHASE experience and project findings in a final paper
5. Present the project at the PHASE symposium

Email: bresnick@jhu.edu

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No undergraduates not permitted
Grading Options: Pass/Fail
Consent required for all students; all students must obtain consent.
Prerequisite: application and acceptance by program director

308.867.01 MSPH Seminar In Health Policy
1 credits - Course offered this year - East Baltimore
Resnick, Beth A.
Introduces work undertaken in health policy settings and prepares students for professional career development.

Upon successfully completing this course, students will be able to:
1. Describe themselves, their strengths, and their personality preferences through use of MBTI and StrengthFinder 2.0 assessments.
2. Identify the Public Health Competencies and related skills
3. Develop a Career Development Action Plan

Email: bresnick@jhu.edu
Lecture: W 3:30 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No Restricted to Masters students in HPM
Grading Options: Pass/Fail

309.617.81 Introduction To Methods For Health Services Research And Evaluation II
2 credits - Course offered this year - Internet
Hsu, Yea-Jen
Introduces basic methods for undertaking research and program evaluation within health services organizations and systems, and reviews major completed studies. Topics include the relationship between health services research (HSR) and health care policy and management; the multidisciplinary philosophy of HSR; research design, including experimental and quasi-experimental approaches; issues of reliability, validity, and measurement; survey research techniques; use of existing data systems; basic cost benefit and effectiveness analysis; and measurement of quality of care. Students critique published HSR studies and develop a design for a research or evaluation project.

Upon successfully completing this course, students will be able to:
1. Critique published health services research and health program evaluations
2. Develop a design for a research or evaluation project
3. Describe the relationship between health services research and program evaluation
4. Identify differences between basic and policy-relevant health services research projects and program evaluation
5. Develop a conceptual framework for a study, showing the hypothesized causal variables and the expected outcomes
6. Identify different types of study design, including observational, pre-experimental and experimental designs, and their inherent threats to internal and external validity
7. Describe the basic issues related to measurement of variables
8. Identify problems with measurement reliability and validity
9. Identify aspects of quality of care and its measurement as they relate to health services research projects

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 111 of 202
10. Discuss how survey research is used in health services research and evaluation, in terms of choice of sampling techniques, determination of sample size, and approaches to writing survey questions.

11. Demonstrate discuss of the basic concepts of cost benefit and cost-effectiveness analysis.

12. Utilize secondary data and existing information sources in research projects.

### Method of Assessment

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<thead>
<tr>
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<td>1. Midterm</td>
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<td>2. Final Exam</td>
<td>45</td>
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<tr>
<td>3. Lab Assignments</td>
<td>25</td>
</tr>
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Email: yjshu@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Introduction to Online Learning and 309.616.81.

Multi-term with 309.616

Final grade applies to all terms

Part I necessitates enrollment in Part II; grades given at end of Part II.

### 309.635.81 POPULATION HEALTH: ANALYTIC METHODS AND VISUALIZATION TECHNIQUES

3 credits - Course offered this year - Internet

Kharrazi, Hadi

Introduces students to concepts, methods, and issues related to the application of data science to population health. Covers the uses of informatics to define and identify populations and sub-populations of interest, and describe the health status and needs of them. Describes the process of analyzing population health data from checking data quality to developing predictive models of utilization. Examines different data sources/methods to risk stratify a population of interest and compares the advantage and disadvantages of each data source/method. Describes various techniques to visualize data quality, depict the denominator selection process, and illustrate the risk adjustment results for large populations.

Upon successfully completing this course, students will be able to:

1. Summarize population health data sources, tools, methods and visualization techniques
2. Describe the common population health data sources (e.g., insurance claims, electronic health records, health information exchanges) and their potential data quality issues (e.g., completeness, accuracy, timeliness, provenance)
3. Use population health tools to group underlying populations into subpopulation and prepare the data for analysis (e.g., use of the Johns Hopkins ACG tool, along with a combination of SQL and R)
4. Explain the advantages and disadvantages of various population health analytic methods (e.g., regression methods vs. machine learning methods)
5. Identify most effective visualization techniques that can be used to convey impactful results to different end users (e.g., patients, clinicians, care managers/ coordinators, health system admin, and policy makers)
6. Describe pertinent government policies that relate to the use of health informatics to improve population health

### Method of Assessment

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<tr>
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<tr>
<td>1. Assignments</td>
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<tr>
<td>2. Discussion Board</td>
<td>20</td>
</tr>
<tr>
<td>3. Final Project</td>
<td>20</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:

Participation 10%; Discussion Board 15%; Quizzes 25%; Mid-term Project 20%; Final-term Project 30%

Email: kharrazi@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Not open to undergraduate students

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 309.631.81 course is recommended but not required.
309.712.93 Assessing Health Status And Patient Outcomes (Cancelled - Department)
3 credits - Course offered only this year - Beijing, China
Wu, Albert

Familiarizes students with current methods of assessing health-related quality of life (HRQoL) and provides a conceptual basis for understanding the measurement of HRQoL and other patient-reported outcomes (PROs). Examines methods used in the development of PRO measures (PROMs), and where applicable, provides demonstrations. Presents a framework for judging the appropriateness of particular measures in a variety of contexts. Exposes students to current issues and problems in PRO assessment as well as areas for further research. Concentrates primarily on general HRQoL measurement, but offers students the option of focusing on a disease-specific measure for the final paper.

Upon successfully completing this course, students will be able to:
1. Debate the importance of using HRQoL and other PRO measures in research, clinical practice, and program evaluation
2. Compare the strengths and weaknesses of commonly used instruments for measuring health status
3. Critique the use of PROs in specific applications
4. Select an instrument for their own work
5. Plan the development of a new instrument or the cultural adaptation of an existing one
6. Critically discuss the challenges of using PRO assessments in research and clinical practice

Method of Assessment
1. Pre-course assignment 15%
2. Participation 30%
3. Group Project(s) 15%
4. Final Paper 40%

Email: awu@jhu.edu
Days & Times with Start & End Dates: Mar 14, 2020 - Mar 16, 2020
Lecture: M SA 8:30 AM - 5:20 PM
Enrollment: Minimum 10, Maximum 31, Waitlist Enabled: Yes
Part-time DrPH students in the Tsinghua cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; enrollment restricted to students in the Tsinghua DrPH cohort
This course will be offered for 3 days in Beijing China. Students will be required to complete assignment prior to the first class session.

309.712.95 Assessing Health Status And Patient Outcomes (Cancelled - Department)
3 credits - Course offered only this year - Kyoto, Japan
Departmental Faculty

Familiarizes students with current methods of assessing health-related quality of life (HRQoL) and provides a conceptual basis for understanding the measurement of HRQoL and other patient-reported outcomes (PROs). Examines methods used in the development of PRO measures (PROMs), and where applicable, provides demonstrations. Presents a framework for judging the appropriateness of particular measures in a variety of contexts. Exposes students to current issues and problems in PRO assessment as well as areas for further research. Concentrates primarily on general HRQoL measurement, but offers students the option of focusing on a disease-specific measure for the final paper.

Upon successfully completing this course, students will be able to:
1. Debate the importance of using HRQoL and other PRO measures in research, clinical practice, and program evaluation
2. Compare the strengths and weaknesses of commonly used instruments for measuring health status
3. Critique the use of PROs in specific applications
4. Select an instrument for their own work
5. Plan the development of a new instrument or the cultural adaptation of an existing one
6. Critically discuss the challenges of using PRO assessments in research and clinical practice

Method of Assessment
1. Pre-course assignment 15%
2. Participation 30%

Email: awu@jhu.edu
Days & Times with Start & End Dates: Mar 14, 2020 - Mar 16, 2020
Lecture: M SA 8:30 AM - 5:20 PM
Enrollment: Minimum 10, Maximum 31, Waitlist Enabled: Yes
Part-time DrPH students in the Tsinghua cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; enrollment restricted to students in the Tsinghua DrPH cohort
This course will be offered for 3 days in Beijing China. Students will be required to complete assignment prior to the first class session.

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 113 of 202
3. Group Project(s) 15
4. Final Paper 40

Days & Times with Start & End Dates: Mar 16, 2020 - Mar 20, 2020
Lecture: M T W TH F 8:00 AM - 8:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Enrollment restricted to those in the Kyoto MPH cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; due to enrollment restrictions, permission must be obtained from Katie Cruit in the MPH program office
This course is offered in Kyoto Japan.

309.720.01 Applied Econometrics For Health Policy Research
3 credits - Course offered this year - East Baltimore
Nicholas, Lauren
Advanced econometrics course that builds on techniques introduced in the prerequisite courses. Topics addressed include techniques for risk adjustment and provider profiling, advanced topics in instrumental variables analysis, calculating appropriate marginal effects and standard errors, heterogeneous treatment effects, decomposition approaches, and methods of assessing the robustness of various estimates. Students work on independent research projects that provide hands-on exposure to research design and data analysis with Stata.
Upon successfully completing this course, students will be able to:
1. Use econometric methods to estimate causal effects of health policies
2. Characterize average and heterogeneous treatment effects
3. Design a health econometrics research study, analyze data, and present results in publication-quality manuscripts
4. Transition to independent dissertation research
Email: lauren.nicholas@jhu.edu
Lecture: T TH 10:30 AM - 11:50 AM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Advanced Methods in Health Services Research: Analysis (309.716)

309.732.01 Human Factors In Patient Safety (Discontinued)
3 credits - Course not offered until 2020 - 2021 - East Baltimore
Gurses, Ayse; Dy, Sydney M.
Provides students with the essential concepts, methods and tools to enable them to design effective patient safety interventions and evaluate their impact.
Upon successfully completing this course, students will be able to:
1. Describe and apply concepts and methods in organizational and human factors literature
2. Assess the roles of organizational, system and human factors in patient safety and in provider/patient behavior change more broadly
3. Use appropriate qualitative and quantitative methods to identify and prioritize patient safety problems
4. Describe and propose designs for successful patient safety interventions
5. Identify and address barriers to improvement efforts
6. Identify appropriate team members for safety improvement efforts
7. Evaluate the outcomes of patient safety interventions
Email: agurses1@jhmi.edu
Lecture: M W 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
undergraduate students are not permitted in this course
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for students who have not taken 309.730.
Prerequisite: 309.730 is strongly recommended, or students must get instructor consent

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 114 of 202
309.750.93 Applied Research Methods For Health Policy And Management
3 credits - Course offered this year - Beijing, China
Kong, Xiangrong
Helps Tsinghua DrPH cohort students synthesize methods content to conduct a valid statistical analysis applied to a Chinese-relevant data set or topic area. Students develop advanced skills in modeling and methods for conducting health policy, healthcare management, and health services research analysis.
Upon successfully completing this course, students will be able to:
1. Frame a scientific question suitable for empirical research and hypothesis testing
2. Distinguish the differences among continuous, binary, count, or time-to-event response measures
3. Choose a specific linear, logistic, log-linear, or survival regression model appropriate to address a scientific question and correctly interpret the meaning of its parameters
4. Describe how longitudinal data differ from cross-sectional data and why special regression methods are sometimes needed for their analysis
5. Summarize in a table, the results of linear, logistic, log-linear, and survival regressions and write a description of the statistical methods, results, and main findings for a scientific report
6. Perform data management, including input, editing, and merging of datasets, necessary to analyze data in STATA or SAS
7. Complete a data analysis project, including data analysis and a written summary in the form of a scientific paper
Email: xkong4@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in JHU-Tsinghua DrPH cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students;
Prerequisite: 140.611-614, 140.620
Offered in Beijing.

309.861.01 Graduate Seminar In Health Services Research And Policy
1 credits - Course offered this year - East Baltimore
Dy, Sydney M.
Provides opportunity to learn about the PhD process, faculty research, discuss issues and concepts relevant to the field of health services research, and learn skills important for academic and professional success in the field of health services research.
Upon successfully completing this course, students will be able to:
1. Describe the key substantive areas that comprise health services research
2. Articulate how their own research interests align with the field of health services research
Email: dy1@jhu.edu
Lecture: W 12:00 PM - 1:20 PM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
PhD students in HPM -Health Services Research and Policy program only
Grading Options: Pass/Fail
Prerequisite:

309.864.01 Quality, Patient Safety, And Outcomes Research Practicum
3 credits - Course offered this year - East Baltimore
Engineer, Lilly
Provides students in the Quality, Patient Safety, and Outcomes Research Certificate Program with an integrated experience in quality, patient safety, outcomes research, or a combination of the 3 domains in any one of a wide variety of settings in the health service delivery environment. Students are placed based on their individual goals and interests and the preceptors’ needs. Students join an active work group and are supervised directly or indirectly by the practicum preceptor.
Upon successfully completing this course, students will be able to:
1. Apply the skills and competencies learned over the entire certificate curriculum to the real world in a health care setting.
Email: lenginee@jhsph.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 115 of 202
Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Students enrolled in the Quality, Patient Safety, and Outcomes Research Certificate only
Grading Options: Pass/Fail
Consent required for all students; practicum site must be approved and completion of required coursework confirmed prior to registration
Prerequisite: All certificate requirements must be taken before or concurrently with the practicum.
Students already in degree seeking programs may use their required capstone/practicum to count towards their Quality practicum as long as it is relevant to the field of Quality, Patient Safety, and Outcomes Research.

311.720.93 Tsinghua DrPH Capstone
2 credits - Course offered this year - Beijing, China
Shi, Leiyu
Helps Tsinghua DrPH students synthesize course content with a specific focus on problem identification and the development of testable hypotheses; how to develop a conceptual model; approaches for conducting a literature review and synthesis. Provides an overview of the DrPH written qualifying examination.
Upon successfully completing this course, students will be able to:
1. Identify a public health problem and develop testable hypotheses
2. Develop conceptual models
3. Conduct literature reviews and synthesis
4. describe the components and expectations for the written qualifying exam

Email: lshi2@jhu.edu

Enrollment: Minimum 10, Maximum 32, Waitlist Enabled: Yes
Enrollment restricted to students in the Tsinghua DrPH cohort
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Consent required for all students
Prerequisite: Completion of all required program coursework
This course will be offered over a 2-day period in Beijing China. Students may be required to complete assignments prior to the first class session

311.820.01 Thesis Research HPM-DRPH
variable credits Students register for thesis research credits per consultation with advisor. - Course offered this year - East Baltimore
Departmental Faculty
HPM/DrPH students conduct their thesis research.
Information not required for this course type
Lecture: TBA

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

311.861.01 Graduate Seminar In Health Care Management And Leadership
1 credits - Course offered this year - East Baltimore
Morlock, Laura; Engineer, Lilly
Provides opportunity to discuss concepts and issues related to organizational performance improvement, organizational performance indicators, and change strategies. Facilitates preparation for comprehensive exams and the design and conduct of dissertation projects. Intended for DrPH students concentrating in Health Care Management and Leadership. Student evaluation based on seminar presentations and participation.
Upon successfully completing this course, students will be able to:
1. Apply concepts and skills in organizational performance improvement
2. Develop and monitor organizational performance indicators on a variety of dimensions (clinical, services, financial)
3. Demonstrate change management, communication and leadership skills

Method of Assessment | Percentage
--- | ---
1. Participation | 30
2. Presentation(s) | 70

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 116 of 202
1. Articulate how their own research interests align with the field of health care management and leadership
2. Discuss the key substantive areas that comprise health care management and leadership

Email: lshi2@jhu.edu

Days & Times with Start & End Dates: Mar 13, 2020 - Mar 13, 2020
Lecture: F 8:30 AM - 5:20 PM

Enrollment restricted to students in the Tsinghua DrPH cohort
Grading Options: Pass/Fail
Consent required for all students; Restricted to students enrolled in the Tsinghua DrPH cohort
Course offered for 1-day in Beijing. Students required to complete assignment prior to the class session.

312.603.81 Fundamentals Of Budgeting And Financial Management
3 credits - Course offered this year - Internet
Ward, William
Provides students with an understanding of budgeting as an important management tool. Focuses on budget development, evaluation of the financial status of a department or operating unit and the ability to determine what, if any, corrective actions need to be taken. Includes strategies for measuring and reporting skills. Considers the analytical tools used to support evaluation and decision-making including; volume adjusted variance analysis, benefit-cost ratio analysis, breakeven analysis, process flow analysis, benchmarking, and methods for building cost standards.

Upon successfully completing this course, students will be able to:
1. Explain budgeting as a key component of the administrative process
2. Develop budgets for service volume, revenues, salaries and supplies, and equipment

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 117 of 202
3 Evaluate the financial status of a department or operating unit and determine what, if any, corrective actions should be taken
4 Prepare marginal P&Ls, benefit-cost ratio analysis, and breakeven analysis and ad hoc financial analyses
5 Use benchmarking to improve operational performance

Method of Assessment Percentage
1. Midterm 40
2. Final Exam 60

Email: wwardjr1@jhu.edu

Enrollment: Minimum 10, Maximum 120, Waitlist Enabled: Yes
Restricted to graduate students
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.
Jointly offered with HPM, IH

312.603.93 Fundamentals Of Budgeting And Financial Management (Cancelled - Department)
3 credits - Course offered only this year - Beijing, China
Ward, William
Provides students with an understanding of budgeting as an important management tool. Focuses on budget development, evaluation of the financial status of a department or operating unit and the ability to determine what, if any, corrective actions need to be taken. Includes strategies for measuring and reporting skills. Considers the analytical tools used to support evaluation and decision-making including; volume adjusted variance analysis, benefit-cost ratio analysis, breakeven analysis, process flow analysis, benchmarking, and methods for building cost standards.
Upon successfully completing this course, students will be able to:
1 Explain budgeting as a key component of the administrative process
2 Develop budgets for service volume, revenues, salaries and supplies, and equipment
3 Evaluate the financial status of a department or operating unit and determine what, if any, corrective actions should be taken
4 Prepare marginal P&Ls, benefit-cost ratio analysis, and breakeven analysis and ad hoc financial analyses
5 Use benchmarking to improve operational performance

Method of Assessment Percentage
1. Midterm 40
2. Final Exam 60

Email: wwardjr1@jhu.edu

Days & Times with Start & End Dates: Apr 24, 2020 - Apr 26, 2020
Lecture: F SA 8:30 AM - 5:20 PM
Enrollment: Minimum 10, Maximum 31, Waitlist Enabled: Yes
Part-time DrPH students in the Tsinghua cohort only
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; enrollment restricted to students in the Tsinghua DrPH cohort only
Prerequisite:
This course will be offered over a 3-day period in Beijing. Students are required to complete assignments prior to the start of class.

312.621.01 Strategic Planning
3 credits - Course offered this year - East Baltimore
Hough, Douglas
Focuses on principles of strategic management and competitive analysis to support strategy development for health care organizations. Considers how current business and management knowledge is applied to health care organizations to promote future success and competitive advantage. Examines contemporary theory and models to foster students' abilities to assess and develop an organization’s mission and vision; perform an internal and external strategic assessment; evaluate competitive threats and responses; develop organizational strategies; and evaluate the decision-making approaches best able to develop and execute the best strategies.
Upon successfully completing this course, students will be able to:
1. Develop a strategic plan for an organization, including: Performing a situational assessment and competitive analysis; developing strategic options; and assessing and making strategic choices
2. Recognize – and avoid – the pitfalls of traditional strategic planning processes
3. Recognize – and use – appropriate decision-making tools for creating and implementing strategies

Method of Assessment | Percentage
--- | ---
1. Participation | 20
2. Interview | 25
3. Business planning workshop | 10
4. Interim Assessment | 45

Email: Douglas.Hough@jhu.edu
Lecture: W 3:30 PM - 6:20 PM
Enrollment: Minimum 10, Maximum 40, Waitlist Enabled: Yes
undergraduates not permitted
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Due to enrollment max, all students must obtain permission before registering for this course.
Prerequisite: 312.600 or 312.603
Administrative Course Fee: 100.000
fee covers the cost of the field trip

Learning Materials:
- (Book) Healthcare Strategic Planning
  Zuckerman, Alan M
  Amazon $76.75
- (Book) The Innovator’s Dilemma: When New Technologies Cause Great Firms to Fail (Management of Innovation and Change)
  Christensen, Clayton M
  Amazon $21.47
- (Book) The Halo Effect ... and the Eight Other Business Delusions That Deceive Managers
  Rosenzweig, Phil
  Amazon $13.24

312.624.01 Financial Management In Health Care II
3 credits - Course offered this year - East Baltimore
Ellis, John
Presents opportunities to apply knowledge of accounting, budgeting and financial management in a real world setting, emphasizing analysis and decision-making; applies in a broad range of healthcare settings, including the pharmaceutical, insurance, consulting and for-profit industries. Topics include business plan preparation; financial analysis and business planning; financial forecasting and cash budgeting; Maryland reimbursement system; mergers and acquisitions; healthcare reform and third party reimbursements.
Upon successfully completing this course, students will be able to:
1. Apply the concepts of the Maryland reimbursement system in business planning situations
2. Develop a strategy to solidify an organization's place in the market
3. Execute a plan to consolidate multiple business lines and estimate the financial impact of a combined entity;
4. Calculate an insurance premium and capitation payment
5. Demonstrate teamwork skills within a work team resulting in a completed case study

Email: jellis1@jhu.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 119 of 202
312.633.81 Health Management Information Systems
3 credits - Course offered this year - Internet
Minear, Michael
Provides a broad overview of healthcare information systems with emphasis on historical foundations, current issues, and industry pressures pushing modernization and increased sophistication in the use of technology. Major topics include an overview of healthcare use of information technology, medical informatics, public health informatics, information technology infrastructure, ethics in computing, computer security, consumer informatics, clinical software, computing in clinical education, research computing, health information exchange, and the future of healthcare computing.

Upon successfully completing this course, students will be able to:
1. Interpret healthcare industry challenges that have put healthcare IT and informatics into the national agenda; Design strategies and initiatives to respond to these challenges
2. Assess and compare public health initiatives requiring data collection, data analysis, and data visualization; recommend how efforts should be synchronized and integrated with clinical computing and workflows
3. Contrast and compare consumer and medical informatics; recommend how new types of software and data exchange between clinicians and patients can impact clinical care and outcomes
4. Assess how modern computing and networks have created new risks and vulnerabilities; evaluate examples of IT issues impacted by ethics in the clinical care, research, and education areas
5. Discuss the impact of natural and man-made disasters and analyze what actions should be taken to protect computer resources; summarize mission critical computing and recommend policies, practices, and technologies to deliver high quality and dependable technology infrastructure
6. Explain the key elements of EHRs and their impact on clinical workflow and outcomes; assess current efforts to share patient information at a community level and define the value that can be generated by data sharing
7. Summarize what the secondary use of EHR data is and provide examples on how clinical data can be used to support research and improve the quality of care
8. Define health analytics and the foundation technologies used to perform analytics tasks. Summarize registries, cohorts, and how they are used to support population health and other ways to improve the quality of care and reduce the cost of care.
9. Interpret the need to create and analyze population data sets and their role to improve the quality of care, improve public health processes, and support new types of clinical research
10. Discuss how genetics and large data sets are impacting research informatics, how technology supports clinical research, and the potential to further integrate research computing with clinical software and work flow
11. Assess technologies used to support medical education
12. Summarize foundational governmental policies and investments in healthcare; and why the federal government has made significant investments in healthcare IT. Analyze various healthcare scenarios and suggest optimal technology strategies.

Method of Assessment

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<th>Method</th>
<th>Percentage</th>
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<tr>
<td>Paper(s)</td>
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<tr>
<td>Final Exam</td>
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<tr>
<td>Literature Review</td>
<td>10</td>
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Email: mminear2@jhu.edu

Enrollment: Minimum 10, Maximum 80, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; due to enrollment cap, all students must obtain permission.
Prerequisite: Introduction to Online Learning.

312.635.01 Human Resources In Health Organizations
2 credits - Course offered this year - East Baltimore
Paulk, Pamela

Develops a basic understanding of human resources trends and issues in health care organizations. Addresses the strategic role that human resources management plays in helping an organization meet its goals. Considers human resource challenges and recognizes alternative strategies for addressing these challenges. Examines elements most associated with employee engagement and motivation. Introduces legal principles relating to human resources and all component functions that make up human resources.

Upon successfully completing this course, students will be able to:

1. Describe the role Strategic Human Resources Management in creating a great work place environment
2. Identify strategies to increase the health care labor supply and decrease labor demand
3. Analyze how the multiple functions of Human Resources Management, e.g. recruitment, selection, compensation, benefits, training and development contribute to employee performance and productivity
4. Recognize employment laws and how they affect Human Resource Management
5. Explain the similarity and difference in employee and management relations in a unionized and non-unionized environments
6. Apply motivation theories to enhance employee engagement
7. Create and evaluate a compensation model that motivates employees and addresses legal concerns
8. Apply Behavioral Event Interviewing to recruitment and selection

Method of Assessment

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<tr>
<td>Participation</td>
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<tr>
<td>Final Paper</td>
<td>40</td>
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<tr>
<td>Final Project</td>
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Email: ppaulk@jhmi.edu

Lecture: TH 1:30 PM - 3:20 PM

Enrollment: Minimum 10, Maximum 35, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; All students must receive consent to register.

312.635.20 Human Resources In Health Organizations

2 credits - Course offered only this year - East Baltimore

Paulk, Pamela

Develops a basic understanding of human resources trends and issues in health care organizations. Addresses the strategic role that human resources management plays in helping an organization meet its goals. Considers human resource challenges and recognizes alternative strategies for addressing these challenges. Examines elements most associated with employee engagement and motivation. Introduces legal principles relating to human resources and all component functions that make up human resources.

Upon successfully completing this course, students will be able to:

1. Describe the role Strategic Human Resources Management in creating a great work place environment
2. Identify strategies to increase the health care labor supply and decrease labor demand
3. Analyze how the multiple functions of Human Resources Management, e.g. recruitment, selection, compensation, benefits, training and development contribute to employee performance and productivity
4. Recognize employment laws and how they affect Human Resource Management
5. Explain the similarity and difference in employee and management relations in a unionized and non-unionized environments
6. Apply motivation theories to enhance employee engagement
7. Create and evaluate a compensation model that motivates employees and addresses legal concerns
8. Apply Behavioral Event Interviewing to recruitment and selection

Method of Assessment

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<tr>
<td>Participation</td>
<td>20</td>
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<tr>
<td>Final Paper</td>
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<td>Final Project</td>
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Email: ppaulk@jhmi.edu

Days & Times with Start & End Dates: Jan 25, 2020 - Jan 26, 2020
Lecture: SA 8:30 AM - 5:20 PM

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 121 of 202
**312.650.01 Non-Traditional & Innovative Health Services Partnerships**

1 credits - Course offered this year - **East Baltimore**

Shaver, Mark

Introduces innovative, non-traditional partnerships as an integral part of achieving a value-based healthcare system. Examines growing trends in healthcare and basic principles and practices of non-traditional partnerships. Discusses the method of building balanced business models to ensure obtainable milestones and returns for all parties. Presents lessons learned by industry leaders who have experienced establishing partnerships with multi-national corporate, investor, and strategic entities focusing on clinical services, population health and health/IT activities.

Upon successfully completing this course, students will be able to:

1. Identify gaps and articulate opportunities for partnerships
2. Compare various models for health services partnerships currently in the market
3. Demonstrate best practices for creating partnerships that encourage information exchange, coordinated efforts to problem solve, and the leveraging of expertise across industries

**Method of Assessment**

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<tr>
<td>Participation</td>
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<tr>
<td>Reflection</td>
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<tr>
<td>Final Presentation</td>
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</table>

**Email:** mshaver@jhmi.edu

**Lecture:** TH 3:30 PM - 5:20 PM

Enrollment: Minimum 10, Maximum 40, Waitlist Enabled: Yes

Grading Options: Letter Grade or Pass/Fail

Consent required for all students; Due to enrollment cap, all students must obtain permission in order to register for this course.

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**312.655.01 Organizational Behavior And Management**

2 credits - Course offered this year - **East Baltimore**

Bittle, Mark

Explores organizational behavior perspectives and theories, which provide the framework for the critical study of management, and the interpersonal skills and knowledge required by managers in the dynamic health sector. Students develop an approach to thinking about health sector organizations and their complexity. Emphasizes current thinking and the application of theory to practice in the areas of management, employee motivation, group behavior and team development, power and influence plus conflict management and negotiation skills.

Upon successfully completing this course, students will be able to:

1. Explain alternate organizational behavior perspectives and conceptual frameworks
2. Explain how personality and perception influence behavior in organizations
3. Apply theories and concepts of motivation and teamwork to developing strategies for improving performance
4. Apply theories and concepts of conflict management and negotiation to improve organizational communication and performance
5. Assess the influence of organizational culture on management and employee behavior

**Email:** mbittle1@jhu.edu

**Lecture:** F 8:30 AM - 10:20 AM

Enrollment: Minimum 15, Maximum 50, Waitlist Enabled: Yes

Not open to undergraduate students

Grading Options: Letter Grade or Pass/Fail

Prerequisite:
**312.660.01 Marketing In Health Care Organizations**

3 credits - Course offered this year - **East Baltimore**

Conderacci, Greg

Introduces students to marketing concepts in health care through readings, guest speakers, small group exercises and individual study. Prepares students to conduct a situational analysis, understanding the market and consumer behavior as well as assessing the capabilities of the organization. Explores primary and secondary market research techniques. Discusses marketing strategy, including positioning and branding, program/service development, pricing, distribution, and promotion. Evaluation and measurement methods are explained.

Upon successfully completing this course, students will be able to:

1. Explain the purpose and value of the marketing function within a healthcare organization
2. Analyze trends within the industry and society and how to take best advantage of them
3. Apply modern marketing tools to analyze markets and to attract or influence people within them
4. Create an effective marketing plan
5. Employ group decision-making dynamics in class setting
6. Create an effective mission for an organization or a person
7. Explain the role and responsibilities of a marketing professional in the health sector
8. Describe the differences between sales, public relations and marketing and appreciate the essential role of each in a comprehensive marketing strategy
9. Develop a marketing plan for a specific product, service or program and create an effective sales presentation
10. Demonstrate basic sales techniques like questioning, listening, needs assessment, objection resolution, and positioning

**Method of Assessment**

| Participation | 40 |
| Final Paper   | 60 |

Email: gcond'er1@jhu.edu

Lecture: M 5:30 PM - 8:30 PM

Enrollment: Minimum 10, Maximum 35, Waitlist Enabled: Yes
undergraduates are not permitted in this course
Grading Options: Letter Grade or Pass/Fail
Students may not add course after 1st class session.

**312.670.01 Negotiation In Health Care Settings**

3 credits - Course offered this year - **East Baltimore**

Lee, Stacey

Addresses the basic skills needed for effective negotiation of business relationships in health care and other settings. Focuses on understanding and developing a systematic approach to preparing for, structuring, and negotiating key business relationships. Presents basic process and conflict management skills needed for effective negotiation of business relationships in health care. Also explores the ethics of negotiation.

Upon successfully completing this course, students will be able to:

1. Use negotiation techniques to assess, plan and conduct effective two-party and multi-party negotiations
2. Use conflict management techniques to assess and manage two-party and multi-party conflicts
3. Identify behavioral elements of their own negotiation and conflict handling style and analyze the potential impact of various style elements
4. Develop and apply strategies to strengthen use of negotiation and conflict management styles and techniques
5. Analyze others' behavior in negotiation and conflict and apply strategies that are effective responses to those behaviors
6. Apply ethical frameworks when engaging in negotiation

**Method of Assessment**

| Participation | 20 |
| Written Assignment(s) | 15 |
| Written Assignment(s) | 15 |
| video Analysis | 25 |
| Final Exam | 25 |

Email: StaceyB.Lee@jhu.edu

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 123 of 202
Lecture: F 1:30 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
undergraduate students are not permitted in this course
Grading Options: Letter Grade or Pass/Fail

312.810.01 MHA Residency
variable credits students typically register for 16 credits but may be modified at the program's discretion - Course offered this year - East Baltimore
Charron, Karen

Complements and reinforces the didactic portion of the MHA program by providing students with an opportunity to apply the knowledge gained during the first year, to develop skills in management according to individually designed learning objectives, and to work as part of a management team in a health care organization. Students are placed in a variety of professional settings, which may include: the community sector (community and university-affiliated hospitals), the for-profit sector (investor-owned hospitals, consulting firms, long-term care facilities, and managed care organizations.)

Upon successfully completing this course, students will be able to:
1. Translate and apply financial, economic, market and performance information and models to improve and optimize organizational performance
2. Demonstrate knowledge of the healthcare system and environment in which health services are provided
3. Develop and define a vision, take initiative, provide direction, manage change, and participate in the planning, development and monitoring required to establish and achieve organizational goals
4. Communicate effectively, manage relationships and influence individuals and groups to take action in the pursuit of organizational goals

Method of Assessment

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Final Paper</td>
<td>34</td>
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<tr>
<td>2. Field Placement Progress Reports</td>
<td>33</td>
</tr>
<tr>
<td>3. Evaluation of performance by residency organization</td>
<td>33</td>
</tr>
</tbody>
</table>

Email: kcharron@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

312.861.01 MHA Case Competition
2 credits - Course offered this year - East Baltimore
Hough, Douglas

Introduces students to the case competition early in the year as part of their seminar. Provides students with the opportunity to apply what they have learned in the classroom setting to a real-world case study.

Upon successfully completing this course, students will be able to:
1. Apply information gathering, research and critical thinking skills to managerial problem solving
2. Work effectively in a team to produce a professional and persuasive presentation
3. Demonstrate effective oral and written communication skills

Email: Douglas.Hough@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
1st year MHA students only
Grading Options: Pass/Fail

Consent required for all students; course is restricted to 1st year MHA students ONLY
Administrative Course Fee: 25.0000
fee will cover the cost of course materials
During Intersession and third term students work in their teams preparing for their 4th term presentations. Each presentation is approximately 20 minutes with a 10 minute Q&A.

312.862.01 MHA Capstone
1 credits - Course offered this year - East Baltimore
Charron, Karen

4th term information is correct as of March 16 , 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 124 of 202
MHA students synthesize and integrate the knowledge and skills they have acquired throughout the program and their field placement to the examination and analysis of a current healthcare trend and its potential implications for health care services and delivery systems.

Upon successfully completing this course, students will be able to:

1. Augment training by pursuing an independent research project within their particular area of interest or specialized competency
2. Synthesize, integrate, and apply the skills and competencies they have acquired to analyze in writing a current healthcare trend from multiple perspectives, e.g. economic, financial, organizational and environmental factors
3. Identify implications of the trend for healthcare leaders

Email: kcharron@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

2nd year MHA students only

Grading Options: Pass/Fail

This written deliverable is a graduation requirement for all MHA students.

312.866.01 MHS Seminar In Health Finance And Management (Discontinued)

1 credits - Course offered this year - East Baltimore

Bittle, Mark; Schwartz, Teresa

Introduces students to current health care finance and management issues through a series of discussion sessions and field trips with program directors. Students will work with their advisor to identify appropriate learning opportunities and contacts that will allow students to develop a scholarly research paper on a topic related to health finance and/or management.

Upon successfully completing this course, students will be able to:

1. Identify, evaluate, and prioritize market opportunities and alternatives
2. Apply management knowledge and skills effectively in guiding individual and group behavior and influencing organizational culture and performance
3. Develop a proposal for the MHS capstone

Email: mbittle1@jhu.edu

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No

Restricted to HPM MHS/HFM students

Grading Options: Pass/Fail

312.867.01 MHA Seminar In Health Finance And Management

1 credits - Course offered this year - East Baltimore

Charron, Karen

Introduces students to current health care finance and management issues through a series of discussion sessions with program directors and guest lecturers. Prepares students for the program’s fourth term case competition and the second year field placement requirement.

Upon successfully completing this course, students will be able to:

1. Discuss current and emerging health care issues; develop effective listening, questioning and critical thinking skills, and actively engage in small group discussions with health care leaders
2. Assume responsibility for developing a professional network
3. Work effectively in a team and produce a professional and persuasive presentation for a case competition
4. Develop a career strategy, write an effective resume and business letter, and perform effectively in job interviews
5. Identify key issues related to the importance of developing effective relationships between clinicians and hospital administrators

Method of Assessment

<table>
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<tr>
<th>Method</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Participation</td>
<td>20</td>
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<tr>
<td>Assignments</td>
<td>80</td>
</tr>
</tbody>
</table>

Email: kcharron@jhu.edu

Lecture: M W 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to MHA students only

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Grading Options: Pass/Fail
Administrative Course Fee: 25.0000
fee to cover cost of course materials

313.604.01 Economic Evaluation IV
3 credits - Course offered this year - East Baltimore
Patenaude, Bryan
Examines advanced methods in the economic analysis of health programs with applications to domestic and international health. Explore methodologies for benefit-cost analysis (BCA), eliciting and analyzing revealed and stated preferences for BCA and cost-effectiveness analysis (CEA), discrete choice experiments (DCE), incorporating equity into economic analyses utilizing weighting and benefit-incidence analysis (BIA), epidemic simulation, microsimulation, and multi-criteria decision analysis.

Upon successfully completing this course, students will be able to:
1. Design a CEA and BCA utilizing survey data and conduct a provider-perspective and societal-level CEA and BCA based on survey data
2. Describe the theoretical basis for cost-benefit analysis as differentiated from cost-effectiveness analysis
3. Demonstrate the use of stated preference methods, revealed preference methods, microsimulation, and multi-criteria decision analysis in the allocation of health care resources
4. Describe methods for examining equity and behavioral agents in economic analyses

Method of Assessment

<table>
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<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>0. Participation</td>
<td>10</td>
</tr>
<tr>
<td>1. Homework</td>
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<tr>
<td>2. Group Project(s)</td>
<td>30</td>
</tr>
</tbody>
</table>

Email: bpatena1@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
Undergraduate students are not permitted in this course
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Required if Economic Evaluation III was not completed in term 3 of 2019-2020.
Prerequisite: Economic Evaluation I (313.601.01), II (313.602.01), and III (313.603.01)
Jointly offered with IH

313.620.01 Introduction To Behavioral Economics: Theory And Practice (Cancelled - Department)
3 credits - Course offered this year - East Baltimore
Hough, Douglas
Explores the theoretical framework of behavioral economics, and applies that framework to issues in health and healthcare. Addresses elements of the theory of behavioral economics including: prospect theory, System 1/System 2 thinking, hyperbolic discounting, loss aversion, the endowment effect, framing and anchoring, mental accounting and commitment contracts, heuristics and biases, the power of the default, and pricing strategies. Applies these concepts to human behavior in general, as well as that of patients and physicians.

Upon successfully completing this course, students will be able to:
1. Explain the theory, tools, and concepts of behavioral economics, and how they relate to neoclassical economics and behavioral psychology
2. Apply the tools of behavioral economics appropriately to analyze decision-making of individuals and organizations, with a focus on health and health care
3. Integrate current research literature on behavioral economics, and apply the research to issues in health, health care, and the general political economy

Email: Douglas.Hough@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, Maximum 35, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Microeconomics (212.619) or Applied Microeconomics for Policymaking (313.603), or equivalent
This course may be coupled with "Behavioral Economics in Health Decisions" offered 3rd term in IH as a de facto sequence
313.645.01 Health Economics III (Discontinued)
3 credits - Course offered this year - East Baltimore
Rao, Krishna
Builds on the material taught in Health Economics I and II, and exposes students to a number of advanced topics relevant to public health. Draws upon a combination of seminal and contemporary readings, broadening students’ awareness of health economics. Builds student skills in critically discussing academic contributions to the field. Uses lectures, student presentations and group discussions to integrate health economics material completed over the course of the sequence.

Upon successfully completing this course, students will be able to:
1. Describe the breadth of applications within the field of health economics
2. Apply economic theory, econometric modeling, and economic reasoning to a range of topics in public health.
3. Appraise and critique examples of theories and conceptual models used by health economists in the analysis of health policy.

Email: kdrao@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 313.641 and 313.644
Jointly offered with IH

313.656.01 Advanced Health Economics IV
2 credits - Course offered this year - East Baltimore
Herring, Bradley; Gaskin, Darrell J.
Covers seminal publications in health economics and is targeted towards advanced Ph.D. students. Describes theoretical models in health economics for the determinants of health and demand for healthcare services, the foundations for cost-effectiveness analysis, the supply of healthcare services in competitive, monopolistic, and government-regulated markets, and the provision of private and public health insurance.

Upon successfully completing this course, students will be able to:
1. Describe the core concepts in health economics and some standard empirical techniques in employed in the literature
2. Apply comparative statics to health economic problems
3. Create your own models of health economic phenomenon
4. Produce advanced articles in health economics literature

Email: herring@jhu.edu
Lecture: F 1:30 PM - 3:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
no undergraduates permitted in this course
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; all students required to obtain consent prior to registration
Prerequisite: 313.653, 313.654 and 313.655
Multi-term with 313.653
final grade submitted at the end of 4th term

313.656.01 Advanced Health Economics IV
2 credits - Course offered this year - East Baltimore
Herring, Bradley; Gaskin, Darrell J.
Covers seminal publications in health economics and is targeted towards advanced Ph.D. students. Describes theoretical models in health economics for the determinants of health and demand for healthcare services, the foundations for cost-effectiveness analysis, the supply of healthcare services in competitive, monopolistic, and government-regulated markets, and the provision of private and public health insurance.

Upon successfully completing this course, students will be able to:
1. Describe the core concepts in health economics and some standard empirical techniques in employed in the literature
2. Apply comparative statics to health economic problems
3. Create your own models of health economic phenomenon

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 127 of 202
4. Produce advanced articles in health economics literature

Email: herring@jhu.edu

Lecture: F 1:30 PM - 3:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

no undergraduates permitted in this course

Grading Options: Letter Grade or Pass/Fail

Consent required for all students; all students required to obtain consent prior to registration

Prerequisite: 313.653, 313.654 and 313.655

Multi-term with 313.654

final grade submitted at the end of 4th term

313.656.01 Advanced Health Economics IV

2 credits - Course offered this year - East Baltimore

Herring, Bradley; Gaskin, Darrell J.

Covers seminal publications in health economics and is targeted towards advanced Ph.D. students. Describes theoretical models in health economics for the determinants of health and demand for healthcare services, the foundations for cost-effectiveness analysis, the supply of healthcare services in competitive, monopolistic, and government-regulated markets, and the provision of private and public health insurance.

Upon successfully completing this course, students will be able to:

1. Describe the core concepts in health economics and some standard empirical techniques in employed in the literature
2. Apply comparative statics to health economic problems
3. Create your own models of health economic phenomenon
4. Produce advanced articles in health economics literature

Email: herring@jhu.edu

Lecture: F 1:30 PM - 3:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

no undergraduates permitted in this course

Grading Options: Letter Grade or Pass/Fail

Consent required for all students; all students required to obtain consent prior to registration

Prerequisite: 313.653, 313.654 and 313.655

Multi-term with 313.655

final grade submitted at the end of 4th term

313.790.81 Introduction To Economic Evaluation

3 credits - Course offered this year - Internet

Ballreich, Jeromie

Prepares students to read and interpret cost-effectiveness studies. Introduces the basic economic concepts that are needed in order to understand the recommendations from the United States Panel on Cost Effectiveness in Health and Medicine, such as the distinction between opportunity costs and budgetary costs. Considers review recommendations, particularly as they apply to cost-effectiveness research reports. Discusses the relationship between cost-effectiveness results and other elements of the health care policy decision-making process.

Upon successfully completing this course, students will be able to:

1. Read and interpret cost-effectiveness studies
2. Describe the methods for conducting scientifically-rigorous cost-effectiveness analyses

Method of Assessment

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<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
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<tr>
<td>Quizzes</td>
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</table>

Method of Assessment Detail:

The evaluation of students is accomplished by two means:

1) Three written assignments 50%; 2) 3 quizzes 50%. The written assignments will be posted and submitted on the Courseplus site. The quizzes will be in Courseplus site.
313.861.01 Public Health Economics Seminar
1 credits - Course offered this year - East Baltimore
Ballreich, Jeromie
Exposes students to recent research in various areas of health economics. Provides opportunities for more in-depth study of the core economics courses being offered each term. Provides opportunities for professional development in the field.
Upon successfully completing this course, students will be able to:
1. List the theoretical and empirical techniques of health economics and their implications for health policy decisions
2. Prepare written critiques of recent research in the area of public health economics
3. Identify the health economics faculty and their research interests
4. Cite the literature that pertains to health economics
5. Discuss the literature and describe relationships between health economics and other areas within public health
6. Facilitate the translation of economics research into policy and practice

313.865.01 MHS Capstone In Health Economics
2 credits - Course offered this year - East Baltimore
Ballreich, Jeromie
Produce a scholarly paper that provides a meaningful contribution to knowledge of the health economics. Affords the opportunity to work under the direction of a research mentor and presenting research results to a group of peers.
Upon successfully completing this course, students will be able to:
1. Integrate and apply the skills and competencies they have acquired to a public health/health economics problem
2. Develop a concise and cohesive written document that defines a health economics problem or issue
3. Conduct a comprehensive literature review and synthesize as appropriate for their selected topic or issue
4. Present results of research in a scholarly paper
5. Present the results of their research orally to peers

Method of Assessment

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Final Presentation</td>
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<tr>
<td>Scholarly research</td>
<td>80</td>
</tr>
</tbody>
</table>

Email: jballre2@jhu.edu
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Restricted to HPM MHS/health economics students
Grading Options: Pass/Fail

315.709.81 Health Sciences Informatics, Knowledge Engineering And Decision Support
3 credits - Course offered this year - Internet
Lehmann, Harold
Provides a framework for understanding decision support in the workflow of the health sciences. Focuses on the types of support needed by different decision makers, and the features associated with those types of support. Discusses a variety of decision support algorithms, examining advantages and disadvantages of each, with a strong emphasis on decision analysis as the basic science of decision making. Students are expected to demonstrate facility with one algorithm in particular through the creation of a working prototype, and to articulate the evidence for efficacy and effectiveness of various types of decision support in health sciences and practice, in general.

Upon successfully completing this course, students will be able to:

1. Discuss motivations and needs for real-time decision support
2. Identify gaps in a decision support plan
3. Provide a high-level design for a decision support intervention and implementation
4. Identify opportunities for unintended consequences of decision support
5. Discuss strengths and weaknesses of different designs (knowledge-centric vs application-centric) for decision support
6. Discuss strengths and weaknesses of different representations for decision support: Tables, Templates, Rules, Data Dictionaries, Taxonomies, Semantic Networks, and Ontologies
7. Match candidate decision support representations to a decision support problem
8. Match candidate knowledge acquisition methods to a decision support problem
9. Classify decision support uses in multiple contexts

Email: lehmann@jhmi.edu

Enrollment: Minimum 15, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to on-line learning
Jointly offered with ME
This is the same course as SOM 600.901

315.862.01 Public Health Informatics Certificate Practicum
variable credits Students register for either 2 or 3 credits for the practicum, after consultation with the certificate director. - Course offered this year - East Baltimore
Bunker, Edward; Weiner, Jonathan; Kharrazi, Hadi
Provides students in the Public Health Informatics Certificate Program with an integrated experience on the use of information technology in a health sciences environment. Students have an opportunity to participate in informatics and information technology issues in real-world settings. Students are placed based on their individual goals and interests and the preceptors’ needs. Students join an active work group and are supervised directly or indirectly by the practicum preceptor. Students already in degree seeking programs may use their required capstone/practicum to count towards their Informatics practicum as long as it is relevant to the field of Informatics.

Upon successfully completing this course, students will be able to:

1. Apply the skills and competencies learned over the entire certificate curriculum to real world informatics in a public health setting

Email: Edward.Bunker@jhpiego.org

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Students enrolled in the Health Informatics Certificate only
Grading Options: Pass/Fail
Consent required for all students; practicum site must be approved and completion of required coursework confirmed prior to registration
Prerequisite: All Public Health Informatics Certificate requirements must be taken before or concurrently with the practicum.

317.610.81 Risk Policy, Management And Communication
3 credits - Course offered this year - Internet
Fox, Mary; Burke, Thomas
Examines the role of the risk sciences in the public policy process. A case study approach presents the broad societal context of risk based decision making, including the scientific, social, economic, legal and political factors that drive the policy process. Provides an overview of risk management tools and the application of risk communication principles and strategies. The goal is to provide an understanding of how the risk sciences are applied in the formulation and implementation of public health risk policy in “the real world.”

Upon successfully completing this course, students will be able to:

1. Select and present scientific data to inform the policy development and decision-making processes

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2 Prepare a health risk policy case study distinguishing among relevant policy options
3 Practice advantageous risk communication skills
4 Evaluate the influence of economic, social, and political factors on health risk policy debates

Email: mfox9@jhu.edu

Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; To confirm student has met pre-requisites.
Prerequisite: 317.600.01 (or 317.600.81) Introduction to the Risk Sciences and Public Policy and Introduction to Online Learning.
Jointly offered with EHE

317.615.01 Topics In Risk Assessment
2 credits - Course offered this year - East Baltimore
Burke, Thomas; Nachman, Keeve
Uses a case study approach of a selected risk-based public health issue to integrate student’s application of the skills in the risk sciences (risk assessment, risk management, and risk communication).
Upon successfully completing this course, students will be able to:
   1 Identify and critically assess key science and policy issues involved in the application of the risk sciences to public health policy decision-making.
   2 Explain strengths and limitations of risk assessment approaches
   3 Identify appropriate risk assessment methods for chemical hazards in air, water, and food

Method of Assessment Percentage
1. Participation 25
2. Assignments 75

Email: tburke1@jhu.edu
Lecture: M 5:00 PM - 6:30 PM

Enrollment: Minimum 5, Maximum 40, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; due to enrollment cap, consent required for all students.
Prerequisite: 317.600, 317.605, 317.610
Jointly offered with EPI
This is the capstone experience to the four-course sequence required for the Certificate in the Risk Sciences and Public Policy.

318.613.01 Statistical Analysis For Policy Making IV (Discontinued)
3 credits - Course offered this year - East Baltimore
Giandrea, Michael
Presents the core tools that are used in conducting policy analysis. Focuses on the basics of regression analysis and the practical applications to public policy problems. sequence.
Upon successfully completing this course, students will be able to:
   1 Apply statistics methods and tools to policy analysis
   2 Identify the common difficulties faced in using the different statistical methods
   3 Conduct a real-world data analysis project using the skills learned throughout the semester
   4 Communicate statistical outcomes and results in accessible and policy-relevant ways
   5 Report statistical analysis results in oral, written and mathematical formats

Email: mgiandr1@jhu.edu
Lecture: W 5:30 PM - 8:30 PM

Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
undergraduates are not permitted in this course;
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; students enrolled in programs other than the MPP must obtain permission of department prior to registering for this course.
Prerequisite: 318.610, 318.611 and 318.612
Multi-term with 318.612
Students must register for 318.612 and 318.613 in order to receive a grade.
Final grade applies to all terms

318.622.01 Data Analysis Workshop In Public Policy II (Discontinued)
3 credits - Course offered this year - East Baltimore
Borkoski, Carey
Focuses on the application of statistical techniques learned in Statistical Analysis I –IV. Introduces students to STATA and develops skills in applying statistical techniques to a real-world data project. Concurrent registration with 318.612 and 318.613 required.

Upon successfully completing this course, students will be able to:
1. Explain the purpose of various STATA tools, including commands, do files and log files
2. Perform various statistical operations using STATA
3. Design a program to conduct a statistical analysis of a data set
4. Interpret output from STATA and identify the policy significance (if any) in the results
5. Use STATA to conduct a complete data analysis project that includes finding and cleaning the data set, creating variables, analyzing the data and completing a formal report on the findings

Email: cborkoski@jhu.edu
Lecture: TH 3:30 PM - 6:30 PM
Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
undergraduates are not permitted in this course;
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; students enrolled in programs other than the MPP must obtain permission of department prior to registering for this course.
Prerequisite: 318.610; 318.611; 318.621 and concurrent registration in 318.612 and 318.613
Multi-term with 318.621
Students must register for 318.621 and 318.622 in order to receive a grade.
Final grade applies to all terms

318.625.01 Management Of Nonprofit Organizations
3 credits - Course offered this year - East Baltimore
Hall, Nancy
Provides the necessary tools to effectively manage a nonprofit organization. Emphasizes financial, personnel and operations management, focusing on skills necessary to be an executive running a program within a large institution or heading an independent nonprofit agency. Addresses budgeting (both grant and organizational), reading and interpreting financial reports, grant writing techniques and staff and compensation management. Also examines how to work with the legal restraints and opportunities to maximize organizational effectiveness within the laws and regulations that make nonprofits different from the government and for-profit sectors.

Upon successfully completing this course, students will be able to:
1. Identify and interpret data about the nonprofit sector
2. Assess the advisability of creating a US-based nonprofit and determining the necessary paperwork to start a new organization.
3. Apply strategic thinking principles to the management of a nonprofit
4. Interpret audits, 990's and other financial reports for a nonprofit
5. Analyze the financial health of a nonprofit organization
6. Develop and review a grant or contract budget
7. Identify the customers and products of a nonprofit and develop a social marketing plan
8. Establish a compensation analysis and develop human resource policies and plans
9. Explain the concept of social enterprise.

Email: nhall5@jhu.edu
319.600.94 Quality Management In Health Care
Gupta, Shiv D.
Teaches students the basic concepts of quality in health care, and also equips them with approaches and skills to implement sustainable quality assurance programs in the health system. Introduces students to various quality improvement approaches (QC, QA, CQI, TQM), role of standards and norms, use of quality improvement tools, methods of quality assessment, and approaches to operationalize and implement quality assurance programs. Explains the concepts of organization for quality improvement, including Quality Teams (QT) and Quality Control Circles (QCC).

Upon successfully completing this course, students will be able to:
1. Explain the importance of quality in improving effectiveness and efficiency of health services
2. Define quality and describe its attributes/dimensions
3. Explain relationship between patient satisfaction and utilization of services
4. Describe approaches of quality Improvement, QC, QA, CQI, and TQM
5. Discuss quality standards and monitoring indicators
6. Assess quality of services using quality improvement tools
7. Undertake problem identification, analysis, operationalization and implementation of quality improvement
8. Describe medical audit and accreditation

Email: sgupta58@jhu.edu

319.601.94 Health Information Management And Decision-Making
Khanna, Anoop
Provides an overview of Health Information Management System, its structure and functions. Identify information needs and indicators in the health systems and public health. Describes uses of information for effective management of health services. Reviews framework and organizational structure of HMIS. Provides a critical review of current issues problems in information management in the health systems in the context of developing countries. Describes various decision models and reviews decision making process in health care; application of information in performance tracking and analysis; monitoring of services and programs, supervision and impact evaluation. The course emphasizes designing health information systems and uses of IT.

Upon successfully completing this course, students will be able to:
1. Describe the need and importance of information and information management and explain the meaning and purpose of information systems
2. Describe and assess the current issues and problems in information management use in health services
3. Describe the framework and organizational structure of HMIS and decision making models
4. Identify information needs and indicators at various levels in the health system
5. Explain the uses of information for effective management of health services

Email: akhanna9@jhu.edu

International Health
220.600.81 International Travel Preparation, Safety, & Wellness
4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses
Kalbarczyk, Anna

Prepares students who aim to work and live overseas. Explores the epidemiology of common morbidity and mortality among travelers. Examines key prevention, safety, and travel medicine principles and services to contextualize risks and maintain wellness. Reviews applicable interventions, appropriate vaccines, and personal protection methods to prepare students to respond to expected and unexpected situations. Assists students with personal preparations for travel through country-specific assignments. Challenges students to examine travel health and safety priorities through case studies and discussions with a cultural competency and ethics lens.

Upon successfully completing this course, students will be able to:

1. Determine what resources and services (visas, consular services, insurance, travel assistance etc.) are required for international travel and work and understand when to engage them.
2. Locate and evaluate resources for identifying region-specific health concerns, required immunizations, and travel medicine services.
3. Practice safe travel protocols, including registering with your embassy, understanding different organizations’ evacuation plans, and traveling in groups.
4. Create a travel plan using knowledge of risks, preventive measures, and interventions as applied to a country.
5. Examine ethical dilemmas in global health field experiences.
6. Define cultural competence and consider the impact of cultural differences on overseas experiences.

Method of Assessment

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<th>Assessment</th>
<th>Percentage</th>
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<tr>
<td>Final Project</td>
<td>40</td>
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<tr>
<td>Discussion</td>
<td>20</td>
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<tr>
<td>Quizzes</td>
<td>30</td>
</tr>
<tr>
<td>Participation</td>
<td>10</td>
</tr>
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Grading Options: Pass/Fail

Prerequisite:

220.601.81 Foundations Of International Health

Amouzou, Agbessi; Hayford, Kyla T.

Provides an overview of foundational approaches and issues in International Health, preparing students to gain the skills and attributes needed to work in global public health. Examines conditions faced by disadvantaged populations, primarily in low and middle income countries (LMICs), and pathways to achieving better health outcomes. Applies principles of health equity and social justice in analyzing global health policies and programs, and develops skills to apply different frameworks for diverse types of public health intervention. Students develop and articulate evidence-informed arguments concerning public health strategies in different contexts, and practice communication skills that demonstrate respect for other cultures and perspectives. They use a range of tools to prepare for work in global public health, including how to conduct situational analyses across a range of settings, how to analyze scale-up, sustainability, and equity, and how to move research into practice.

Upon successfully completing this course, students will be able to:

1. Characterize major domains of global public health, including the associated social determinants and burdens of disease, and the key interventions and approaches to improve outcomes within those domains.
2. Apply principles of social justice and human rights to assess global health policies and programs, and their impact on health equity.
3. Demonstrate interpersonal communication skills that demonstrate respect for other perspectives and cultures.
4. Use scientific evidence for health program planning, implementation, and evaluation in low and middle-income country settings.
5. Develop and articulate arguments for global health strategies using evidence from reliable sources.
6. Describe the roles and relationships of the entities influencing global health.
7. Identify different dimensions of capacity building in global health, and apply capacity building concepts to health policies and program interventions in low and middle income country settings.
Conduct a situation analysis across a range of cultural, economic, and health contexts, identifying the relationships among patterns of morbidity, mortality, and disability with demographic and other factors in shaping the circumstances of the population of a specified community, country, or region

Method of Assessment

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<th>Percentage</th>
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<tbody>
<tr>
<td>1. Assignments</td>
<td>60</td>
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<tr>
<td>2. Presentation(s)</td>
<td>20</td>
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<tr>
<td>3. Participation</td>
<td>20</td>
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</table>

Email: aamouzo1@jhmi.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning.

220.800.01 MPH Capstone International Health

2 credits Must have 1-4 credits per term for two terms. - Course offered this year - East Baltimore

Departmental Faculty

The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Lecture: TBA

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

220.810.01 Field Placement DRPH Program International Health

variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

220.820.01 Thesis Research DRPH Program International Health

variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

220.840.01 Special Studies And Research DRPH Program International Health

variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

220.895.01 MPH Practicum: International Health
variable credits Students who have not met the practicum requirement, must register for at least two credits. - Course offered this year - East Baltimore

The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:

1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Student must receive faculty advisor approval

221.608.94 Managing Non-Governmental Organizations In The Health Sector
3 credits - Course offered this year - India
Sadhu, Goutam

Familiarizes students with the key competencies required for managing NGOs in the health sector. Though many of the situations described in the lectures are taken from the instructor's experiences in managing international NGOs in developing countries, the material presented is applicable in organizational settings in developed countries as well. Topics correspond to the key responsibilities of NGO or health program directors. Lectures present guidelines, best practices, and management tools for the area of responsibility followed by a discussion of the lecturer's and students' experiences on those topics. Readings, which provide background information, are assigned for each class.

Upon successfully completing this course, students will be able to:

1. Apply frequently used management tools to fulfill the responsibilities of NGO managers
2. Identify potentially difficult situations and apply appropriate strategies to either resolve them or reduce negative outcomes

Method of Assessment Percentage
1. Participation 10
2. Written Assignment(s) 40
3. Written Assignment(s) 35
4. Group Presentation 15

Email: gsadhu@jhsph.edu

Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Jointly offered with HPM, IH

221.611.01 Food Security And Nutrition In Humanitarian Emergencies (Cancelled - Minimum Not Met)
2 credits - Course offered this year - East Baltimore
Doocy, Shannon

Examines food insecurity and nutritional deficiencies as they appear in different types of humanitarian emergencies. Discusses the profiles of international relief organizations involved in nutrition and food assistance are presented and common nutrition and food assistance interventions in emergency settings. Factors contributing to food insecurity are considered and various response modalities, including in-kind assistance and cash-based approaches, are discussed. Students learn to appraise and compare content, cost, and logistical considerations associated with large-scale food assistance programs and become familiar with nutrition surveys and curative nutrition programs. Emphasizes development of practical skills and knowledge that can be applied in field settings.

Upon successfully completing this course, students will be able to:

1. Define common nutritional deficiencies in emergencies and specify how these should be corrected
2. Assess population nutrition status and household food security
3. Determine how a food assistance should be targeted, provided and monitored
4. Discuss the dynamics of food assistance in the emergency context, including policy factors, key organizations involved in provision of food assistance, and current food crises

Method of Assessment Percentage
1. Student evaluation based on a series of assignments 85

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 136 of 202
2. Attendance/participation in class 15
discussions

Email: doocy1@jhu.edu
Lecture: W 8:30 AM - 10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Undergraduate students or graduate students outside JHSPH must have taken 221.613 Introduction to Humanitarian Emergencies OR 221.615 Health Emergencies in Large Populations for a letter grade or pass/fail prior to taking this course

221.616.01 Ethics Of Public Health Practice In Developing Countries (Cancelled - Department)
2 credits - Course offered this year - East Baltimore

Merritt, Maria
Provides a forum for discussion and deliberation about ethical issues in the practice of public health (including the conduct of research) in developing countries. Equips students to identify and analyze critical ethical issues and to consider systematically the ethical responsibilities of all parties involved.

Upon successfully completing this course, students will be able to:
1. Identify critical ethical issues in the practice of public health (including research) in developing countries
2. Apply selected conceptual resources to elucidate key ethical concepts operating in case examples of public health practice
3. Consider systematically the ethical responsibilities of actors with decision-making authority over the practice of public health in developing countries
4. Analyze case examples that call for the application of key ethical concepts to developing-country contexts

Method of Assessment Percentage
1. Participation 20
2. Discussion 15
3. Final Paper 65

Email: mmerrit2@jhu.edu
Lecture: M 1:30 PM - 3:20 PM
Enrollment: Minimum 5, Maximum 60, Waitlist Enabled: Yes
No undergraduates
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

221.616.81 Ethics Of Public Health Practice In Developing Countries
2 credits - Course offered this year - Internet

Merritt, Maria
Provides a forum for discussion and deliberation about ethical issues in the practice of public health (including the conduct of research) in developing countries. Equips students to identify and analyze critical ethical issues and to consider systematically the ethical responsibilities of all parties involved.

Upon successfully completing this course, students will be able to:
1. Identify critical ethical issues in the practice of public health (including research) in developing countries
2. Apply selected conceptual resources to elucidate key ethical concepts operating in case examples of public health practice
3. Consider systematically the ethical responsibilities of actors with decision-making authority over the practice of public health in developing countries
4. Analyze case examples that call for the application of key ethical concepts to developing-country contexts

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 137 of 202
Method of Assessment | Percentage
--- | ---
1. Participation | 20
2. Discussion | 15
3. Final Paper | 65

Email: mmerritt2@jhu.edu

Enrollment: Minimum 5, Maximum 60, Waitlist Enabled: Yes
No undergraduates
Grading Options: Letter Grade or Pass/Fail
Prerequisite: No prerequisites.

221.624.81 Urban Health In Developing Countries
3 credits - Course offered this year - Internet
Baqui, Abdullah
Explores the emerging public health issues associated with rapid growth of urban population in developing countries, with a particular focus on the urban poor. Includes urban demography, epidemiology, changes in urban physical and social environment and their consequences for health, nutritional issues, the inadequacy of conventional health services, and the design and implementation of a coordinated and cost-effective health care system. Introduces these concepts and presents case studies for analysis. Emphasizes sensitizing and capacity-building by exposing public health professionals and researchers to the unique urban health problems of developing countries.

Upon successfully completing this course, students will be able to:
1. Identify the key issues associated with rapid growth of urban population in developing countries
2. Critically analyze some of these issues and their implications for public health
3. Examine methods to deal with the emerging and complex issues of urban health in developing countries by reviewing successful case studies
4. Critically analyze the successes and weaknesses of each case study, the lessons learned from them, and learn to apply the lessons

Email: abaqui@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

221.645.81 Large-Scale Effectiveness Evaluations Of Health Programs
4 credits - Course offered this year - Internet
Baqui, Abdullah; Creanga, Andreea
Discusses evaluation of evidence-based public health programs, with a focus on low income countries. Addresses methodological challenges in designing and conducting effectiveness evaluations in these settings. Designs comprehensive measurement plans with knowledge gained about pros and cons of different ways to collect new data and use existing data to address all parts of impact chains. Discusses ways to design the evaluation and disseminate findings to maximize acceptance and use of findings.

Upon successfully completing this course, students will be able to:
1. Identify stakeholders of an impact evaluation
2. Identify and document key objectives and answerable evaluation research questions that meet key stakeholders’ needs and are appropriate for program and setting
3. Select and/or develop SMART indicators that answer the evaluation questions
4. Propose a technically-sound design for evaluating the impact of program, focusing on key evaluation questions
5. Identify pros and cons of evaluation designs under various constraints
6. Identify appropriate sources of data and data collection methods to evaluate programs across the impact pathway
7. Describe barriers and strategies to overcome barriers to promoting the uptake of results by policy makers and program planners
8. Interpret evaluation results based on the design
9. Prepare a conceptual model of the program being evaluated, linking program inputs to health impact
10. Write a comprehensive evaluation plan and proposal
11. Select quantitative and qualitative data collection methods appropriate for a given public health context (CEPH Competency/Learning objective)
12. Select methods to evaluate public health programs (CEPH Competency/Learning objective)

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<th>Method of Assessment</th>
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<tbody>
<tr>
<td>1. Take-home Mastery Checks</td>
<td>30</td>
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<tr>
<td>2. Exam(s)</td>
<td>20</td>
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<tr>
<td>3. Final Presentation</td>
<td>10</td>
</tr>
<tr>
<td>4. Final Paper</td>
<td>40</td>
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</table>

Email: abaqui@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Introduction to Online Learning, Knowledge of basic biostatistics and epidemiology.

**221.653.81 Hospital-Based Injury/Trauma Surveillance In Low- And Middle-Income Countries** *(Cancelled - No Enrollment)*

3 credits - Course offered this year - Internet
Bachani, Abdulgafoor; Stevens, Kent

Examines the high, and growing, global injury burden with a focus on low- and middle-income countries. Establishes the need for and complexities of establishing and maintaining reliable injury surveillance systems in LMIC. Focuses on training students on the fundamentals of an injury surveillance system in LMIC settings—data needs, collection, coding, processing and use, as well as on evaluation of such systems, and how to sustain them. Prepares students to participate in designing and sustaining hospital-based injury/trauma surveillance systems in LMIC to inform health program planning at the local and national level. Uses case studies to compare and contrast injury surveillance systems in different LMIC settings.

Upon successfully completing this course, students will be able to:

1. Identify, retrieve, and manage injury-related data sources in LMICs
2. Define and understand trauma outcome metrics
3. Critically appraise the reliability and validity of different types of injury surveillance data
4. Develop proposals for the collection of injury data in resource-limited settings

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<tr>
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<tbody>
<tr>
<td>1. Participation</td>
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<tr>
<td>2. Project(s)</td>
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<tr>
<td>3. Quizzes</td>
<td>20</td>
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</table>

Email: abachani@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Principles of Epidemiology (340.601.01) OR Epidemiologic Methods 1 (340.751.01) OR Fundamentals of Epidemiology (550.694.81 & 550.695.81) OR equivalent formal course in epidemiology

**221.660.01 Systems Science In Public Health: Basic Modeling And Simulation Methods** *(Cancelled - Department)*

3 credits - Course offered this year - East Baltimore
Lee, Bruce; Paina, Ligia

Introduces students to mathematical and computational modeling and simulation methods that can help public health decision makers better understand and improve various systems in public health. Addresses the basic concepts of mathematical and computational modeling and simulation. Covers probability theory, decision analysis, Markov models, compartment models, and systems dynamics models, as well as basics of economic and operational modeling. Introduces TreeAge, and VenSim software. Offers examples of public health systems including both communicable and non-communicable disease control programs (e.g., vaccines, medications, and non-pharmaceutical interventions), dietary and physical activity behaviors and interventions, and healthcare systems and healthcare policy.

Upon successfully completing this course, students will be able to:

1. Evaluate and critique a mathematical or computational model and its results

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 139 of 202
2 Develop a basic mathematical/computational model and apply it to public health issue/questions
3 Translate modeling results to public health decision-making

Email: brucelee@jhu.edu
Lecture: W 3:30 PM - 6:20 PM
Enrollment: Minimum 10, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 221.654.81 Systems Thinking in Public Health

221.661.01 Project Development For Primary Health Care In Developing Countries
4 credits - Course offered this year - East Baltimore
Burnham, Gilbert; Edward, Anbrasi

Focuses on the practical problems in the planning, design, implementation, and evaluation of primary health care programs in developing countries. Students design a primary health care program addressing community participation, needs assessment, training and supervision of Community Health Workers, approaches to sustainability, logistics of service delivery, monitoring, and evaluation, and presents the program to the class.

Upon successfully completing this course, students will be able to:

1 Understand the need for a project to improve health services or introduce new approaches or interventions
2 Create a background section and problem statement which considers the cultural environment and traditional practices of a population which would need to be included in the project design and plans for its implementation
3 Conduct a 30-cluster household survey to substantiate and quantify needs identified
4 Write realistic, appropriate and measurable project objectives
5 Develop an implementation strategy for a primary health care project
6 Know how to develop a Human Resources plan and to manage project personnel
7 Create a health monitoring and evaluation component for the project
8 Write a budget and the narrative summary for the project you have designed

Method of Assessment Percentage
1. Midterm exercise 20
2. Final PHC proposal 40
3. Quizzes 20
4. Participation 20

Email: gburnha1@jhu.edu
Lecture: M W 3:30 PM - 5:20 PM
Enrollment: Minimum 10, Maximum 45, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

221.663.01 Globalization And Health: Framework For Analysis
3 credits - Course offered this year - East Baltimore
Vecino Ortiz, Andres Ignacio

Evaluates in depth the influence of globalization on population health across the four main dimensions of globalization (economic, political, cultural and environmental). Teaches the use of analytical tools to observe the impact of globalization on population health using Global Burden of Disease data.

Upon successfully completing this course, students will be able to:

1 Appraise the existing evidence on the impact of globalization on population health and how it affects global burden of disease
2 Apply standard statistical techniques to evidence the impact of globalization on population health using cross-country datasets
3 Assess the effect of opportunities and challenges of globalization, and consider its effect on population health

Method of Assessment Percentage
1. Participation 20
2. Final Paper 30
3. Paper(s) 10
4. Assignment 2: Methods section and preliminary results (2-3 pages)  20
5. Assignment 3: Final results for final paper (2-3 pages)  20

Email: avecino1@jhu.edu
Lecture: M W 10:30 AM - 11:50 AM
Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Biostatistics 140.622, or consent from instructor, and expertise with Stata

221.695.01 Seminar In Humanitarian Health
0.5 credits - Course offered this year - East Baltimore
Spiegel, Paul; Robinson, Courtland
Introduces important and evolving issues in global humanitarian health from various perspectives including experts, practitioners, policymakers and academics. Examines trending issues such as new emergencies, politics, human rights, humanitarian architecture, leadership, cash transfers, innovative financing among others. Prepares students to explore practicums, internships, develop capstone projects, and apply to careers in the humanitarian health field.
Upon successfully completing this course, students will be able to:
1. Explain new and evolving concepts, policies, and interventions in humanitarian emergencies and disasters
2. Apply concepts, policies and interventions to different contexts and scenarios using current emergencies
3. Analyze key issues in humanitarian health including (but not limited to) models in program financing, sector-specific interventions, and solutions for refugees, displaced populations and others affected by crisis.
4. Identify key elements of the humanitarian health architecture and important organizations involved in program interventions, policy, and research.
5. Critique existing humanitarian interventions and responses at global, regional and national levels.

Method of Assessment

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<tr>
<td>Participation</td>
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<tr>
<td>In-class Exercises</td>
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<td>proposal</td>
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Method of Assessment Detail:

Email: pbspiegel@jhu.edu
Lecture: W 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only students signed up for the MPH Concentration Health in Crisis and Humanitarian Assistance, or the Certificate in Humanitarian Assistance
Grading Options: Pass/Fail
Meets every twice a month from 1st to 4th terms, except for winter break. Grade will be given at the end of 2nd and 4th terms.
Seminar dates:
Wed Mar 25
Wed Apr 8
Wed Apr 22
Wed May 6

221.801.01 Health Systems Program Seminar I (Discontinued)
1 credits - Course offered this year - East Baltimore
Rao, Krishna; Shawar, Yusra
Familiarizes Health Systems students with ongoing faculty research and activities, professionals and organizations in the field of international health, and provides a forum for discussion for current topics in health systems and international health.
Upon successfully completing this course, students will be able to:
1. Identify Health Systems Program faculty and staff who can be mentors and informal advisors during students’ course of study
2. Define educational and long-term goals for a career in International Health Systems

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 141 of 202
3. Identify research and practice opportunities in the Health Systems program
4. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings

Email: kdrao@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Enrollment is restricted to MSPH and Doctoral students in the Health Systems Program area and International Health DrPH students.
Grading Options: Pass/Fail

221.804.01 HEALTH SYSTEMS GRADUATE SEMINAR 4
1 credits - Course offered this year - East Baltimore
Koon, Adam; Garcia, Cristina R.
Familiarizes Health Systems students with work beyond the walls of academia. Cultivates essential qualities needed to effectively manage complex responsibilities in rapidly changing health systems. Includes perspectives from professionals and organizations in the field of international health, providing a forum for discussion for current topics in health systems and international health. Emphasizes skills in the modern workplace, including effective teamwork, conflict resolution, and dealing with complexity in health systems. Several practical sessions are aimed at preparing students to enter the workforce including job hunting, interviewing tips, and perspectives from employers and alumni.

Upon successfully completing this course, students will be able to:
1. Identify research and practice opportunities in Health Systems
2. Apply negotiation & mediation skills to address organizational or community challenges
3. Perform effectively on interdisciplinary teams

Method of Assessment Percentage
1. Participation 40
2. Written Assignment(s) 60

Method of Assessment Detail:
x

Email: adamkoon@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Enrollment is restricted to MSPH (Health Systems) and MHS Health Economic track students and doctoral students in the Health Systems Program and DrPH students in the Department of International Health.
Grading Options: Pass/Fail
Prerequisite:

221.810.01 Health Systems Practicum
variable credits field placement - Course offered this year - East Baltimore
Paina, Ligia; Creanga, Andreea
Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in management of health programs in low- and middle-income countries according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience

Upon successfully completing this course, students will be able to:
1. Integrate and apply methods and skills learned in courses taken on the first year of the MSPH in a practical setting.
2. Develop new skills essential for functioning as an effective global health professional, in assuming responsibility on the ground and becoming a reliable and collaborative member of a project team, an effective communicator, writer, trainer and implementer.
3. Evaluate a program or field project as it relates to the management and control of health problems of public health importance in resource poor settings
4. Develop a proposal, take initiative, provide direction, and participate in the implementation, evaluation and/or analysis required to establish and achieve project goals.
Communicate effectively, manage relationships and participate in teams
6 To allow for the seamless transition from student to public health professional.

Email: lpaina@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

221.820.01 Thesis Research Health Systems
variable credits thesis research - Course offered this year - East Baltimore
Departmental Faculty
Students actively conduct research on topics of global health importance, including developing a research question, designing a study to answer the question, conducting the research and writing up the results in a scientific format.
This course will prepare you to be able to do the following:
1 Identify research questions of importance to health in underserved populations in low resource settings internationally and in the US.
2 Design a study or studies to answer the questions.
3 Develop an application to an Institutional Review Board to address human subjects research issues
4 Write up the results of research for the scientific literature

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

221.830.01 Postdoctoral Research Health Systems
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

221.840.01 Special Studies And Research Health Systems
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

221.850.01 MSPH Capstone Health Systems
variable credits 2-16 - Course offered this year - East Baltimore
Departmental Faculty
Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students' ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students' development of tangible evidence of expertise that addresses specific applied topics relevant to international health.
Upon successfully completing this course, students will be able to:
1 Develop a concise and cohesive written document that defines a public health problem, a population of interest, and have a defined geographic scope
2 Conduct a comprehensive literature review
3 Synthesize relevant literature in a specific Public Health topic
4 Analyze and present public health data in a scholarly paper

Method of Assessment Percentage
1. Final Paper 99

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only for MSPH Health Systems students in their 2nd year

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 143 of 202
Grading Options: Pass/Fail
Prerequisite: All other MSPH HS requirements must be taken before or concurrently with the capstone project.

221.861.01 Doctoral Seminar In Health Systems
1 credits - Course offered this year - East Baltimore
Bachani, Abdulgafoor
Designed to prepare first-year PhD students in the Health Systems program area to develop and defend their research proposal. Students will practice formulating a research question, conducting a systematic literature review, and drafting, presenting and critiquing research proposals.
Upon successfully completing this course, students will be able to:
1 Describe the elements of a research proposal
2 Formulate a research question, develop or identify a conceptual framework, conduct a brief literature review, and describe a range of study designs
3 Analyze and present a critique of a scientific journal article
4 Draft, present and defend an outline of a research proposal and to critique the proposals of fellow students

Email: abachani@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

222.630.81 Nutrition, Infection And Immunity
3 credits - Course offered this year - Internet
Palmer, Amanda; Shet, Anita
Provides an overview of the relationships between nutrition, infection, and immunity, with a focus on established and emerging public health problems. Discusses the impact of the immune response on nutrient metabolism, nutritional status, and interpretation of biomarkers. Examines the deleterious effects of malnutrition on host barrier defenses and innate, humoral, cell-mediated immunity, and mucosal immunity. Presents case studies on the synergistic and antagonistic interactions between nutrition and immune function--ranging from infectious diseases to immune-mediated and metabolic diseases.
Upon successfully completing this course, students will be able to:
1 Describe the interplay between the human immune response and nutritional status
2 Explain the general effects of malnutrition on host immune function
3 Discuss the implications for nutritional interventions and disease control in low- and middle-income countries

Method of Assessment Percentage
0. Group Presentation 40
1. Discussion Forum activities 20
2. Livetalk participation 10
3. Quizzes 30

Email: apalme17@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Basic knowledge of immunology, microbiology and nutrition is desirable.
For students with a limited background in immunology, microbiology, and/or nutrition, self-study materials are provided.

222.649.01 International Nutrition
3 credits - Course offered this year - East Baltimore
Thorne-Lyman, Andrew; West, Keith
Presents major nutritional problems that influence the health, survival, and developmental capacity of populations in developing societies. Covers approaches implemented at the household, community, national, and international levels to improve nutritional status. Explores the degree to which malnutrition can be prevented or reduced prior to achieving full economic development through targeted public and private sector interventions that address the causes of malnutrition.
Upon successfully completing this course, students will be able to:
1 Describe and discuss contemporary public health nutrition problems facing low- and middle-income countries
2 Apply conventional epidemiologic, nutritional, demographic, and health economic concepts and indicators in characterizing nutrition problems and interventions in low- and middle-income populations
3 Develop a profile of nutrition and health problems in a low- and middle-income country and evaluate national approaches to prevention

Method of Assessment Percentage
1. Paper(s) 50
2. Written Assignment(s) 20
3. Participation 20
4. Final Presentation 10

Email: Athorne1@jhu.edu
Lecture: T TH 8:30 AM - 9:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduates required to get instructor consent
Prerequisite: There are no formal prerequisites for taking the course. However, students are expected to be familiar with basic principles of human nutrition, nutritional assessment, epidemiology, and the types and causes of malnutrition, and in resource constraints faced by many low-income countries.
Undergraduates are required to get instructor consent

222.649.81 International Nutrition (Discontinued)
3 credits - Course offered this year - Internet
West, Keith
Presents major nutritional problems that influence the health, survival, and developmental capacity of populations in developing societies. Covers approaches implemented at the household, community, national, and international levels to improve nutritional status. Explores the degree to which malnutrition can be prevented or reduced prior to achieving full economic development through targeted public and private sector interventions that address the causes of malnutrition.
Upon successfully completing this course, students will be able to:
1 Describe and discuss contemporary public health nutrition problems facing low- and middle-income countries
2 Apply conventional epidemiologic, nutritional, demographic, and health economic concepts and indicators in characterizing nutrition problems and interventions in low- and middle-income populations
3 Develop a profile of nutrition and health problems in a low- and middle-income country and evaluate national approaches to prevention

Method of Assessment Percentage
1. Paper(s) 50
2. Written Assignment(s) 20
3. Participation 20
4. Final Presentation 10

Email: kwest1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning

222.652.81 Nutrition In Disease Treatment And Prevention
3 credits - Course offered this year - Internet
Murray-Kolb, Laura
Reviews the underlying nutritional components and pathophysiology of common human diseases/disorders. Focuses on the metabolic disturbances occurring with these diseases. Also emphasizes nutrition therapy approaches for the prevention and care of these diseases. Topics include nutritional aspects of diabetes, GI diseases, obesity, renal diseases, cardiovascular disease, eating disorders, HIV and severe malnutrition among others.
Upon successfully completing this course, students will be able to:
1 Explain the underlying nutritional aspects of several common diseases
2 Define a nutrition therapy plan for each of these chronic diseases
3 Integrate pathophysiology into their nutrition therapy recommendations
4 Discuss prevention theories and guidelines for each of these diseases
5 Critically evaluate scientific literature dealing with nutritional aspects of selected disease states
Email: lmurra13@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Undergraduate level courses on nutrition, metabolism and physiology (examples of some graduate level courses from JHSPH that qualify: Advanced Nutrient Metabolism - 222.651; Nutritional Biochemistry - 222.644; Principles of Human Nutrition - 222.641).

Learning Materials:
• (Book) Krause’s Food and Nutrition Therapy
  Raymond, Janice
  Amazon $29.49

222.653.01 Food Technology And Health
3 credits - Course offered this year - East Baltimore
Fahey, Jed
Discusses nutritional, chemical, physical, and technological perspectives of food, food ingredients, food quality, food safety, and the regulation thereof. Focuses on the core constituents of foods, and examines the non-nutritional (phytochemical, flavor, pigment, texture and fragrance) constituents of whole foods and food products and their impact on health. Evaluates food delivery and production systems, and specific eating patterns. Critical discussions of food range from the history of food and global dietary staples to probiotics, prebiotics, and the gut microbiome. Sustainability and urban gardening are juxtaposed with institutional food preparation, additives, processing, product development, and the regulatory framework surrounding food and supplements.

Upon successfully completing this course, students will be able to:
1 Apply knowledge of food science and technology to food production and the functions of food ingredients
2 Apply microbiological and chemical considerations to process controls involved in food production, processing, preparation, storage, packaging, preservation, metabolism, and bioavailability
3 Balance the differing philosophies that impact our food supply, its regulation, and the food options and cultural aspects of food and eating
4 Describe the basics of sensory science and testing and evaluate how this impacts ingredient sourcing decisions, culinary techniques, and the promotion of pleasurable eating
5 Demonstrate the complexities of regulating food supplies

Email: jfahey@jhsph.edu
Lecture: M W 10:30 AM - 11:50 AM
Enrollment: Minimum 4, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Preference is given to Human Nutrition/RD students
Two local (lunch time) field trips required.

222.654.01 Food, Culture, And Nutrition
4 credits - Course offered this year - East Baltimore
Gittelsohn, Joel
Introduces the bio-cultural influences on nutrition and their relevance to international and domestic public health research and programs. Topics include theoretical and methodological issues in nutritional anthropology, an overview of social scientific contributions to nutrition focusing on cultural perspectives of infant feeding, social impacts on under- and overnutrition, comparisons of Eastern and Western traditions of nutrition and the role of nutritional anthropology in the development of public health interventions.

Upon successfully completing this course, students will be able to:
1 Understand the significance of culture as it relates to food behavior and nutritional status in contemporary human populations
2 Discuss how culture interacts conceptually with other aspects of human existence (behavior, social, historical, economic, etc.)
3 Describe some of the main theoretical approaches that have been used to guide nutrition interventions
4 Apply cultural and behavioral information to the development, implementation and evaluation of nutrition intervention programs

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 146 of 202
Method of Assessment | Percentage
--- | ---
1. Participation | 10
2. Lab Assignments | 30
3. Review of an ethnography | 15
4. Final Project | 40
5. Peer-feedback | 5

Email: jgitel1@jhu.edu
Lecture: M W 1:30 PM - 3:20 PM
Enrollment: Minimum 6, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Students must get consent from instructor prior to registering

222.661.01 Designing Healthy Diets
2 credits - Course offered this year - East Baltimore
Caulfield, Laura
Examines the factors influencing dietary patterns and food choices in the U.S. and internationally. Focuses on modifying recipes, calculation of nutritional information for foods and recipes, and on planning, analyzing and evaluating dietary choices and patterns using the Nutrition Data System for Research (NDSR) software program and food composition tables, so that they meet guidelines for overall health and wellbeing.
Upon successfully completing this course, students will be able to:
1. Translate dietary recommendations into daily food choices to meet guidelines for healthy living in a public health setting
2. Use the NDSR software program and food composition tables to modify recipes, calculate nutritional information for foods and recipes, and plan, analyze and evaluate dietary choices and patterns
3. Explain the underlying principles for costing and scaling-up of recipes for volume food production
Method of Assessment | Percentage
--- | ---
1. Participation | 20
2. Homework | 30
3. Presentation(s) | 20
4. Final Project | 30
Email: lcaulfl1@jhu.edu
Lecture: T 1:30 PM - 2:20 PM
Lab Section: 01 F 10:00 AM-11:50 AM
Enrollment: Minimum 4, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required for non-HN program students.
Prerequisite: Principles of Human Nutrition (222.641), Assessment of Nutritional Status (222.642), or Nutritional Epidemiology (222.647) or equivalent classes elsewhere.
Labs have changed from Thursday afternoon to Fridays 10a-12p. They will be held in a computer lab.

222.701.01 Global Food Systems And Policy (Discontinued)
2 credits - Course offered this year - East Baltimore
Fanzo, Jess
Examines global food systems and the policies that impact global food security, and broader aspects of sustainable development including public health, the environment and economies. Presents and critiques different food system policies that determine the availability, affordability, and nutritional quality of the food supply and influence the amount and combination of foods that people are willing and able to consume. Encourages use of critical thinking skills and debate to understand how policy and science interact with regard to food systems. Presents data, case studies and real-time challenges related to global food systems with an emphasis on the development of practical skills to analyze systems approaches.
Upon successfully completing this course, students will be able to:
1. Characterize the major players in the global food system and the political economy of food
2. Obtain a working knowledge of the food system from production to consumption
3. Explain the social, political and economic determinants of diets and food security, food systems politics and their contributions to health inequities

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 147 of 202
4. Elucidate how these policies ultimately impact economic growth, environmental sustainability, human well-being and social cohesion.

5. Evaluate food policy and governance issues that impact food system transformations.

6. Critically analyze and evaluate how these policies, as well as macro-drivers such as urbanization and globalization, impact the food system and health outcomes at every level.

7. Apply systems thinking to critical food security, nutrition and public health challenges.

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**222.810.01 Human Nutrition Practicum**

**variable credits field placement - Course offered this year - East Baltimore**

Hurley, Kristen

Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop field, laboratory, or clinical skills related to nutrition research or programs according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), university projects, and multi-lateral, private, and/or for-profit sector. Practicum locations exist in the US and typically most regions of the world. Provide opportunity for feedback for student performance and placement experience.

Upon successfully completing this course, students will be able to:

1. Integrate and apply methods and skills learned in courses taken on the first year of the MSPH in a practical setting.
2. Develop new skills essential for functioning as an effective global health professional, in assuming responsibility on the ground and becoming a reliable and collaborative member of a project team, an effective communicator, writer, trainer and implementer.
3. Evaluate a program or field project as it relates to public health nutrition.
4. Integrate and understand knowledge through critical literature reviews, and analysis and interpretation of scientific data.
5. Develop a proposal, take initiative, provide direction, and participate in the implementation, evaluation and/or analysis required to establish and achieve project goals.
6. Communicate effectively, manage relationships and participate in teams.
7. To allow for the seamless transition from student to public health professional.

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**222.820.01 Thesis Research Human Nutrition**

**variable credits thesis research - Course offered this year - East Baltimore**

Departmental Faculty

Students actively conduct research on topics of global health importance, including developing a research question, designing a study to answer the question, conducting the research and writing up the results in a scientific format.

This course will prepare you to be able to do the following:

1. Identify research questions of importance to health in underserved populations in low resource settings internationally and in the US.
2. Design a study or studies to answer the questions.
3. Develop an application to an Institutional Review Board to address human subjects research issues.
4. Write up the results of research for the scientific literature.

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**222.830.01 Postdoctoral Research Human Nutrition**

**variable credits - Course offered this year - East Baltimore**

Information not required for this course type.
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

222.840.01 Special Studies And Research Human Nutrition
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

222.850.01 MSPH Capstone Human Nutrition
variable credits 2-16 - Course offered this year - East Baltimore

Departmental Faculty
Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students' ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students' development of tangible evidence of expertise that addresses specific applied topics relevant to international health.

Upon successfully completing this course, students will be able to:

1. Develop a concise and cohesive written document that defines a public health problem, a population of interest, and have a defined geographic scope
2. Conduct a comprehensive literature review
3. Synthesize relevant literature in a specific public health topic
4. Analyze and present public health data in a scholarly paper

Method of Assessment Percentage
1. Final Paper 99

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only for MSPH Human Nutrition students in their 2nd year
Grading Options: Pass/Fail
Prerequisite: All other MSPH HN requirements must be taken before or concurrently with the capstone project.

222.860.01 Graduate Nutrition Seminar
1 credits - Course offered this year - East Baltimore
Palmer, Amanda

Exposes students to the breadth of interests represented by Center for Human Nutrition faculty, as well as a range of researchers, clinicians, policymakers, and practitioners from the larger Johns Hopkins community and organizations such as the US Department of Agriculture (USDA), the National Institutes of Health (NIH), and UN Agencies. Specific topics vary over time. Emphasizes active listening, as well as the critical evaluation of research, practice, and policy.

Upon successfully completing this course, students will be able to:

1. Cite examples of state-of-the-art research, policy, or practice in the field of public health nutrition based on presentations by faculty and/or visiting speakers
2. Identify areas of overlapping interest with seminar speakers that may be of relevance to MSPH practicums, MPH capstone projects, or doctoral research
3. Recognize the features of an engaging presentation

Email: apalme17@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite:

222.861.01 Doctoral Seminar In Proposal Development
1 credits - Course offered this year - East Baltimore
Caulfield, Laura

Email: alc@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite:

Email: alc@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite:
Facilitates doctoral students in the development of research ideas and their dissertation proposals. Topics will vary by term but will include the following: how to develop a research idea, and components of a solid research proposal – background, design, methods, sample size, analysis, writing to different audiences, research designs in nutrition, ethical review, funding sources and requirements, budgeting, staff management, thesis and manuscript preparation, and professional development.

Upon successfully completing this course, students will be able to:

1. Identify the differences between a resume and curriculum vitae
2. Identify the components of a research career that they would like to pursue and opportunities at JHU to support the process
3. Conduct a literature review in an area of interest
4. Develop a concept paper for a study in an area of interest
5. Write an NIH-style grant on a research topic of interest
6. Give presentations on a research topic of interest

Email: lcaulfi1@jhu.edu
Lecture: TBA
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
doctoral students only
Grading Options: Pass/Fail

223.603.01 Controlling Infectious Disease-1851 To The Present
3 credits - Course offered this year - East Baltimore
White, Alexandre
Discusses advanced topics in the field of global health exploring the development of the first international sanitary conferences to responses to present day public health emergencies of international concern. Acquaints students with the colonial roots of international health, the rise of disease eradication strategies and contemporary responses to global epidemics. Introduces students with the histories and roles of several global health institutions such as the World Health Organization, the Pan-American Health Bureau, the World Bank and others.

Upon successfully completing this course, students will be able to:

1. Examine the differing roles of major global health organizations and contextualize the histories of international regimes of international disease control, for example WHO's International Health Regulations’ evolution and importance to contemporary disease control.
2. Describe the evolution of international disease control from the 19th century to the present
3. Explain the role of scientific expertise in infectious disease control
4. Explore the connections between disease control and the concerns of global trade
5. Conceptualize why certain disease eradication strategies have succeeded while others have failed
6. Examine primary source material and contextualize original data analyses within larger academic debates
7. Conduct group research on primary source documents

Method of Assessment

1. Assignments 10
2. Participation 20
3. Midterm Paper 40
4. Final Presentation 30

Method of Assessment Detail:

x

Email: awhite94@jhmi.edu
Lecture: F 1:30 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

223.630.81 The Practice Of Public Health Through Vaccine Case Studies: Problem Solving Seminar
3 credits - Course offered this year - Internet
Salmon, Daniel
Presents a historic vaccine case study highlighting challenges in emerging science, program design and evaluation, management, policy and communication. Examines decision-making surrounded by scientific uncertainty, controversy and competing public health priorities. Explores the challenges of developing policy and practice decisions within the constraints of emerging and uncertain science. Challenge students to make policy decisions and develop programmatic and communication strategies in real world settings.

Upon successfully completing this course, students will be able to:
1. Explain key immunization stakeholder and decision-makers and how they contribute to vaccine policy and practice
2. Identify, synthesize and apply evidence based public health research and theory from a broad range of disciplines and data sources for problem solving and to advance vaccine programs, policies, and systems
3. Facilitate shared decision making through negotiation and consensus-building methods regarding policies and practices that advance public health using scientific knowledge, analysis, communication and consensus building (DrPH FC 8)
4. Communicate public health science to diverse stakeholders, including at all levels of health literacy, to inform and influence individual, organization, and community behavior and policies to promote the health of the public (DrPH FC 5)
5. Propose human, fiscal, and other resources within public health organizations to achieve a strategic goal (DrPH FC 12)
6. Integrate scientific research, legal and regulatory approaches, ethical frameworks, and varied stakeholder interests in vaccine policy development and analysis (DrPH FC 16)

Method of Assessment

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<th>Percentage</th>
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<tr>
<td>Written Assignment(s)</td>
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<tr>
<td>Participation</td>
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</table>

Email: dsalmon1@jhu.edu

Enrollment: Minimum 10, Maximum 70, Waitlist Enabled: Yes

Enrollment restricted to first year Doctor of Public Health students only

Grading Options: Letter Grade or Pass/Fail

Prerequisite: In DrPH program OR completed 223.662 Vaccine Development and Application. Completed Introduction to Online Learning.

223.632.01 Methods For Planning And Implementing Evaluations Of Large-Scale Health Programs In Low And Middle Income Countries

4 credits - Course offered this year - East Baltimore

Munos, Melinda; Amouzou, Agbessi

Prepares students to design, implement, and analyze large-scale evaluations of health programs, focusing on low and middle income settings. Provides students with the skills to conduct household surveys, assessments of provider readiness and quality of care, and documentation of contextual factors, as well as overall planning, design, and analysis of program evaluations. Focuses on adaptation, development, and refinement of project-specific tools; sampling and sample size calculations; and various analytical methods appropriate for program evaluations.

Upon successfully completing this course, students will be able to:
1. Justify a rigorous, feasible, and appropriate evaluation design for a particular program, considering constraints due to time, budget, capacity, and program design.
2. Generate an evaluation plan and timeline
3. Identify an appropriate comparison area for a quasi-experimental evaluation, based on available data
4. Calculate the appropriate sample sizes for the overall evaluation and for individual data collection activities
5. Propose an appropriate sampling design for household and provider assessments for large-scale evaluations
6. Create program-specific instruments for measuring program implementation and quality of care
7. Create a program-specific household survey to measure intervention coverage and impact.
8. Perform analyses of evaluation data, including difference in differences analyses, hierarchical models, and small area estimation.

Method of Assessment

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<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>Participation</td>
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<tr>
<td>Two assignments applying skills learned during the course (each worth 20% of the final grade). These are INDIVIDUAL assignments.</td>
</tr>
</tbody>
</table>
3. A small final group project to apply the 50 skills and competencies from the course

Email: mmunos1@jhu.edu
Lecture: T TH 8:30 AM - 9:50 AM
Lab Section: 01 TH 1:30 PM-3:20 PM
Lab Section: 02 TH 3:30 PM-5:20 PM
Enrollment: Minimum 5, Maximum 30, Waitlist Enabled: Yes
Graduate students only.
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for any student who has not taken one of the prerequisite courses.
Prerequisite: Students must have taken 221.645 AND 140.623 OR 140.653
Students must attend one of the lab times each week.

**223.672.81 Data Mgmt Methods In Health Research Studies (Cancelled - Department)**
5 credits - Course offered this year - Internet
Holt, Elizabeth

Presents data management techniques needed to implement a health research study in domestic and international settings. Discusses methods of designing and monitoring patient data flow, with an emphasis on data collection, editing, documentation, management, and preparation for analysis using database software packages. Involves lectures and completion of a tutorial designed to build data management skills. Geared to students preparing to undertake research.

Upon successfully completing this course, students will be able to:
1. Develop a coding guide for a data collection instrument
2. Edit collected data and document edit decisions
3. Design a double data entry system
4. Design a system to identify out-of-range and illogical values, document the related edit decisions, and produce a cleaned data table in preparation for analysis
5. Prepare administrative reports
6. Prep data for analysis
7. Evaluate an operations manual for a research study
8. Evaluate questionnaires for format, design, content, wording, coding, etc.

Email: eholt@jhsph.edu
Enrollment: Minimum 5, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
No audits.

**223.680.01 GLOBAL DISEASE CONTROL PROGRAMS AND POLICIES**
4 credits - Course offered this year - East Baltimore
Labrique, Alain

Presents the history, social and political context, organization, technical content, funding and evaluation of current, major, global initiatives for disease control. Emphasizes programs focused on health problems of the developing world and includes, initiatives for vaccines and immunization, non-communicable diseases, safe motherhood and reproductive health, malaria, Neglected Tropical Diseases, HIV, emerging infectious diseases, TB, tobacco control, nutritional interventions and injury control. Also examines the process of policy formulation and resource allocation to international health and disease control.

Upon successfully completing this course, students will be able to:
1. Explain how globalization historically and currently impacts the burden, spread and control of infectious and non-communicable diseases.
2. Explain the development, organization and funding of global disease control programs
3. Describe programmatic approaches for controlling selected major causes of death and disability in developing countries
4. Discuss program and policy implementation obstacles and approaches to overcoming them
5. Critically evaluate the strengths, weaknesses and the sustainability of disease control programs and policies
6. Describe the core functions of public health and 10 essential services as they relate to global health programs spanning disease, injury and maternal / child health

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 152 of 202
### 223.680.81 GLOBAL DISEASE CONTROL PROGRAMS AND POLICIES

4 credits - Course offered this year - Internet

Labrique, Alain

Presents the history, social and political context, organization, technical content, funding and evaluation of current, major, global initiatives for disease control. Emphasizes programs focused on health problems of the developing world and includes, initiatives for vaccines and immunization, non-communicable diseases, safe motherhood and reproductive health, malaria, Neglected Tropical Diseases, HIV, emerging infectious diseases, TB, tobacco control, nutritional interventions and injury control. Also examines the process of policy formulation and resource allocation to international health and disease control.

Upon successfully completing this course, students will be able to:

1. Explain how globalization historically and currently impacts the burden, spread and control of infectious and non-communicable diseases.
2. Explain the development, organization and funding of global disease control programs
3. Describe programmatic approaches for controlling selected major causes of death and disability in developing countries
4. Discuss program and policy implementation obstacles and approaches to overcoming them
5. Critically evaluate the strengths, weaknesses and the sustainability of disease control programs and policies
6. Describe the core functions of public health and 10 essential services as they relate to global health programs spanning disease, injury and maternal / child health

### Method of Assessment

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>0. Case Studies</td>
<td>40</td>
</tr>
<tr>
<td>1. Zero Sum Game VoiceThread</td>
<td>20</td>
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<tr>
<td>2. Policy Brief</td>
<td>30</td>
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<tr>
<td>3. Participation</td>
<td>10</td>
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</table>

Email: alabriq1@jhu.edu

Lecture: M W 1:30 PM - 3:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 340.601 or 340.751 or 550.694.81 and 550.695.81

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### 223.682.60 Clinical And Epidemiologic Aspects Of Tropical Diseases

4 credits - Course offered this year - East Baltimore

Talaat, Kawser; Sack, David

Focuses on infectious diseases that disproportionately affect those in developing countries. Some of these are major killers, others are neglected tropical diseases not covered in other courses. Discusses the epidemiological and clinical aspects of each disease, including diagnosis and treatment. Students will have been introduced to the major infectious diseases that are prevalent and of public health importance in tropical and developing countries.

Upon successfully completing this course, students will be able to:

1. Recognize and cite examples of the major infectious diseases that are prevalent and of public health importance in tropical and developing countries
2. Differentiate the clinical presentations of many of the tropical diseases of public health importance, including their modes of transmission, geographic distribution, biological basis for the diseases, means of diagnosis and modes of treatment

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*Note: Information is correct as of March 16, 2020. For latest information visit Course Catalog at [http://www.jhsph.edu/courses](http://www.jhsph.edu/courses) - Page 153 of 202*
3 Appraise and assemble the resources available for gathering information on other tropical diseases

4 Evaluate the general recommendations for travelers visiting developing countries where transmission of tropical diseases is a risk

5 Debate programmatic strategies for improved disease control of select agents

6 Understand the biological and genetic factors that influence disease patterns in the tropics

**Method of Assessment**

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<tbody>
<tr>
<td>Participation</td>
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<tr>
<td>Group exercise</td>
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<tr>
<td>Quizzes</td>
</tr>
</tbody>
</table>

Email: ktalaat@jhu.edu

Lecture: T TH 1:30 PM - 2:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Understanding of basic biomedical concepts and terminology

This course blends traditional classroom time and outside-of-class activities with a corresponding reduction in class sessions. This class will meet twice a week. Students are expected to spend 1 hour a week on class work in addition to regular homework.

**Learning Materials:**

- (Book) Control of Communicable Diseases Manual
  Heymann, David L  
  Amazon $42.93  
  Comment: Mathews Book Center $50.00

**223.689.01 Biologic Basis Of Vaccine Development**

3 credits - Course offered this year - East Baltimore

Durbin, Anna

Provides an overview of the biologic basis for development and evaluation of new viral, bacteriologic, parasitic, and cancer vaccines. Lectures address the fundamental immunologic concepts of correlates of protective immunity underlying current and new strategies for immunization. Emphasizes the use of new technologies for expression of vaccine antigens, including recombinant DNA techniques and use of novel adjuvants and antigen-carrier systems to enhance the delivery/presentation of specific immunogens to effector sites.

Upon successfully completing this course, students will be able to:

1. Identify and describe the biological obstacles preventing development of effective vaccines for several important human pathogens
2. Identify, analyze, and critique cutting-edge strategies for approaching these obstacles
3. Describe several molecular mechanisms by which various adjuvants may potentiate vaccine induced immune responses
4. Identify and explain multiple differences between the natural immune response to pathogens and the vaccine induced immune response to targeted antigens
5. Analyze and explain the implications for bio-defense of vaccine related work on various pathogens
6. Describe the advantages and disadvantages of several viral and bacterial vectors for the delivery of recombinant vaccine antigens or DNA
7. Discuss the three signals necessary to trigger a primary immune response to a candidate vaccine antigen
8. Discuss the important role that vaccine type (i.e. live vs. killed vs. subunit) and route of administration (IM vs. ID) can play in determining the types of immune responses elicited by immunization

**Method of Assessment**

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<thead>
<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
</tr>
<tr>
<td>Attendance</td>
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</tbody>
</table>

Email: adurbin1@jhu.edu

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4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 154 of 202
**Lecture: M W 3:30 PM - 4:50 PM**

- **Enrollment:** Minimum 8, No maximum enrollment required, Waitlist Enabled: No
- **Grading Options:** Letter Grade or Pass/Fail
- **Prerequisite:** 260.611-612, or equivalent familiarity with the principles of immunology
- **Jointly offered with MMI**

**223.690.01 The Design And Analysis Of Cluster Randomized Trials**

- **2 credits - Course offered this year - East Baltimore**
- **Moulton, Lawrence**

Covers the major concepts and methods in the design and analysis of trial in which the unit of randomization is a group of participants. Focuses on design: discusses unmatched, matched, stepped wedge, and other approaches, with particular attention paid to randomization and sample size considerations. Presents a variety of methods for the analysis of these correlated-outcomes studies. Includes special aspects of infectious disease interventions.

Upon successfully completing this course, students will be able to:

1. Identify when a cluster randomized trial may be preferable to an individually randomized trial
2. Determine optimal design strategies for enabling estimation of efficacy and effectiveness parameters of interest
3. Conduct and interpret statistical analyses appropriate to these designs

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1. Weekly exercises</td>
<td>60</td>
</tr>
<tr>
<td>2. Short project paper outlining a new trial with critical features and options discussed</td>
<td>40</td>
</tr>
</tbody>
</table>

**Email:** lmoulto1@jhu.edu

**Lecture: T 3:30 PM - 5:20 PM**

- **Enrollment:** Minimum 6, Maximum 25, Waitlist Enabled: Yes
- **Grading Options:** Letter Grade or Pass/Fail
- **Prerequisite:** Biostatistics 621, 622, 623, 624 or equivalent sequence.

**223.705.81 GOOD CLINICAL PRACTICE: A VACCINE TRIALS PERSPECTIVE**

- **4 credits - Course offered this year - Internet**
- **Bar Zeev, Naor; Atwell, Jessica E.**

Acquaints students with the regulatory and ethical standards of conducting trials in accordance with FDA Code of Federal Regulations and ICH GCP Guidelines. Provides students with background and resources needed to conduct clinical trials in healthy populations. Students complete a project based on a real-world vaccine trial focusing on logistical and operational components of protocol design, informed consent process, recruitment considerations, human subjects protection including adverse event assessments and reporting. Additional concepts include the responsibilities of ethical review committees, principal investigators, and sponsors; investigational product management and preparation; data collection methods; quality assurance and quality control (QA/QC). Contributors to the course have experience conducting clinical trials research in various settings.

Upon successfully completing this course, students will be able to:

1. Apply the ethical framework and standards of Good Clinical Practice (GCP) to clinical trials with special consideration for vaccine trials and trials enrolling children or conducted in resource-poor settings
2. Identify and differentiate the roles and responsibilities of clinical trial stakeholders including sponsors, investigators, institutional review boards (IRBs), and regulatory authorities
3. Plan study procedures and create related materials for the safe conduct of a trial from recruitment to enrollment, management of study products, and monitoring of adverse events and serious adverse events
4. Formulate processes for operational tasks including: collection and management of study data, maintenance of essential documents, quality assurance/quality control (QA/QC) oversight, and monitoring

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tr>
<td>1. Written Assignment(s)</td>
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<tr>
<td>2. Assignments</td>
<td>15</td>
</tr>
<tr>
<td>3. Participation</td>
<td>10</td>
</tr>
</tbody>
</table>

**Email:** nbarzee1@jhu.edu

**Enrollment:** Minimum 10, No maximum enrollment required, Waitlist Enabled: No
No auditors or undergraduate students
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning

**Learning Materials:**
- (Other) FDA Good Clinical Practice Reference Guide
  clinicalresearchresources.com $18.95

**223.804.01 Global Disease Epidemiology And Control Program Seminar 4 (Cancelled - Department)**
1 credits - Course offered this year - **East Baltimore**
Tam, Yvonne; Charron, Karen

Prepares students for the activities and requirements of the second year of the MSPH program including the practicum and beyond. Presents best practices and workshop for conducting a strategic literature search. Explains the role and resources of the Institutional review Board (IRB) Explores the continuum of qualitative to quantitative research and programs. Explores practicum and capstone requirements and documentation. Establishes second year MSPH milestones within CoursePlus Portfolio.

Upon successfully completing this course, students will be able to:
1. Create and conduct a search strategy using structured vocabulary and literature databases
2. Apply the steps for IRB review of a human subjects project utilizing supportive resources available
3. Determine when a research question demands a qualitative approach and how to take appropriate steps
4. Write a background section with citations and bibliography in the style of a manuscript for a peer-reviewed journal

Email: yvonneyotam@jhu.edu
Lecture: M 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Limited to GDEC MSPH students
Grading Options: Pass/Fail
Consent required for all students;
Prerequisite: 223.803 MSPH GDEC Seminar 3

**223.810.01 Global Disease Epidemiology And Control Practicum**
variable credits field placement - Course offered this year - **East Baltimore**
Tam, Yvonne; Chou, Victoria

Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in epidemiologic and data analysis skills applied to diseases of importance in low and middle income countries according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience

Upon successfully completing this course, students will be able to:
1. Integrate and apply knowledge, methods and skills learned in courses taken on the first year of the MSPH in a practical setting, to allow for the seamless transition from student to public health professional.
2. Develop new skills essential for functioning as an effective global health professional, in assuming responsibility on the ground and becoming a reliable and collaborative member of a project team, an effective communicator, writer, trainer and implementer.
3. Evaluate a program or field project as it relates to the socio-cultural and health context, behavioral and health impact, community involvement and program process.
4. Develop a proposal, and/or report, or other written document that analyzes and synthesizes public health data related to their practicum.
5. Take initiative, provide direction, and participate in the implementation, evaluation and/or analysis required to establish and achieve project goals.
6. Communicate effectively, manage relationships and participate in teams

Email: yvonneyotam@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
223.820.01 Thesis Research Disease Control
variable credits thesis research - Course offered this year - East Baltimore

Departmental Faculty
Students actively conduct research on topics of global health importance, including developing a research question, designing a study to answer the question, conducting the research and writing up the results in a scientific format.

This course will prepare you to be able to do the following:
1. Identify research questions of importance to health in underserved populations in low resource settings internationally and in the US.
2. Design a study or studies to answer the questions.
3. Develop an application to an Institutional Review Board to address human subjects research issues
4. Write up the results of research for the scientific literature

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

223.830.01 Postdoctoral Research Disease Control
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

223.840.01 Special Studies And Research Disease Control
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

223.850.01 MSPH Capstone Global Disease Epidemiology And Control
variable credits 2-16 - Course offered this year - East Baltimore

Departmental Faculty

Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students' ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students' development of tangible evidence of expertise that addresses specific applied topics relevant to international health.

Upon successfully completing this course, students will be able to:
1. Develop a concise and cohesive written document that defines a public health problem, a population of interest, and have a defined geographic scope
2. Conduct a comprehensive literature review
3. Synthesize relevant literature in a specific public health topic
4. Analyze and present public health data in a scholarly paper

Method of Assessment Percentage
1. Final Paper 99

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only for MSPH GDEC students in their 2nd year
Grading Options: Pass/Fail
Prerequisite: All other MSPH GDEC requirements must be taken before or concurrently with the capstone project.

223.861.01 Global Disease Epidemiology And Control Program Doctoral Seminar (Cancelled - Department)
1 credits - Course offered this year - East Baltimore

Mullany, Luke
Creates a focused, small group environment for the entering PhD students, which actively engages them in relevant, challenging content necessary for success in the PhD program. The content of the seminar will support and extend beyond those topics taught in the classroom setting. The doctoral student education does not merely consist of successful completion of required courses—each student is expected to become a leading scientific expert during the years spent at JHU. It provides an opportunity to engage with senior faculty and move meaningfully toward selection of a dissertation topic and the skills necessary to successfully complete the PhD.

Upon successfully completing this course, students will be able to:

1. Engage in intellectual discussion on a range of topics, including research study design, aims, and methods, career trajectories, doctoral level skill-sets, etc.
2. Intelligently discuss the role of research in the improvement of the health status of populations throughout the world
3. Constructively critique research methods employed by public health scientists
4. Formulate research questions that may develop into dissertation topics

Email: lmullany@jhu.edu
Lecture: W 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
IH doctoral students
Grading Options: Pass/Fail

224.605.01 Indigenous Health
2 credits - Course offered this year - East Baltimore
O'Keefe, Victoria; Barlow, Allison
Examines Indigenous Health through a public health lens. Critically evaluates the historical, social, cultural, and political determinants of Indigenous health utilizing various Indigenous theoretical frameworks. Provide students with an understanding of Indigenous research methodologies and prevention/interventions programs employed to promote and strengthen the overall health status of Indigenous populations globally.

Upon successfully completing this course, students will be able to:

1. Describe demographics and health disparities of Indigenous peoples globally, as well as the complexity of Indigenous identification and how this status impacts health and access to healthcare
2. Explain the importance of the historical, social, political, and cultural contexts in the lives of Indigenous communities today and how it relates to health (e.g., colonialism, sovereignty, self-determination, discrimination)
3. Evaluate Indigenous research methodologies, and the importance of community-based participatory research, tribal participatory research, and strengths-based resilience approaches when understanding and developing research and programming related to Indigenous health
4. Analyze unique Indigenous cultural perspectives and practices that promote individual, community, and environmental health

Method of Assessment Percentage
1. Participation 20
2. Reflection 20
3. Group Presentation 25
4. Final Paper 35

Email: vokeefe3@jhu.edu
Lecture: T 3:30 PM - 5:20 PM
Enrollment: Minimum 5, Maximum 40, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

224.691.01 Qualitative Data Analysis
3 credits - Course offered this year - East Baltimore
Harvey, Steve
Combines lecture, hands-on exercises, and work with individual data to guide students through several approaches to managing and analyzing qualitative data in the context of both international and domestic public health research. Offers instruction in how to create efficient and accessible qualitative databases, apply different coding and other analytic strategies to different types of qualitative data, write analytical memos, and present qualitative results in forms appropriate for different target audiences, both academic and programmatic. Provides a brief introduction to the use of computer-aided qualitative data analysis software (CAQDAS).
Upon successfully completing this course, students will be able to:

1. Manage qualitative data in an efficient and accessible manner
2. Develop a qualitative data analysis plan
3. Choose and apply different inductive and deductive approaches to coding appropriate to the data type and the context in which results will be used
4. Employ and write analytical memos to aid in interpretation of qualitative data
5. Understand the basic functions of computer-aided qualitative data analysis software
6. Present qualitative findings in different settings using formats appropriate for different audiences

Method of Assessment

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<td>35</td>
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<td>10</td>
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</table>

Email: Steven.Harvey@jhu.edu
Lecture: M W 9:00 AM - 10:20 AM
Enrollment: Minimum 18, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Anyone who has not met the prerequisite
Prerequisite: 224.690 or permission of instructor
Terms graded individually

224.692.01 Formative Research For Behavioral And Community Interventions
4 credits - Course offered this year - East Baltimore
Leontsini, Elli

Examines how to conduct formative research and use its findings in the many stages of developing designing, implementing and evaluating public health interventions. Discusses cross-cutting issues in study design, community entry and involvement, data sharing and use, as well as staff development and supervision. Draws parallels with implementation and translational research and with human centered design. Presents and explores case studies of multi-method formative research, and the use of the data collected to develop more effective behavioral and community interventions. Examples presented and analyzed include programs to prevent and control HIV/AIDS, malaria, dengue hemorrhagic fever, diarrhea and neonatal mortality in Latin America, Africa and Asia.

Upon successfully completing this course, students will be able to:

1. Formulate formative research questions appropriate for each stage in intervention design and evaluation process
2. Identify appropriate guiding theories and methodologies, and integrate them into a formative research protocol
3. Prepare for coordinating a formative research component in the field, including capacity building, and sharing of data with community and partners in forums and meetings
4. Review, learn and critique current theories and methodologies taken, and ways in which data are utilized, in selected case studies

Method of Assessment

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<th>Percentage</th>
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<tr>
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<tr>
<td>20</td>
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<tr>
<td>75</td>
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</tbody>
</table>

Email: eleontsi@jhu.edu
Lecture: M F 10:30 AM - 11:50 AM
Lab Section: 01 F 9:00 AM - 10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent is required if prerequisites are not met.
Prerequisite: A behavior change course such as 224.689, 221.688, 410.600, or similar, and a qualitative course such as 224.690, 410.710, 550.604 or similar; or consent of the instructor

224.699.01 Qualitative Research Practicum III: Analyzing And Writing Qualitative Findings

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 159 of 202
2 credits - Course offered this year - East Baltimore
Surkan, Pamela; Saleem, Haneefa

Enables students to complete data collection, analysis and write-up of results from a qualitative research project in collaboration with a local community-based organization or JHU faculty. Discusses common challenges in qualitative research including analysis of qualitative data, writing qualitative papers and reports, presenting qualitative findings, and ethical issues related to fieldwork and authorship.

Upon successfully completing this course, students will be able to:
1. Describe common challenges in analyzing qualitative data and strategies for overcoming these challenges
2. Write up findings from a qualitative research project
3. Present qualitative data effectively in both written and oral formats
4. Work collaboratively with interprofessional teams to interpret qualitative data and give recommendations of value to such teams

Method of Assessment

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
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<td>Participation</td>
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<td>Peer-feedback</td>
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<td>Data collection transcript</td>
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<td>Presentation(s)</td>
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<tr>
<td>Preceptor evaluation</td>
<td>10</td>
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Email: psurkan@jhu.edu
Lecture: F 1:30 PM - 3:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 224.697.01: Qualitative Research Practicum I: Partnerships and Protocol Development and 224.698.01: Qualitative Research Practicum II: Collecting Qualitative Data.

Undergraduates must directly ask instructor for permission

224.810.01 Social And Behavioral Interventions Practicum

variable credits field placement - Course offered this year - East Baltimore
Leontsini, Elli

Complements and reinforces the didactic portion of the MSPH program. Provides students with an opportunity to apply the knowledge gained during the first year, to develop skills in the development, implementation, and evaluation of social and behavioral global health interventions, according to individually designed learning objectives, and to work as part of a team in an applied research or practice project. Students are placed in a variety of professional settings, which may include: government, non-government organizations (NGOs), multi-lateral, private, and/or for-profit sector. Provide opportunity for feedback for student performance and placement experience

Upon successfully completing this course, students will be able to:
1. Integrate and apply knowledge, methods and skills learned in courses taken on the first year of the MSPH in a practical setting, to allow for the seamless transition from student to public health professional.
2. Develop new skills essential for functioning as an effective global health professional, in assuming responsibility on the ground and becoming a reliable and collaborative member of a project team, an effective communicator, writer, trainer and implementer.
3. Evaluate a program or field project as it relates to the socio-cultural and health context, behavioral and health impact, community involvement and program process.
4. Develop a proposal, report, or other written document.
5. Take initiative, provide direction, and participate in the implementation, evaluation and/or analysis required to establish and achieve project goals.
6. Communicate effectively, manage relationships and participate in teams

Email: eleontsi@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Pass/Fail

224.820.01 Thesis Research Social And Behavioral Interventions

variable credits thesis research - Course offered this year - East Baltimore

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 160 of 202
Students actively conduct research on topics of global health importance, including developing a research question, designing a study to answer the question, conducting the research and writing up the results in a scientific format.

This course will prepare you to be able to do the following:

1. Identify research questions of importance to health in underserved populations in low resource settings internationally and in the US.
2. Design a study or studies to answer the questions.
3. Develop an application to an Institutional Review Board to address human subjects research issues.
4. Write up the results of research for the scientific literature.

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

224.830.01 Postdoctoral Research Social And Behavioral Interventions
variable credits - Course offered this year - East Baltimore
Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

224.840.01 Special Studies And Research Social And Behavioral Interventions
variable credits - Course offered this year - East Baltimore
Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

224.850.01 MSPH Capstone Social And Behavioral Interventions
variable credits 2-16 - Course offered this year - East Baltimore
Departmental Faculty

Offers students an opportunity to integrate and apply program skills and competencies to a public health problem in a format that approximates a professional practice experience. Fosters students' ability to produce scholarly papers that provide a meaningful contribution to knowledge of the health of underserved populations. Guides students' development of tangible evidence of expertise that addresses specific applied topics relevant to international health.

Upon successfully completing this course, students will be able to:

1. Develop a concise and cohesive written document that defines a public health problem, a population of interest, and have a defined geographic scope.
2. Conduct a comprehensive literature review.
3. Synthesize relevant literature in a specific public health topic.
4. Analyze and present public health data in a scholarly paper.

Method of Assessment

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<th></th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Paper(s)</td>
<td>99</td>
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</table>

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only for MSPH SBI students in their 2nd year
Grading Options: Pass/Fail
Prerequisite: All other MSPH SBI requirements must be taken before or concurrently with the capstone project.

224.865.01 Doctoral Seminar In Behavior, Change And Health (Discontinued)
3 credits - Course offered this year - East Baltimore
Departmental Faculty

Through readings and discussion of psycho-social theory, students explore the nature of health and human behavior as well as the role of both individual and environmental factors on the process of behavior change. Students work on developing a conceptual framework and theory section for their doctoral dissertation proposal.
Upon successfully completing this course, students will be able to:

1. Explore the nature of and influences on human behavior and how these factors impact changes in health, utilizing readings and discussion of social theory.
2. Utilize social theory in the process of constructing and/or refining the conceptual framework and accompanying narrative of the doctoral dissertation research proposal.

Lecture: F 1:30 PM - 4:30 PM
Enrollment: Minimum 4, Maximum 12, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail

Mental Health

330.604.01 Seminars In Research In Public Mental Health
1 credits - Course offered this year - East Baltimore
Bass, Judy
Integrates academic training with current research in public mental health, including etiological, epidemiologic and intervention research for mental and behavioral disorders across the lifespan. Features presentations by researchers from JHU and other research and practice institutions on the results of state of the art investigations of mental and behavioral health problems and issues of public health significance, emphasizing experimental design and methodology for analysis and discussion.

Upon successfully completing this course, students will be able to:

1. Cite examples of current research, policy, or practice in the field of public mental health.
2. Identify areas of interest for current and future research.
3. Recognize the features of engaging presentations and participate in discussions with fellow researchers.

Email: jbass1@jhu.edu
Lecture: W 12:00 PM - 1:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Only open to DMH Postdocs, PhD and MHS students.
Grading Options: Pass/Fail

330.605.01 Doctoral Seminar In Public Mental Health
1 credits - Course offered this year - East Baltimore
Bass, Judy
Explores and critiques public mental health research and practice, emphasizing key constructs and methods with department faculty through presentations, readings, and group discussions. Develops professional development skills for careers in public mental health.

Upon successfully completing this course, students will be able to:

1. Explore in depth key public mental health historical and cutting edge research.
2. Gain skills in key professional development domains related to careers in public mental health.

Email: jbass1@jhu.edu
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

330.607.81 Prevention Of Mental Disorders: Public Health Interventions
3 credits - Course offered this year - Internet
Wilcox, Holly;Leaf, Philip
Introduces the basic principles and methods that guide research on the prevention of and early intervention with mental disorders and alcohol/substance use disorders. Includes public health interventions that operate at multiple ecological levels, including the community (e.g., mobilization, media), school (e.g., changes in classroom management and organization), family (e.g., parent training strategies), and individual (e.g., social competence strategies). Focuses on specific topics in prevention and intervention trial design, community and institutional base building, intervention theory and monitoring, and data analysis techniques and findings. Examines population-based epidemiologic and other methodological approaches from a life-course developmental perspective.

Upon successfully completing this course, students will be able to:

1. Describe a public health approach to the prevention and control of mental disorders and substance abuse.
2 Apply concepts learned to the development and evaluation of preventive interventions for individuals, families, neighborhoods, and communities

3 Utilize conceptual models for the development, implementation, and evaluation of intervention strategies aimed at the prevention or control of mental disorders or substance use

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<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<td>Discussion Board</td>
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<td>Final Paper</td>
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<td>Presentation(s)</td>
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<tr>
<td>Participation</td>
<td>10</td>
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</tbody>
</table>

Email: hwilcox1@jhmi.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; Consent required for undergraduates.

Prerequisite:

**330.609.81 Climate Change And Mental Health: Research, Practice, And Policy Perspectives**

3 credits - Course offered this year - Internet

Augustinavicius, Jura L.

Examines mental health concepts of disorder, distress, well-being, and resilience in the context of climate change. Focuses on research, policy, and practice perspectives on 1) climate change exposures and their impacts on mental health and well-being, 2) social and environmental justice in climate change and mental health, 3) resilience, psychosocial adaptation, and action. Presents data on direct and indirect mental health and psychosocial impacts of chronic and acute climate change exposures. Discusses inequalities in climate change impacts on mental health with examples from across local and global contexts. Explores individual and community-level resilience, psychosocial adaptation, and areas of priority action

Upon successfully completing this course, students will be able to:

1. Explain the impacts of climate change on mental health and psychosocial well-being across varying chronic and acute climate change exposures.
2. Identify inequalities in the impacts of climate change on mental health and psychosocial well-being globally and locally.
3. Define psychosocial adaptation.
4. Identify opportunities for climate change and mental health action within research, policy, and practice.

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<tr>
<th>Method of Assessment</th>
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<td>LiveTalks</td>
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<tr>
<td>Discussion</td>
<td>30</td>
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<tr>
<td>Assignments</td>
<td>45</td>
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Method of Assessment Detail:
Students will be evaluated based on:

1) A brief (3-5 minute) VoiceThread submission prior to the LiveTalk session and participation in the LiveTalk session (25%);

2) Participation in the discussion forum through Voicethread and/or written text submissions in response to specific content covered in course lectures, readings, and assigned audio and visual material (30%);

3) A project proposal to study or intervene on a particular climate change and mental health issue (45%). The student may choose the type of proposal that they would like to develop (i.e. research, policy, or practice focused) and should consider and define the purpose, guiding framework, location, target population, timing, and each mental health/psychosocial and/or climate change related component of the proposed project. Students have two options for the project proposal: (1) a 15-minute Powerpoint presentation delivered over Voicethread, or, (2) a 7-8 page paper (double-spaced font).

Email: jaugust6@jhu.edu

Enrollment: Minimum 10, Maximum 60, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students.
Prerequisite: Introduction to Online Learning

330.612.01 Introduction To Behavioral And Psychiatric Genetics

3 credits - Course offered this year - East Baltimore
Zandi, Peter

Provides an overview of research methods and their application to the study of behavioral and psychiatric genetics. Course begins by briefly introducing necessary concepts in molecular and population genetics. The course then studies designs and analytic methods used to investigate the genetic contribution to human behavior and its disturbances. The study designs covered include the following: family, twin, and adoption studies to evaluate the extent of genetic contribution; segregation studies to determine the mode of inheritance; linkage and association studies to map genes; and other epidemiological designs to elucidate gene-by-environment interactions. These are illustrated through examples of real studies. At the end of the course, the student will be familiar with our current understanding of the role genetic factors play in human behavior, its disturbances, and how our research may further that understanding.

Upon successfully completing this course, students will be able to:

1) Review the basic molecular genetic concepts necessary for discussing how genetic factors may contribute to behavioral and psychiatric traits
2) Describe the latest research methods that may be used to investigate the genetics of behavioral and psychiatric traits
3) List the principles of quantitative genetic studies, such as family, twin and adoption studies, and molecular genetic studies, such as linkage and association studies, and the challenges of applying these study designs to behavioral and psychia
4) Discuss the role genetic factors play in behavioral and psychiatric traits of major public health concern, including schizophrenia, personality and smoking

Method of Assessment          Percentage
1. Final Exam                  50
2. Presentation(s)            35
3. Participation              15

Email: pzandi1@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required of undergraduates.
Prerequisite: Prior or concurrent coursework in epidemiology/biostatistics.

330.614.01 Advanced Latent Variable Modeling: Matching Model To Question
3 credits - Course offered this year - East Baltimore
Musci, Rashelle
Reviews concepts, key assumptions, and published applications of advanced latent variable methods commonly used in psychology or mental health research including growth mixture models, latent class analysis with covariates and distal outcomes, and latent transition analysis. Acquaints students with the current state of science related to latent variable methods, which is a quickly advancing field, and gives students the tools they need to build an appropriate latent model for their research question. Topics include growth mixture modeling, latent class regression, latent transition analysis, multi-level models, and measurement invariance. Presents students with examples from psychological, mental health, and developmental datasets with applications in the behavioral and social sciences. Students will apply lessons from didactic lectures in assignments and class projects.

Upon successfully completing this course, students will be able to:
1 Critically evaluate the use of advanced latent variable models in studies related to mental health, psychology, epidemiology, etc.
2 Conduct latent class analysis, including the use of latent class regression and latent class analysis with distal outcomes within a single and multilevel framework
3 Analyze and interpret growth mixture models with complex data
4 Analyze and interpret latent transition analyses with covariates
5 Write and present a methods and results section with complex latent variable modeling

Email: rmusci1@jhu.edu
Lecture: T TH 10:30 AM - 11:50 AM
Enrollment: Minimum 5, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Jointly offered with BIOSTAT

330.618.01 Mental Health In Later Life
3 credits - Course not offered until 2020 - 2021 - East Baltimore
Rebok, George
Contrasts the definition, diagnosis, risk factors, natural history, functional implication, and settings of care for the major mental disturbances of late life, identifying gaps in knowledge and research approaches to fill them. Emphasizes measurement issues as applied to the older adult.

Upon successfully completing this course, students will be able to:
1 Classify the major mental disorders of late life and contrast the presentation of the major mental disorders of late life with presentation among younger persons
2 Describe the concepts of successful aging, wisdom, and quality of life as related to life transitions and mental status
3 Name the chief risk and protective factors associated with each of the major mental disorders of late life and factors associated with optimal mental functioning
4 Describe methods used to evaluate mental health in late life in epidemiologic surveys and the methodological issues involved in research on elderly
5 Identify gaps in knowledge of aging and mental health and the research approaches to fill these gaps
6 Differentiate the problems and opportunities inherent in the treatment settings in which older adults receive care for major mental disorders of late life
7 Apply concepts to the development and evaluation of preventive interventions for older adults

Email: grebok1@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Undergraduates only.

330.619.01 Psychiatric Genomics
3 credits - Course offered this year - East Baltimore
Maher, Brion; Jaffe, Andrew

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 165 of 202
Addresses the rapidly changing landscape of the study of complex genetics diseases. Students explore the current state of the quantitative issues in complex disease genetics, so that they can translate their experiences into research practice. Analyzes genome-wide association scans, epigenetics, and next-generation sequencing, as well as approaches to power calculation, including the use of simulation. Students study the current literature as well as examples from real data sets. In addition to learning the analytic techniques, students also become familiar with the assumptions and limitations of these approaches.

Upon successfully completing this course, students will be able to:
1. Analyze data from genome-wide or candidate methylation studies
2. Perform systems-based and polygenic analyses from genome-wide association data
3. Perform genetic association studies using data generated next generation sequencing
4. Perform power calculations for genetic association studies
5. Apply simulation-based approaches to calculate statistical power or empirical significance to genetic studies

Email: brion@jhu.edu
Lecture: M W 10:30 AM - 11:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

330.623.01 Brain And Behavior In Mental Disorders
3 credits - Course offered this year - East Baltimore
Carlson, Michelle
Examines the onset and clinical symptoms of mental disorders over the life course of the developing and aging brain to illustrate neurobiological systems involved in thinking, feeling, and acting. Increases understanding of behavioral disorders, their assessment, neurobiological underpinnings, and systemic influences. Reviews some common disorders, discussion (1) clinical and case studies; (2) definitions and diagnostic methods; treatment, epidemiologic evidence regarding etiology, and (3) challenges to examining brain-behavior relationships across disorders.

Upon successfully completing this course, students will be able to:
1. Describe and learn concepts, test instruments, and methods used to understand the fundamental principles of brain-behavior relationships and how they break down
2. Think critically about the onset of mental disorders across the life span in conjunction with brain developmental milestones

Method of Assessment

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<tr>
<td>Participation</td>
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<tr>
<td>In-class Exercises</td>
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<td>Final Exam</td>
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Method of Assessment Detail:
class participation= 15%
in-class review of assigned paper= 23%
critical appraisal of weekly readings= 32%
in-class final exam= 30%

Email: mcarlso2@jhu.edu
Lecture: M W 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required of undergraduates.

Learning Materials:
• (Book) Fractured Minds: A Case-study Approach to Clinical Neuropsychology
  Ogden, Jenni
  Amazon.com $41.25

330.639.01 The Intersection Of Mental And Physical Health

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 166 of 202
3 credits - Course offered this year - East Baltimore

Gallo, Joseph; Joo, Jin Hui

Addresses the epidemiology, consequences, measurement, and implications for health service delivery of co-morbidity of mental and physical disorders. Employs a conceptual framework that emphasizes the potential psychological, behavioral, social, and biological mechanisms through which mental and medical illness interact to cause disability and death. This model has implications for development of new service delivery models that integrate the care of mental health disorders into the care of medical conditions such as cancer, cardiovascular disease, and diabetes. Students interact with investigators and clinicians in lecture format, examine case studies, and generate a paper related to a medical-psychiatric co-morbidity of their choosing.

Upon successfully completing this course, students will be able to:

1. Demonstrate knowledge of the descriptive epidemiology of the major mental disorders and co-occurring medical conditions: a) name the most commonly occurring co-morbid physical and mental disorders, b) name three risk factors for mental disorders among pe
2. Identify how mental health and illness interact with physical health and illness to affect health outcomes such as function, quality of life, and mortality: a) discuss the social, behavioral, psychological, and biological pathways through which mental he
3. Describe the impact of medical and mental illness co-morbidity on the use and organization of health services: a) discuss the evidence on medical co-morbidity and mental illness are managed in primary health care and in specialty psychiatric and non-psyc

Method of Assessment

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<tr>
<td>Participation</td>
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<td>Discussion</td>
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<td>Paper(s)</td>
<td>40</td>
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Email: jgallo2@jhu.edu

Lecture: T TH 1:30 PM - 2:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

330.640.01 Childhood Victimization: A Public Health Perspective

3 credits - Course offered this year - East Baltimore

Letourneau, Elizabeth

Examines childhood victimization across a wide spectrum of victimizations, including sexual and physical abuse, peer and sibling assaults, witnessing domestic violence and verbal abuse and neglect. Acquaints students with the epidemiology of childhood victimization, reviews existing victim and perpetrator-focused interventions, and explores established emerging prevention strategies. Reviews legal policies aimed at reducing childhood victimization, their strengths and weaknesses, and challenges to the notion that childhood victimization is, or can be, effectively addressed solely or primarily via criminal justice interventions.

Upon successfully completing this course, students will be able to:

1. Discuss how differences in the age and sex of perpetrators and victims link to different etiologies and consequences.
2. Identify factors associated with increased risk for childhood victimization and perpetration.
3. Explain the mechanisms of action by which interventions have an impact on clients (both victims and perpetrators)
4. Identify the primary components of effective prevention programs, including who is targeted and the expected mechanism of action.
5. Evaluate the quality and limitations of legal interventions that address childhood victimization.
6. Identify elements of a more comprehensive public health approach to childhood victimization.

Email: ElizabethLetourneau@jhu.edu

Lecture: M W 3:30 PM - 4:50 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite:
Learning Materials:

- (Book) Childhood Victimization: Violence, Crime, and Abuse in the Lives of Young People
  Finklehor, David
  Amazon.com $23.70

330.660.01 Grant Writing For The Social And Behavioral Sciences
3 credits - Course offered this year - East Baltimore
Maher, Brion; Leaf, Philip
Targets the development of effective research proposals in public mental health, including the identification of research questions, factors related to significance and innovation, study design, and analytic approaches. Reviews of research proposals and articles address issues such as topic selection, sample selection, measurement, and analytic strategies. Reviews strengths and weaknesses of proposals and studies and considers recent advances in epidemiologic and statistical methods as alternative approaches for addressing research questions.

Upon successfully completing this course, students will be able to:

1. Identify the review criteria used by NIH, other federal agencies, and other potential funders.
2. Prepare a grant proposal that meets review criteria established by funders.
3. Critique grant proposals in terms of strengths and weaknesses.
4. Create biosketches in support of grant proposals.
5. Determine who to identify the assets that should be highlighted in grant proposals.

Email: brion@jhu.edu
Lecture: T TH 3:30 PM - 4:50 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
No undergraduates
Grading Options: Pass/Fail
Consent required for some students; Consent required for students who have not taken all of the prerequisites
Prerequisite: 340.751-753 and 140.621-624; or consent of instructor

This course is limited to doctoral students who have completed basic course sequences in epidemiology and biostatistics and first year Department of Mental Health course sequence or those who have received permission of the instructor.

330.663.01 Mental And Behavioral Clinical Practice Exposure
2 credits - Course offered this year - East Baltimore
Nestadt, Paul
Introduces students to the mental health/behavioral care clinical settings. Acquaints students with the therapeutic relationship that exists between clinician and patient. Presents opportunities for shadowing and research partnerships with clinicians.
Provides access to potential clinical data sets for exploration and analysis. Emphasizes practical hands-on experience over didactic secondary exposure. Challenges student notions of the psychiatric patient and their care, while destigmatizing both the illnesses and the treatment processes. Encourages creative hypothesis generation grown from observation of solvable challenges experienced in the field.

Upon successfully completing this course, students will be able to:

1. Appraise the therapeutic clinical setting and the practice of administering mental healthcare.
2. Compile common misconceptions regarding the mentally ill and the treatment of mental illness in order to propose educational strategies to rebut these.
3. Generate hypotheses grown from observation of solvable challenges experienced in the field.

Method of Assessment

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<tr>
<td>1. Final Paper</td>
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<td>2. Discussion</td>
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<td>3. Written Assignment(s)</td>
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Method of Assessment Detail:

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 168 of 202
Students will produce a set of proposed research questions, in the form of an aims page, which apply a public health perspective to improving direct clinical care. The final classroom meeting will include group discussions of these questions and conversations of how to answer them, potentially using the clinic population which was observed. Students will be evaluated based on 1) Weekly written reflections on the shadowing sessions (30%), 2) Active participation in the two classroom discussion sessions (30%), and 3) Research questions write up/Aims Page (40%)

Email: pnestadt@jhmi.edu

Enrollment: Minimum 1, Maximum 5, Waitlist Enabled: Yes
Grading Options: Pass/Fail

Consent required for all students; All students must request instructor consent.

Class Times: Three classroom sessions of two hours each will be scheduled around the enrolled students availability. These will consist of an initial meeting to contextualize the experiences and discuss the pairing of students with shadowing opportunities, a mid-term discussion of assigned articles on clinical practice (such as therapeutic alliance or service delivery), and a final session for discussion of the student generated research question pages as well as review of how their shadowing experience may contribute to their efficacy as an agent of public mental health. Lab times: Shadowing will consist of 4-5 hours per week (half day per week at the assigned site, in weeks 2-8. We also expect a total of 8-15 hours of time to be spent on homework in the form of written reflections and paper preparation.

330.674.81 Suicide As A Public Health Problem (Cancelled - Department)
3 credits - Course offered this year - Internet
Wilcox, Holly;Clarke, Diana
Introduces students to the following content areas with regard to suicide: history and theories; epidemiology; etiological factors and mechanisms; clinical phenomenology and comorbid disorders; assessment of suicidal behaviors; special populations; preventative and treatment interventions.

Upon successfully completing this course, students will be able to:
1 Define and discuss suicide and suicidal behaviors from a public health framework
2 Describe the epidemiology, etiology, and interventions for attempted and completed suicide
3 Identify the essential clinical, social and ethical issues in the conduct of suicide research

Method of Assessment Percentage
1. Final Paper 30
2. Group Presentation 40
3. Quizzes 20
4. Participation 10

Email: hwilcox1@jhmi.edu

Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Introduction to Online Learning

330.680.01 Promoting Mental Health And Preventing Mental Disorders In Low- And Middle-Income Countries (Discontinued)
3 credits - Course offered this year - East Baltimore
Tol, Wietse
Focuses on research and intervention approaches in low- and middle-income countries in the field of mental health prevention and promotion. Particularly emphasizes populations exposed to adversity and challenges students to bridge the gap between research and practice in this area. Discusses the determinants of mental health and how they can be targeted at different life stages and different socio-ecological levels (e.g., family, school, and neighborhood). Addresses such questions as "What is resilience, and how can it be promoted?", "How can interventions prevent depression in women exposed to intimate partner violence?", and "How do poverty, violence and malnutrition impact mental health?". Uses real-world examples, and follows a case method approach.

Upon successfully completing this course, students will be able to:
1 Design assessment approaches or epidemiological studies to identify relevant social determinants of mental health in populations residing in low- and middle-income countries
2 Select and adapt appropriate intervention approaches that address such determinants
Develop monitoring and evaluation strategies or studies aimed at evaluating the prevention of mental disorders and promotion of mental health in low- and middle-income countries

Email: wtol1@jhu.edu
Lecture: F 1:30 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

**330.680.81 Promoting Mental Health And Preventing Mental Disorders In Low- And Middle-Income Countries**

3 credits - Course offered this year - Internet
Tol, Wietse
Focuses on research and intervention approaches in low- and middle-income countries in the field of mental health prevention and promotion. Particularly emphasizes populations exposed to adversity and challenges students to bridge the gap between research and practice in this area. Discusses the determinants of mental health and how they can be targeted at different life stages and different socio-ecological levels (e.g., family, school, and neighborhood). Addresses such questions as ‘What is resilience, and how can it be promoted?’, ‘How can interventions prevent depression in women exposed to intimate partner violence?’, and ‘How do poverty, violence and malnutrition impact mental health?’; Uses real-world examples, and follows a case method approach.

Upon successfully completing this course, students will be able to:

1. Design assessment approaches or epidemiological studies to identify relevant social determinants of mental health in populations residing in low- and middle-income countries
2. Select and adapt appropriate intervention approaches that address such determinants
3. Develop monitoring and evaluation strategies or studies aimed at evaluating the prevention of mental disorders and promotion of mental health in low- and middle-income countries

**330.800.01 MPH Capstone Mental Health**

2 credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

**330.802.01 Seminar On Aging, Cognition And Neurodegenerative Disorders**

2 credits - Course offered this year - East Baltimore
Rebok, George
Addresses age-related cognitive and neuropsychiatric disorders that are of particular importance with the rapid expansion of the aging population. Focuses on the major domains of cognition and comparison of the age-related changes that occur in each cognitive domain. Includes emphasis on contrasting the major neurodegenerative disorders related to age and describing the clinical presentation and pattern of cognitive change in each condition. Participants address current strategies for maximizing cognitive function with age and treatment strategies for the primary neurodegenerative disorders. Participants examine and identify gaps in knowledge and research approaches to fill these gaps. Explores concepts of cognitive systems, animal and imaging models, and neuropathological changes associated with aging and with disease.

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*4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 170 of 202*
Upon successfully completing this course, students will be able to:

1. Discuss models of improving care for patients with dementia
2. Describe biomarkers that have been examined in neurodegenerative disorders, and how they may be used to improve the conduct of clinical trials
3. Review the genetic causes and/or risks for the major neurodegenerative diseases
4. Discuss animal models of neurodegenerative disorders and how they can be used to find improved treatments for patients

Email: grebok1@jhu.edu
Lecture: TH 3:30 PM - 5:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; consent is required for everyone
Prerequisite:
Predoctoral and Postdoctoral students from A&S, SPH and Medicine students participating in training grant on age-related, cognitive and neuropsychiatric disorders.

330.805.01 Seminar On Statistical Methods For Mental Health
1 credits - Course offered this year - East Baltimore
Linton, Sabriya L.; Stuart, Elizabeth
Students discuss recent advances in statistical methods in mental health. Class sessions include student and faculty presentations as well as discussions of recent articles in the literature. Topics include missing data, longitudinal data analysis, causal inference, and measurement.
Upon successfully completing this course, students will be able to:
1. Identify the key areas of research in statistical methods for mental health
2. Describe recent developments in the field
3. Critically evaluate studies in this area
Email: slinton1@jhu.edu
Lecture: TH 12:00 PM - 1:20 PM
Enrollment: Minimum 4, Maximum 50, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Consent required for some students; Master's students and undergraduates.
Prerequisite: 140.621-624 or 140.651-654, or consent of the instructor
Jointly offered with BIOSTAT
Will be held in department space.

330.820.01 Thesis Research Mental Health
variable credits - Course offered this year - East Baltimore
Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

330.830.01 Postdoctoral Research Mental Health
variable credits - Course offered this year - East Baltimore
Information not required for this course type
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

330.840.01 Special Studies And Research Mental Health
variable credits - Course offered this year - East Baltimore

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsp.edu/courses - Page 171 of 202
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

330.895.01 MPH Practicum: Mental Health
variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore
Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.
Upon successfully completing this course, students will be able to:
1 Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Molecular Microbiology and Immunology

260.601.01 Vector-Borne Disease Control (Cancelled - Minimum Not Met)
3 credits - Course offered this year - East Baltimore
Dimopoulos, George
The course will address various vector-borne disease control strategies that target any of the complex interactions between the pathogen, vector and host. Emphasis is placed on malaria, dengue and other arboviral diseases, as well as Chagas, leishmaniasis and schistosomiasis. Current and future prophylactic, therapeutic and transmission-blocking vaccines and drugs, vector control, and vector-targeted pathogen transmission control are some examples of control strategies that will be discussed. Interactions between control methods and factors that influence efficacy will also be addressed.
Upon successfully completing this course, students will be able to:
1 Explain current and future vector-borne disease control concepts
2 Identify the most effective disease control strategy for a given disease and transmission setting
3 Critique the strengths and weaknesses of various vector-borne disease strategies
4 Analyze compatibilities and incompatibilities between different vector-borne disease control strategies, and identify the most appropriate combination in a given transmission environment.
Email: gdimopo1@jhu.edu
Lecture: T TH 1:30 PM - 3:20 PM
Enrollment: Minimum 6, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Background in biomedical sciences

260.624.01 Advanced Virology
4 credits - Course offered this year - East Baltimore
Pekosz, Andrew
Includes lectures on a diverse collection of viruses, with emphasis on molecular biology and pathogenesis. Approximately 50% course content consists of student presentations and discussion of primary literature.
Upon successfully completing this course, students will be able to:
1 Describe in depth and in detail the replication and pathogenesis of a number of different viruses
2 Critically analyze and critique the literature
3 Identify novel and important areas of research
Email: apekosz1@jhu.edu
Lecture: T TH 1:30 PM - 3:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; If fundamental virology prerequisite is not met.
Prerequisite: 260.623, undergraduate virology or consent of instructor

260.656.01 Malariology (Discontinued)
4 credits - Course offered this year - East Baltimore
Sullivan, David
Presents issues related to malaria as a major public health problem. Emphasizes the biology of malaria parasites and factors affecting their transmission to humans by anopheline vectors. Topics include host-parasite-vector relationships; diagnostics; parasite biology; vector biology; epidemiology; host immunity; risk factors associated with infection, human behavior, chemotherapy, and drug resistances; anti-vector measures; vaccine development; and management and policy issues.

Upon successfully completing this course, students will be able to:
1. Discuss the complex relationships between host and vector that affect transmission and control
2. Integrate the host and parasite relationships to discuss the immune response, nature of disease, and disease manifestations
3. Interpret epidemiological indices associated with patterns of malaria transmission
4. Evaluate different approaches to malaria control through vector control, chemotherapy, and vaccines when they become available
5. Describe the differences between the various species of Plasmodium affecting humans

Email: dsulliv7@jhnmi.edu
Lecture: T TH 10:00 AM - 11:50 AM
Enrollment: Minimum 6, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

260.657.01 Vector Biology And Disease Ecology Literature
1 credits - Course offered this year - East Baltimore
Norris, Douglas; McMeniman, Conor
Reviews and discusses, in depth, historic and current publications in the field of vector biology, vector-borne diseases and disease ecology.

Upon successfully completing this course, students will be able to:
1. Critically evaluate instructor selected scientific literature in vector biology, vector-borne diseases and disease ecology, beginning with classic papers and ending with contemporary successes
2. Assess a wide variety of experimental strategies ranging from field to laboratory studies as they are applied to discover/discuss arthropod- and vertebrate-borne disease transmission
3. Discuss required readings in depth during class to evaluate the experimental techniques and critique the conclusions in light of the data and advancement of the field

Email: douglas.norris@jhu.edu
Lecture: W 9:00 AM - 9:50 AM
Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: General biology or consent of instructor

260.658.01 Advanced Malariology (Cancelled - Department)
2 credits - Course offered this year - East Baltimore
Sullivan, David
Presents current controversies and issues in malaria research and control. Emphasizes advanced topics in Plasmodium biology, clinical disease, Immunopathogenesis, mosquito-parasite interactions, malaria vaccines and drugs with attention to vaccine efficacy and drug resistance as well as elimination strategies.

Upon successfully completing this course, students will be able to:
1. Discuss complex parasite biology related to bottlenecks in life cycle and disease
2. Discuss the interaction of the human host, mosquito vector and Plasmodium parasite in disease pathogenesis outcome
3. Critically evaluate malaria elimination strategies that target vector, parasites and human behavior
4. Evaluate approaches and efficacy of vaccines, insecticides and drugs for malaria

Method of Assessment

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4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 173 of 202
Method of Assessment Detail:
Midterm paper 50%, Final paper 50%

Email: dsulliv7@jhmi.edu

Lecture: T TH 10:30 AM - 11:20 AM

Enrollment: Minimum 6, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Consent required for some students; If the student did not take 260.656, instructor consent is required.

Prerequisite: 260.656 or permission of instructor

260.663.01 Biological Response To Biomaterials
3 credits - Course offered this year - East Baltimore
Frondoza, Carmelita

Focuses on the clinical applications of biomaterials as medical devices: (1) to repair, replace organs and tissues; and (2) to deliver drugs, growth factors and other agents to stimulate, enhance, and restore function. Discusses biomaterials used in clinical settings such as orthopedics, cardiovascular, dental, and reconstructive surgery. Covers chemical, physical and mechanical properties of currently used and new biomaterials. Presents biological responses (immune and non-immune) that determine success or failure of biomaterial devices. Provides state-of-the art information on public health concerns with respect to the use of biomaterials in medicine.

Upon successfully completing this course, students will be able to:
1. Identify biomaterials used for tissue regeneration, repair and replacement and as delivery systems for restoration of function
2. Explain tissue, organ, system response (non-immune, immune) to biomaterials
3. Discuss regulatory issues for public health safety with the use of standard and new biomaterial compositions and combination devices

Email: cgfrondo@jhmi.edu

Lecture: T TH 3:30 PM - 4:50 PM

Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

260.701.60 Anatomy Of Scientific Error
3 credits - Course offered this year - East Baltimore
Bosch, Gundula

Examines sources of error in scientific practice (misconduct or honest mistakes, methodological or systematic errors). Presents real-world examples to analyze errors that cause problems in science across the disciplines. Introduces methodological and mathematical approaches to error reduction. Explores the review- and retraction mechanisms for journal articles and grants as methods of science self-correction. Discusses historic and contemporary cases where errors constitute sources of innovation.

Upon successfully completing this course, students will be able to:
1. Define the current understanding of experimental rigor, the meaning of academic ethics and the limits of reproducibility in an interdisciplinary context
2. Describe the sources of error in scientific practice as well as approaches for reducing errors
3. Formulate recommendations for avoiding mistakes and misconduct in scientific practice
4. Explain the procedures, advantages and disadvantages of review and retraction mechanisms for scientific journal articles
5. Appraise the role of errors in discovery and innovation

Email: gbosch2@jhu.edu

Lecture: W 1:30 PM - 2:50 PM

Enrollment: Minimum 3, Maximum 30, Waitlist Enabled: Yes

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 174 of 202
260.701.81 Anatomy Of Scientific Error
3 credits - Course offered this year - Internet
Bosch, Gundula
Examines sources of error in scientific practice (misconduct or honest mistakes, methodological or systematic errors). Presents real-world examples to analyze errors that cause problems in science across the disciplines. Introduces methodological and mathematical approaches to error reduction. Explores the review- and retraction mechanisms for journal articles and grants as methods of science self-correction. Discusses historic and contemporary cases where errors constitute sources of innovation.
Upon successfully completing this course, students will be able to:
1 Define the current understanding of experimental rigor, the meaning of academic ethics and the limits of reproducibility in an interdisciplinary context
2 Describe the sources of error in scientific practice as well as approaches for reducing errors
3 Formulate recommendations for avoiding mistakes and misconduct in scientific practice
4 Explain the procedures, advantages and disadvantages of review and retraction mechanisms for scientific journal articles
5 Appraise the role of errors in discovery and innovation
Email: gbosch2@jhu.edu
Enrollment: Minimum 3, Maximum 30, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail

260.710.60 Communication Practice For Health Science Professionals
3 credits - Course offered this year - East Baltimore
Klaas, Brian; Bosch, Gundula
Introduces students to current trends in presentation design and delivery. Focuses on narrative-oriented thinking to improve information dissemination. Emphasizes clarity and simplicity in communication practice in multiple settings, targeting both lay and interdisciplinary expert audiences.
Upon successfully completing this course, students will be able to:
1 Construct visual presentations around simple, clear narratives
2 Formulate concise statements and brief lightning speeches about current research topics without presentation aids
3 Explain the need for their research in multiple formats, targeted at interdisciplinary and lay audiences
Email: bklaas@jhu.edu
Lecture: T TH 1:30 PM - 2:50 PM
Enrollment: Minimum 10, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduates.
Prerequisite:
Part of the R3 graduate science initiative
Learning Materials:
- (Book) Better Presentations: A Guide for Scholars, Researchers, and Wonks
  Schwabish, Jonathan
  Amazon or Other $14.47
  2017

260.711.01 Principles Of Neuroimmunology
3 credits - Course not offered until 2020 - 2021 - East Baltimore
Stins, Monique
Briefly covers the role of specific cells of the central nervous system (CNS), immune functions of CNS cells, and trafficking of leukocytes into the CNS, both in health and disease. Subsequently, it discusses various immune cells, e.g. monocytes, T cells, B cells, inflammatory molecules such as cytokines, chemokines, metalloproteinases, and prostaglandins in more detail, focusing on their role in either protecting from neurological disease or in causing CNS disease pathologies, including cognitive dysfunction. Presentations from experts in the field address topics and diseases such as multiple sclerosis (MS), the blood brain barrier (BBB), HIV and other neurotropic microbes in eliciting neurological disease.

Upon successfully completing this course, students will be able to:

1. Describe the types and effector functions of resident and peripheral immune cells in the human brain, in health and disease
2. Explain how the immune system and cellular brain components contribute to neurological disease

Email: mstins@jhmi.edu
Lecture: T TH 9:00 AM - 10:20 AM
Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Basic knowledge of biology
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Basic knowledge of brain anatomy, physiology and biology.

260.712.01 Clinical Immunology
3 credits - Course offered this year - East Baltimore
Talor, Eyal; Rosario, Maxim; Cihakova, Daniela

Lectures and student-led discussions survey methods for evaluating immune competence and immune function; the immunocompromised host, including congenital and acquired immunodeficiencies such as AIDS; applications of immunogenetics; human transplantation; cancer immunology; allergic and autoimmune disease processes; and prophylaxis of infectious diseases, including vaccines and vaccine development.

Upon successfully completing this course, students will be able to:

1. Analyze clinical immunology topics
2. Describe the immune response in relation to different disease etiologies
3. Explain immune-based disease management and Case Report interpretation
4. Define immune-based approach to vaccine development
5. Analyze different immune-based diseases, causes, diagnosis and therapies

Method of Assessment Percentage
1. Participation 30
2. Presentation(s) 20
3. Midterm 25
4. Final Exam 25

Email: etalor@cel-sci.com
Lecture: T TH 6:00 PM - 7:30 PM
Enrollment: Minimum 6, Maximum 20, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; NOT Required for Full time Students who have all prerequisites. Undergrad and Special Students require pre-approval to register.
Prerequisite: a course in Basic Immunology or an equivalent

260.717.01 Graduate Immunology: The Immune Response
3 credits - Course offered this year - East Baltimore
Bream, Jay; Zavala, Fidel

Presents advanced topics concerning the immunologic system; the cellular basis of the immune response; effector functions of antibody, lymphocytes, and macrophages; regulation of the immune response; and immunologic diseases. Lectures and readings develop a well-rounded view of the interrelated elements comprising the immune system.

Upon successfully completing this course, students will be able to:

1. Survey the structure of the immune system, the molecular and cellular bases of immune recognition, the effector functions and regulation of the immune response
2. Relate the function of the immune system to its applications in protection, transplantation and immunological diseases
3 Critically review articles in recent literature

Email: jbream1@jhu.edu

Lecture: T TH 9:00 AM - 10:20 AM

Enrollment: Minimum 6, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 260.611-612, ME260.709, ME340.703, or consent of instructor

260.720.81 Communications Primer For The Public Health Sciences
1 credits - Course offered this year - Internet
Klaas, Brian; Bosch, Gundula

Acquaints students with the basics of effective oral and written communications in the form of brief exercises. Focuses on clarity and simplicity in presentation practice across disciplines and cultures to emphasize central messages. Introduces students to writing succinctly for advocacy using "compelling writers strategies" for opinion pieces and short speeches.

Upon successfully completing this course, students will be able to:
1 Construct visual presentations around simple, clear narratives
2 Explain the rationale for important public health topics across disciplines and to the public
3 Formulate clear and concise oral and written messages in the form of motivational presentations and opinion pieces

Email: bklaas@jhu.edu

Enrollment: Minimum 4, Maximum 80, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Course is an offspring of 260.710
Students interested in more extensive communications training are advised to enroll in 260.710.60/.81 Communications Practice for Health Science Professionals

260.800.01 MPH Capstone Molecular Microbiology And Immunology
2 credits Must have 1-4 credits per term for two terms. - Course offered this year - East Baltimore

Departmental Faculty

The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:
1 Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Email: bklaas@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

260.810.01 Field Placement Molecular Microbiology And Immunology
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

260.811.01 Field Studies In Ecology And Behavior
variable credits 3-6 - Course offered this year - East Baltimore
Norris, Douglas
Presents practical aspects of ecology and comparative behavior, particularly in relation to problems encountered in public health and conservation of natural resources. Covers measurement of environmental factors in collecting, marking, and census methods of wild populations; in statistical methods for field ecology; and in special techniques. Students work under the direction of a faculty advisor.

Upon successfully completing this course, students will be able to:
1. Explain how to appropriately acquire samples the field taking into account ecological and/or environmental constraints.
2. Employ field and laboratory pre-processing techniques that are widely used in the areas of infectious disease research.
3. Compare and contrast different methodologies in order to solve biological/sampling/logistical issues with field collections.

Email: douglas.norris@jhu.edu

Enrollment: Minimum 3, Maximum 8, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Consent required for all students; Consent required due to limited slots.

260.812.01 The Performance Of Leadership: Foundations
2 credits - Course offered this year - East Baltimore

Departmental Faculty

Explores leader and leadership as one’s natural self-expression through the ontological/phenomenological model in which ontology is the study or science of the nature and function of being (as in “being a leader”), and phenomenology is the method of direct access used to study and research the nature and function of being (as in being’s impact on exercising leadership effectively). Introduces a new conversational domain and transformative learning paradigm for leadership. Encourages discovery through discussion, exercises, and assignments. Prepares students to develop the skills necessary to create positive, effective, and sustainable change.

Upon successfully completing this course, students will be able to:
1. Develop students’ capacity to read, evaluate and apply ideas from weekly course readings
2. Enable students to develop their self-expression and to generate occasions for themselves to master being an effective leader
3. Provide tools for students to achieve significant breakthroughs in their academic, professional, and personal lives
4. Develop the ability to gain access and influence as a leader on a larger stage
5. Develop communication skills, authentic listening, and effective writing
6. Engage in ontological learning and practice new ways of being and acting that equip students to exercise leadership in every aspect of their lives

Method of Assessment

<table>
<thead>
<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>1. Discussion</td>
<td>10</td>
</tr>
<tr>
<td>2. In-class Exercises</td>
<td>45</td>
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<tr>
<td>3. Reflection</td>
<td>25</td>
</tr>
<tr>
<td>4. Presentation(s)</td>
<td>20</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:
Exercises 45%; Discussion 10%; Oral Presentation 20%; Bi-weekly, Written Reflections 25%;

Lecture: W F 1:30 PM - 2:50 PM

Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Prerequisite: none

This course will be offered as part of the JHSPH R3 Graduate Science Initiative.

260.815.01 The Business Of Academic Biomedical Research (Cancelled - Minimum Not Met)
1 credits - Course offered this year - East Baltimore

Dimopoulos, George

Addresses topics related to business aspects of academic biomedical research, and focuses specifically on organizational, managerial, political, strategic and economical characteristics of academic biomedical research. Prepares students for a career in academic biomedical research by discussing essential features for success, other than the actual science.

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 178 of 202
Upon successfully completing this course, students will be able to:

1. Analyze the economics of academic biomedical research at an institutional and national scale
2. Explain basic concepts of research institutions organizational structure and behavior
3. Assess the quality of leadership and management styles in an academic research environment
4. Develop competitive research project portfolios
5. Define basic funding and publishing strategies
6. Perform effective career planning and management

**Method of Assessment**

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Attendance</td>
<td>70</td>
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<tr>
<td>Discussion</td>
<td>20</td>
</tr>
<tr>
<td>Paper(s)</td>
<td>10</td>
</tr>
</tbody>
</table>

Email: gdimopo1@jhu.edu

Lecture: W 10:30 AM - 11:20 AM

Enrollment: Minimum 5, Maximum 50, Waitlist Enabled: Yes
Grading Options: Pass/Fail
Prerequisite: None

**260.820.01 Thesis Research Molecular Microbiology And Immunology**

variable credits - Course offered this year - **East Baltimore**

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

**260.821.01 Research Forum In Molecular Microbiology And Immunology**

1 credits - Course offered this year - **East Baltimore**

Brady, Anne

Departmental students organize and present research findings, resulting from laboratory investigations or literature review, to faculty and fellow students. These oral reports consist of rationale and background of the working hypothesis, experimental design, presentation of results, and analysis in the context of the hypothesis. Usually, each student presents twice a year and weekly attendance is required.

Upon successfully completing this course, students will be able to:

1. Become skilled in presenting research data to a diverse audience
2. Become familiar with the research conducted in departmental laboratories

Email: abrady9@jhu.edu

Lecture: M 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Required for MMI students.

**260.822.01 Seminars In Research In Molecular Microbiology And Immunology**

1 credits - Course offered this year - **East Baltimore**

Srinivasan, Prakash

Integrates academic training with current research in microbiology, immunology, and infectious diseases. Researchers from JHU and other biomedical research institutions present results of state of the art investigations of microbial diseases of public health significance, emphasizing experimental design and methodology for analysis and discussion.

Upon successfully completing this course, students will be able to:

1. Become familiar with current research in microbiology, immunology and infectious diseases

Email: psriniv3@jhu.edu

Lecture: TH 12:00 PM - 1:20 PM

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

*4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 179 of 202*
260.830.01 Postdoctoral Research Molecular Microbiology And Immunology
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

260.840.01 SS/R: Molecular Microbiology And Immunology
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

260.848.81 Implementing Community-Based Practice Through Civic Engagement Projects
2 credits - Course offered this year - Internet

Wear, Margaret; Derreth, Tyler; Bosch, Gundula

Examines a participatory, online service-learning approach to enable students regardless of geographical location to engage in real-world, community-based, educational projects. Acquaint students to work with Baltimore-based community organizations through critical reflection on issues of equity and professional practice. Emphasizes the application of professional skills to real-world issues. Discusses the limitations and ethical aspects inherent to civic engagement work. Prepares students to develop evaluation plans and materials for the organizations’ identified programs. Emphasizes translation of experiences with Baltimore Community-based organizations into local contexts. Focuses on building reciprocal partnerships that reach beyond “consultancy.”

Upon successfully completing this course, students will be able to:
1. Recognize the importance of equitable partnerships in professional practice to advance community outcomes.
2. Explain the importance of socio-historical aspects in addressing an educational problem in a community context
3. Find programmatic evaluation needs in Baltimore community-based organizations’ identified programs
4. Propose equitable, community-driven, and scientifically sound evaluation methods that support the work of Baltimore community-based organizations
5. Construct assessment tools that measure K-12 learning, volunteer impact, and program efficiency in collaboration with partnering Baltimore Community-based organizations

Method of Assessment

<table>
<thead>
<tr>
<th>Percentage</th>
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<tbody>
<tr>
<td>Discussion 20</td>
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<tr>
<td>Reflection 20</td>
</tr>
<tr>
<td>Written Assignment(s) 30</td>
</tr>
<tr>
<td>Final Project 30</td>
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</tbody>
</table>

Method of Assessment Detail:

Discussions 20%;
Reflections 20%;
Needs assessment 30%;
Evaluation plan including assessment tools 30%

Email: mwear1@jhmi.edu

Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail

This course is part of the JHSPH R3 Graduate Science Program

260.851.01 Laboratory Rotations
variable credits 4-8 - Course offered this year - East Baltimore

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Departmental Faculty
All departmental Sc.M. and doctoral students spend one and three terms, respectively, participating in the research activities of departmental faculty's laboratories. Students select appropriate rotations in consultation with their academic advisors and the departmental Graduate Program Committee.

Upon successfully completing this course, students will be able to:
1. To broaden a student's knowledge of laboratory techniques and skills
2. To provide exposure to a variety of research areas
3. To provide the opportunity for interaction with several faculty members, so that a thesis laboratory may be identified
4. To develop the ability to carry out a research project

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

260.895.01 MPH Practicum: Mmi
variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - East Baltimore

Departmental Faculty
The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:
1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

Online Programs for Applied Learning

600.709.86 Statistical Concepts In Public Health 1
3 credits - Course offered this year - Internet
McGready, John

Provides students with a broad overview of Biostatistical methods and concepts used in the public health sciences. Emphasizes the interpretation and conceptual foundations of statistical estimation and inference. Covers summary measures, measures of association, confidence intervals, p-values, and statistical power.

Upon successfully completing this course, students will be able to:
1. Provide examples of different types of data arising in public health studies
2. Suggest and interpret appropriate numerical and visual measures to summarize data for a given data type and study design
3. Calculate standard normal scores and resulting probabilities
4. Distinguish between variability individual study observations and variability in sample summary measures across multiple studies of individual observations
5. Calculate and interpret confidence intervals for single population measures (means, proportions, incidence rated) and for measure of association comparing two populations (differences in means, differences in proportions, relative risk, odds ratio, incidence rate ratio)
6. Interpret p-values from hypothesis tests, and connect these results to the corresponding confidence intervals
7. Explain the factors that determine the statistical power of a study designed to compare two or more populations

Email: jmcgrea1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in OPAL degree and certificate programs
Grading Options: Letter Grade or Pass/Fail
Course is an offspring of 140.611

600.711.86 Public Health Statistics I
4 credits - Course offered this year - Internet
McGready, John
Provides students with a broad overview of Biostatistical methods and concepts used in the public health sciences. Emphasizes the interpretation and conceptual foundations of statistical estimation and inference. Covers summary measures, measures of association, confidence intervals, p-values, and statistical power. The software package R is incorporated into the course learning experiences, and students will use R for a portion of each of the four class homework assignments.

Upon successfully completing this course, students will be able to:

1. Calculate standard normal scores and resulting probabilities
2. Suggest and interpret appropriate numerical and visual measures to summarize data for a given data type and study design
3. Distinguish between variability of individual study observations and variability in sample summary measures across multiple studies of individual observations
4. Calculate and interpret confidence intervals for single population measures (e.g., means, proportions, incidence rates) and for measures of association comparing two populations (e.g., differences in means, differences in proportions, relative risk, odds ratio, incidence rate ratio)
5. Interpret p-values from hypothesis tests, and connect these results to the corresponding confidence intervals
6. Explain the factors that determine the statistical power of a study designed to compare two or more populations
7. Use the R package to create graphics (histograms and boxplots), translate normal scores into probabilities, compute sample summary statistics, create 95% confidence intervals for population based quantities, and get p-values for various hypothesis tests.

Email: jmcgrea1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students enrolled in MAS in Spatial Analysis for Public Health
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

601.734.86 Spatial Applications
4 credits - Course offered this year - Internet
Curriero, Frank; Shields, Timothy
Focuses on further developing and integrating components of the spatial science paradigm: Spatial Data, GIS and Spatial Statistics. Provides an opportunity for students to gain a working knowledge of resources for conducting spatial analysis (e.g., literature, software, and data). Expands students’ abilities to design and conduct spatial analysis by providing data for reproduction, and in some cases, extension of analyses from existing studies.

Upon successfully completing this course, students will be able to:

1. Integrate spatial information and spatial analysis into public health research and practice
2. Frame a scientific question and/or hypothesis about spatial relationships into the appropriate spatial statistical methodology, the results and interpretations of which represent quantities of scientific interest
3. Identify appropriate resources (literature, software, data) for conducting spatial analysis
4. Complete a spatial analysis (including methods, results and interpretation) that addresses each component of the spatial science paradigm

Email: fcurriero@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students enrolled in the MAS in Spatial Analysis Program
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Spatial Data Technologies for Mapping (601.732.86) and Applied Spatial Statistics (601.733.86)

601.880.86 Spatial Analysis Integrative Activity
4 credits - Course offered this year - Internet
Curriero, Frank; Shields, Timothy
This course will involve the research, analysis and writing of a complete and independent spatial analysis project. Intermediate outlines, hypotheses and objectives produced in previous classes will be finalized. No new material will be covered. The finalized project will follow journal article format including an abstract, and introduction/background, methods, results and conclusion sections. The final project will represent an integrated and synthesized assessment of the spatial science paradigm (Spatial Data, GIS, Spatial Statistics) applied to a relevant public health problem.

Upon successfully completing this course, students will be able to:

1. Formulate a set of hypotheses and objectives for investigating spatial characteristics for a relevant public health problem
2. Conduct an independent spatial analysis including all components of the spatial science paradigm; spatial data, GIS and spatial statistics

3. Summarize background material including literature citations for a relevant public health problem

Email: fcurriero@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to OPAL MAS in Spatial Analysis for Public Health students

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 601.733.86 Applied Spatial Statistics, 601.732.86 Spatial Data Technologies for Mapping, 600.712.86 Public Health Statistics 2, 601.702.86 Intermediate Epidemiology, 601.931.86 Spatial Analysis Lab 1, 601.932.86 Spatial Analysis Lab 2

601.931.86 Spatial Analysis Lab 1

2 credits - Course offered this year - Internet

Shields, Timothy

Expands on GIS concepts and skills previously learned with more hands-on practice with epidemiological applications. Focuses on translating an epidemiological problem or getting into a set of spatial objectives that align with our spatial science paradigm. Surveys and summarizes the literature on spatial applications in public health. Prepares students to design a protocol to help identify a public health problem and accompanying data for their MAS Integrative Activity.

Upon successfully completing this course, students will be able to:

1. Perform a GIS based analysis appropriate for investigating a specific epidemiological research question
2. Communicate the limitations of a GIS based analysis in both epidemiological and biostatistical terms
3. Summarize the literature to gain an understanding of the wide-ranging use of spatial science in public health applications
4. Design a protocol for identifying potential projects to be used for their MAS Integrative Activity

Email: tshields@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to students enrolled in the MAS in Spatial Analysis Program

Grading Options: Pass/Fail

Prerequisite: Spatial Analysis for Public Health (601.731.86), Spatial Data Technologies for Mapping (601.732.86), Introduction to Epidemiology (600.701.86). Prior or concurrent enrollment in Public Health Statistics 1 (600.711.86).

602.691.86 Managing Health Across The Continuum: Contemporary Models And Applications Of Care Coordination And Management

3 credits - Course offered this year - Internet

Davison, Ashwini

Performs in-depth explorations of a variety of contemporary models for care coordination and management. It encourages students to evaluate different strategies for identifying modifiable risks, aligning appropriate services, and integrating non-clinical partners in improving the health of populations. Also introduces students to the newest standards in the population health management category of Health Plan Accreditation.

Upon successfully completing this course, students will be able to:

1. Provide examples of modern approaches to care coordination that extend the continuum beyond the healthcare system and into the community
2. Describe the role of non-clinical partners in addressing the needs of vulnerable populations and underserved communities
3. Evaluate contemporary care management models and their strategies for identifying populations with modifiable risks, aligning services to the needs of the population, and integrating the various services
4. Interpret data from a variety of sources to identify populations of interest and to recommend appropriate community-oriented care pathways
5. Develop strategies for meeting standards in NCQA’s new population health management category of Health Plan Accreditation

Email: ashdavison@jhmi.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to OPAL MAS in Population Health Management students and Certificate in Population Health Management students

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 183 of 202
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

**602.880.86 Population Health Management Integrative Activity**

4 credits - Course offered this year - Internet
Bittle, Mark; Ellis, John

This course will involve the research, analysis, and writing of a complete and independent population health management strategy. This activity requires students to draw upon the relevant evidence-based concepts of population health and population health management provided through the curriculum. No new material will be covered. The finalized project will be in the format of a consulting report to senior leadership and contain an executive summary in addition to, introduction, background, assessment and analysis, findings, and recommendation sections. The final project paper will represent an integrated and synthesized assessment of population health management paradigm of Know-Engage-Manage as applied to a defined community.

Upon successfully completing this course, students will be able to:

1. Establish goals and objectives for improving health outcomes that incorporate an understanding of the social determinants of health and the socioeconomic environment in which the organization functions
2. Construct a multi-sector collaboration of key provider, community-based organizations, and other relevant sectors, based on identified population health needs, quality and cost of care for individuals and populations
3. Recommend an evidence-based population health management strategy to reduce burden of illness and related impact (e.g. costs, avoidable utilization, productivity or other population health level measure(s)
4. Propose an implementation and evaluation plan using feasible and valid measures

Email: mbittle1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in MAS in Population Health Management
Grading Options: Letter Grade or Pass/Fail
Prerequisite: Must have completed all 1st year courses to enroll in this course.
Enrollment requires Advisor's Permission.

Learning Materials:
- (Dept. Material) Population Health Management Standardized Case
  
  $0.00
  
  Comment: This is the case the students must use to complete the integrated activity

**603.721.86 Leadership For Change And Patient Safety And Quality Improvement**

3 credits - Course offered this year - Internet
Rosen, Michael

Describes, demonstrates and builds competence in leadership to support organizational quality and safety, and support transformational change. Explores organizational theory and frameworks for leadership and management. Explains the importance of vision, mission, and strategies for organizations. Describes organizational culture and articulates the role of exploring values and creating a shared vision in developing a culture of patient safety. Explains the roles of top managers, technical leaders and unit managers in safety improvement. Demonstrates the use of analytics in leading and management safety and quality improvement. Describes practices to engage leaders and staff to improve patient safety. Introduces topics including conflict management, negotiation, transparency, managing transitions, and innovation in health care.

Upon successfully completing this course, students will be able to:

1. Describe change management processes, tools, and common barriers and facilitators to change in patient safety and quality improvement
2. Explain the role of leaders across the organization in patient safety and quality, and specific leadership behaviors for engaging and motivating key stakeholders
3. Assess components of management systems for patient safety and quality and describe how they impact an organization’s ability to change, learn, adapt, and improve performance
4. Critique approaches to building patient safety culture, just culture, and the habits of high reliability organizing

Method of Assessment Percentage
1. Participation 15
2. Discussion Board 15
3. Quizzes 30
4. Final Paper 40

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 184 of 202
Email: mrosen44@jhmi.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to OPAL MAS Patient Safety and Healthcare Quality students
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 603.711.86 Science of Patient Safety

603.880.86 Patient Safety And Healthcare Quality Integrative Activity
4 credits - Course offered this year - Internet
Engineer, Lilly
This course will involve the research, analysis and writing of a complete and independent quality and patient safety improvement project. Concepts around the science of quality of medical care, patient safety and measurement will be heavily utilized. No new material will be covered. The finalized project will follow journal article format including an abstract, introduction/background, Literature review, methods, results and conclusion sections. The final project paper will represent an integrated and synthesized assessment of the quality and patient safety paradigm (Q&PS problem—Evidence—Intervention—assessment) applied to a relevant setting within the healthcare delivery process.

Upon successfully completing this course, students will be able to:
1 Identify and describe the magnitude of a quality and / or patient safety problem in a specific healthcare setting
2 Formulate contributing and mitigating factors factors for investigating a quality and patient safety problem
3 Conduct a literature review to highlight evidence related key contributing and mitigating factors for the identified quality and patient safety problem
4 Propose intervention to address the problem
5 Propose an implementation and evaluation plan using feasible and valid measures
6 Synthesize and summarize the whole journey from problem identification to proposed solution in a well written scientific paper format

Email: lenginee@jhsph.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in MAS in Patient Safety and Healthcare Quality
Grading Options: Letter Grade or Pass/Fail

603.931.86 Measurement Lab In Quality & Safety
2 credits - Course offered this year - Internet
Austin, Matthew
Familiarizes students with different data sources and measurement methods to assess health care quality and patient safety. Data sources include both secondary data, including from administrative claims, medical records, and malpractice claims, and primary data including from cohorts, surveys, direct observation and clinical monitoring. Introduces different methods to measure structure, process and outcome, including both quantitative and qualitative data. Describes methods to analyze these data including techniques related to risk adjustment.

Upon successfully completing this course, students will be able to:
1 Identify common data sources that are used to assess health care quality and patient safety
2 Explain the advantages and disadvantages of different data sources in assessing health care quality and patient safety
3 Recognize when quantitative data or qualitative data may be most appropriate for assessing quality and safety
4 Analyze previously collected patient outcome data applying risk adjustment techniques and stratification
5 Evaluate the performance measures that acute care clinical departments are using for measuring the impact of quality improvement projects on the quality and safety of patient care
6 Propose a set of specified performance measures that can be used in the program’s Integrative Activity for assessing the impact of their own quality improvement project

Email: jmaustin@jhmi.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in MAS in Patient Safety and Healthcare Quality
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 603.731 Measurement and Evaluation in Quality and Safety

604.771.86 Social & Cultural Basis For Community And Primary Health Programs
3 credits - Course offered this year - Internet

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsp.edu/courses - Page 185 of 202
Brieger, William

Introduces students to the social and cultural aspects of global health programming at community, organizational, and policy levels. Utilizes social and behavioral theories to understand change processes and health program implementation with a particular focus on low- and middle-income countries, and underserved populations. Identifies the factors that promote and inhibit community involvement in PHC program development and implementation. Provides a foundation for planning appropriate Primary Health Care (PHC) programs.

Upon successfully completing this course, students will be able to:

1. Outline the contributions of social and behavioral science theory in the planning and implementation of PHC programs
2. Apply relevant social and behavioral theories to diagnose and discuss individual, social network, organizational, community, and policy-maker behaviors associated with the planning, implementation, evaluation, and maintenance of community-based programs
3. Identify the factors that promote and inhibit community involvement in PHC program development and implementation, and outline indigenous management strategies to sustain PHC at the community level

Email: wbriege1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Only students in MAS students in Humanitarian Health, GHPM, Community-based PHCPGH, Pop Health Mgmt, and Certificate in GHP allowed

Grading Options: Letter Grade or Pass/Fail

604.880.86 Humanitarian Health Integrative Activity

4 credits - Course offered this year - Internet

Robinson, Courtland; Spiegel, Paul

Requires students to synthesize knowledge and skills in humanitarian health on a project topic that demonstrates mastery program competencies. Completes a project on a selected aspect of humanitarian health, using one of a variety of formats including: 1) literature review; 2) program/operational plan; 3) program evaluation; 4) policy analysis; 5) research proposal; or 6) research report using data from a de-identified public data set. Results presented in the form of a final paper and an oral presentation.

Upon successfully completing this course, students will be able to:

1. Demonstrate mastery of core knowledge and skills in humanitarian health through completion of a final project activity
2. Identify a topic in humanitarian health and produce a written report using a variety of formats relevant to the field
3. Develop materials for an oral presentation on a chosen topic in humanitarian health and make a presentation via video-recording or live presentation

Method of Assessment

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<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>20</td>
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<tr>
<td>Presentation(s)</td>
<td>20</td>
</tr>
<tr>
<td>Final Paper</td>
<td>60</td>
</tr>
</tbody>
</table>

Method of Assessment Detail:

Project/Paper Outline: 20%, Final Paper: 60%, Oral Presentation: 20%

Email: court.robinson@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to MAS in Humanitarian Health students

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 604.601.86 Public Health in Humanitarian Emergencies

605.745.86 Qualitative Methods For Tobacco Control

3 credits - Course offered this year - Internet

Lagasse, Lisa

• Reviews the methods and rationale for incorporating qualitative approaches into tobacco control research.
• Explores the main principles of qualitative research and consider how these principles shape the questions to which qualitative methods can best be applied in tobacco control research.
• Introduces applied research techniques used in tobacco control, including observational studies, focus group discussion, in-depth interviews, and documents analysis.
• Describes techniques to analyze qualitative data collection and disseminate findings.
Upon successfully completing this course, students will be able to:

1. Describe the main qualitative data collection and analytic approaches used in tobacco control research, and articulate the relative appropriateness of each given a particular research question
2. Identify the strengths and weaknesses of adopting a qualitative approach to addressing a particular research question
3. Practice applying qualitative methods to specific questions relevant to tobacco control research
4. Demonstrate competence in writing about qualitative methods, analysis, and findings

Email: lprokop1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in OPAL Certificate in Global Tobacco Control
Grading Options: Letter Grade or Pass/Fail

605.751.86 Implementation: Making Change Happen In Tobacco Control
3 credits - Course offered this year - Internet
Cohen, Joanna; Hoe, Connie

Provides an introduction to implementation science in the context of tobacco control. Identifies the challenges associated with tobacco control policy/program implementation and highlights how implementation science can address them. Discusses commonly used implementation frameworks and emphasizes implementation determinants, strategies, and outcomes that may help guide implementation efforts. Examines key implementation topics in the context of tobacco control including industry interference, enforcement and compliance.

Upon successfully completing this course, students will be able to:

1. Develop an understanding of implementation determinants, strategies, and outcomes that can help guide implementation efforts
2. Determine the barriers and challenges that arise when implementing tobacco control policies/programs
3. Apply common implementation frameworks to analyze tobacco control policy/program implementation issues
4. Explain the relationships between implementation and industry interference, enforcement, and compliance in the context of tobacco control
5. Identify issues regarding the scaling up and sustainability of tobacco control programs
6. Develop and tailor courses of action to successfully implement an intervention

Email: jcohen@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in OPAL Certificate in Global Tobacco Control
Grading Options: Letter Grade or Pass/Fail

607.751.86 Building Community Capacity For Primary Health Care In Low And Middle-Income Countries
3 credits - Course offered this year - Internet
Koffi, Alain; Schleiff, Meike

This course, coming near the end of the MAS in Community Based PHC, reinforces an understanding of the origins and recent advances in community-oriented PHC through case studies from low- and middle-income countries. Focuses on problem-solving skills in practical situations by connecting case experiences with the contexts where students are working or will work in the future. Examines strategies and frameworks to assess and enhance community-based approaches to building community capacity. Explores current events and emerging opportunities and challenges for community based PHC.

Upon successfully completing this course, students will be able to:

1. Describe frameworks and their application in analyzing and strengthening participation in community based PHC
2. Outline practical methods of promoting participatory activities in communities, drawing from case examples
3. Explain practical techniques for developing partnerships to improve community based primary health care
4. Describe concepts of equity, sustainability, scaling up, community empowerment, and challenges in promoting changes in behaviors and social norms

Method of Assessment

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<tr>
<th>Method of Assessment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Assignments</td>
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<tr>
<td>Discussion Board</td>
<td>30</td>
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<tr>
<td>Final Paper</td>
<td>40</td>
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</table>

Method of Assessment Detail:

Email: alainkoffi@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Restricted to students in OPAL Certificate in Global Tobacco Control
Grading Options: Letter Grade or Pass/Fail
The methods of evaluation of students will comprise of case summaries and reflections (30%), participation in discussion fora (original posts and engagement with peers) and LiveTalks (30%) and a final written project, which will include two structured parts over the course of the term (40%).

Email: akoffi1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to students in MAS in Community-based Primary Health Care Programs in Global Health

Grading Options: Letter Grade or Pass/Fail

607.880.86 Integrative Activity In Community-Based Primary Health Care

4 credits - Course offered this year - Internet

Brieger, William

This course will enable the learner to apply skills obtained through the coursework in the MAS in Community-Based Primary Health Care to design or update a community based PHC program in a real life community. Learners will select a community where they have lived or worked and obtain data and reports to analyze the social, cultural, epidemiological and demographic profile of the community and use this information to design strategies that involvement community members in improving their health. Learners will draw on previous course materials and independent desk review to produce a program strategy/plan document that includes human and material resource development and an evaluation component.

Upon successfully completing this course, students will be able to:

1. Use community-based approaches to address priority health problems through full participation of community members and groups
2. Conduct desk reviews and design household surveys that could yield relevant health and social data needed to plan community based PHC programs
3. Analyze local contexts and project implementation designs in order to develop evaluation plans that can be practically applied to community based PHC programs in middle and low-resource settings
4. Design (or update) a community based primary health care program from the analysis through implementation to evaluation stages

Method of Assessment

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<th>Percentage</th>
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<tbody>
<tr>
<td>1. Assignments 10</td>
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<td>3. Assignments 10</td>
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<td>4. Assignments 10</td>
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<tr>
<td>5. Assignments 10</td>
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<tr>
<td>6. Final Project 50</td>
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</table>

Method of Assessment Detail:

Assignment 1: description of community and health/development issues for 10%
Assignment 2: Desk Review and Analysis of social, cultural, epidemiological and demographic data for 10%
Assignment 3: Program Priorities and Objectives for 10%
Assignment 4: Description of Community Involvement Approach and overall strategies for 10%
Assignment 5: Evaluation Plan for 10%
Final Project: Complete community-based PHC plan submitted for 50%

Email: wbriege1@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to students in MAS in Community-based Primary Health Care Program in Global Health

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Students are expected to have completed all "Year 1" and "Year 2" OPAL MAS Community Based PHC courses except that they will be concurrently taking 607.751.86 in their final term.

608.771.86 Non-Governmental Organizations And The Administration Of Global Health Programs

3 credits - Course offered this year - Internet

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 188 of 202
Roberton, Timothy

Students will describe the practical challenges and philosophical dilemmas faced by NGOs operating in low- and middle-income countries, and basic concepts in the administration of global health programs. Simulation exercises will allow students to experience and analyze real-world scenarios faced by NGO managers and leaders. The first half of the course will focus on the role of NGOs in the health sector, situating a manager’s responsibilities in the broader context of the development and humanitarian environment. The second half will focus on the internal workings of an NGO and the day-to-day challenges of managing strategy, finances, human resources, and accountability.

Upon successfully completing this course, students will be able to:

1. Describe the practical challenges and philosophical dilemmas faced by NGOs operating in low- and middle-income countries
2. Explain basic concepts in the administration of global health programs
3. Interpret and respond to real-world scenarios faced by NGO managers and leaders
4. Analyze issues of organizational strategy, financing, human resources, and accountability for NGOs operating in the health sector

Method of Assessment

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<thead>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Midterm</td>
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<tr>
<td>Group Work</td>
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<tr>
<td>Final Paper</td>
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</tbody>
</table>

Method of Assessment Detail:

Mid-term exam: 35%, Group-based, role-playing scenarios: 25%, Final written assignment: 40%

Email: timroberton@jhu.edu

Application:
Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Restricted to students enrolled in MAS in Global Health Planning and Management

Grading Options: Letter Grade or Pass/Fail

608.880.86 Integrative Activity In Global Health Planning And Management

4 credits - Course offered this year - Internet

Brieger, William

This course will enable the learner to apply skills obtained through the coursework in the MAS in Global Health Planning and management to identify and address an organizational problem or need in a real life organization that focuses on underserved people in a global health setting. Learners will select an organization where they have worked and obtain data and reports to analyze the environmental, structural, human, technical and policy characteristics of the organization and use this information to design strategies for improving organizational functioning. Learners will draw on previous course materials and independent desk review to produce a program strategy/plan document that includes human and material resource strengthening and an evaluation component.

Upon successfully completing this course, students will be able to:

1. Use a systems approach to diagnose an organizational problem or challenge highlighting human, technical, policy, environmental and structural characteristics of an organization
2. Develop a plan to improve organizational functioning based on the problem diagnosis
3. Suggest and evaluation framework to monitor success and challenges in implementing an organizational change plan

Method of Assessment

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<td>Assignments</td>
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<td>Assignments</td>
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<tr>
<td>Assignments</td>
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<tr>
<td>Final Project</td>
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Method of Assessment Detail:
Population, Family and Reproductive Health

380.612.01 Applications In Program Monitoring And Evaluation
4 credits - Course offered this year - East Baltimore

West, Allison

Builds on Course 380.611, Fundamentals of Program Evaluation, and includes a service learning component. The Fundamentals course prepared students to explain major concepts in program evaluation and write a basic evaluation plan. Applications introduces advanced evaluation methods using concrete illustrations and allows an opportunity to apply skills in real world evaluations of public health initiatives. Working in small groups, students design an evaluation plan for a specific community-based public health program in Baltimore. Emphasizes stakeholder engagement to address challenges and promote the usefulness of results. Class sessions integrate lectures with case studies, experiential learning activities, and reflection.

Upon successfully completing this course, students will be able to:

1. Explain strategic approaches, methods and principles in applied program evaluation
2. Explain the aims and uses of evaluation from the perspective of a local community-based organization
3. Demonstrate skill in critiquing evaluation designs and published studies
4. Demonstrate skill in designing a rigorous and useful evaluation plan
5. Demonstrate skill in communicating evaluation plans in writing and in oral presentation
6. Select methods to evaluate public health programs

Method of Assessment

<table>
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<tr>
<th>Method</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>1. Presentation(s)</td>
<td>55</td>
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<tr>
<td>2. Assignments</td>
<td>45</td>
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</table>

Email: awest25@jhu.edu

Lecture: T TH 3:30 PM - 5:20 PM

Enrollment: Minimum 10, Maximum 18, Waitlist Enabled: Yes

Grading Options: Letter Grade or Pass/Fail

Prerequisite: 380.611

Includes a service learning component. Each student will be assigned to work in a small group to assist a local community based organization (CBO) with evaluation needs. Students will meet with program directors and staff at the CBO at least twice during the term. The final assignment includes a written report and group presentation to the CBO during the final week of class. The nature of the assignment will vary slightly depending on the needs of the community-based organization to which you are assigned. Students will have the opportunity to rank their preferences for CBO assignments; most students receive their first or second choice. This course partially fulfills the MPH practicum requirement (50 hours).

Attendance will be mandatory for select dates throughout the term. Failure to attend will result in a reduction in the final grade.

380.616.01 Child Health Epidemiology (Cancelled - Minimum Not Met)

3 credits - Course offered this year - East Baltimore

Donohue, Pamela
Explores conditions and diseases that compromise children’s health from birth (congenital anomalies) through adolescence (violence/bullying). Presents methodological challenges to estimating the burden of disease, including the strengths and weaknesses of standardized outcome measures. Analyzes preventive strategies and treatment modalities considering the social context of disease. Encourages creative thinking about needed research and discusses the public health implication of childhood disease. Focuses on domestic health but presents data on the global burden of childhood conditions/diseases, when available.

Upon successfully completing this course, students will be able to:

1. Identify the current health conditions and diseases that threaten childhood well being
2. Explain methodological challenges in child health epidemiology and how they influence research findings
3. Critically review epidemiologic research concerning selected child health conditions
4. Apply epidemiologic considerations to clinical and public health practice
5. Explain effects of environmental factors on a population’s health

Email: pdonohu2@jhmi.edu
Lecture: T TH 9:00 AM - 10:20 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Consent required for some students; Consent required for undergraduate students.
Prerequisite: 340.601 Principles of Epidemiology

380.628.01 Public Health Perspectives On Abortion

3 credits - Course offered this year - East Baltimore
Departmental Faculty

Provide students with an overview of abortion practice in the United States and worldwide from a public health perspective. Lectures and readings enable students to critically evaluate current research, public health practice, and policy related to abortion, and to speak knowledgably and accurately on these issues.

Upon successfully completing this course, students will be able to:

1. Describe trends in abortion incidence, the sociodemographic characteristics of women who have abortions, the provision of abortion, and health consequences
2. Analyze current abortion legislation and regulations in the United States and internationally and their impact on women’s health
3. Critically review epidemiological research on abortion related health concerns
4. Align evidence with advocacy for policy or legal reform

Method of Assessment

<table>
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<th>Method of Assessment</th>
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<td>1. Participation</td>
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<td>2. Policy Brief</td>
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<tr>
<td>3. Debate Participation</td>
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</table>

Method of Assessment Detail:

- Class participation (10%)
- Article critique and associated paper (30%)
- Debate participation (30%)
- Policy brief (30%)

Lecture: M 1:30 PM - 4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

This course addresses a sensitive issue in Public Health. We therefore require that contact information about class instructors only be shared with students who are enrolled in the class. We also require that the class not be recorded to maintain student confidentiality during class discussions. This includes recording through the school, or by individual students on personal devices. Students will be asked to agree to this at the beginning of the first day of class.

380.635.01 Urban Health In Contemporary America (Cancelled - Department)

4 credits - Course offered this year - East Baltimore
Blum, Robert
Introduces students to the historical forces associated with the rise of the modern city and the fundamental characteristics of urban living in the U.S. Discusses the impact of the increase in urban settings on population health. Examines contexts of the urban environment that shape health including: the physical environment, housing, education, discrimination and racism, policing, and safety. Explores the complexity and diversity of the determinants of health among domestic urban populations.

Upon successfully completing this course, students will be able to:

1. Describe the historical forces that led to the rise of cities in the U.S. and the social and economic factors shaping contemporary urban crises
2. Develop and apply a framework for conceptualizing urban health, its components, and their interrelationships
3. Assess the relative importance of the characteristics of contemporary U.S. cities in shaping the health of their populations
4. Articulate the structural factors that lead to advantaged and disadvantaged populations in major urban centers in the U.S.
5. Explain and discuss controversies in urban health from multiple perspectives

Email: rblum@jhu.edu
Lecture: TH 3:30 PM - 5:20 PM
Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
No auditors
Grading Options: Letter Grade or Pass/Fail

There will be 6 lab sessions and while most will take place between 5:15 and 7 PM on Thursdays there will be a couple exceptions. The April 5 lab will take place from 3:30 to 5:15 (and class that day will be at noon to 1:30 in E9519). On April 26, the tour of housing segregation in Baltimore will take place from 3:30 to 5:15 (to take advantage of daylight) and class will follow. The same is true for the tour of Turner Station tour on May 3 (for the same reasons). These is no class May 3; however, on April 30 there is a special symposium all day and students will be expected to come to half of the sessions as their schedules allow.

**380.663.81 Gender-Based Violence Research, Practice And Policy: Issues And Current Controversies**

3 credits - Course offered this year - Internet
Decker, Michele

Explores gender-based violence (GBV), including intimate partner violence, sexual violence, and sex trafficking. Topics include the following as they relate to GBV: epidemiology, theoretical frameworks, structural risks and gender equity, policy, prevention and intervention, perpetrators, populations with unique needs, and health consequences spanning sexual and reproductive health, STI, and HIV. Prepares students to undertake meaningful scholarly, community-based, programmatic or policy work in the field. Emphasizes active learning and facilitates application of knowledge and skills gained to real world issues.

Upon successfully completing this course, students will be able to:

1. Describe the epidemiology and health impact of GBV
2. Apply public health methods, strategies and frameworks to GBV-related research, policy and practice
3. Develop and critique GBV research and prevention/intervention programs and policies
4. Articulate current controversies and challenges in GBV-related research, policy and practice
5. Explain ethical and methodological issues unique to GBV research
6. Describe the history of the field, including major research and policy advances

**Method of Assessment**

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<tr>
<th>Method</th>
<th>Percentage</th>
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<tr>
<td>2. Topic selection, outline</td>
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<tr>
<td>3. Final Paper preparation (</td>
<td>45</td>
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<tr>
<td>Epidemiologic data gathering,</td>
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<td>Intervention approaches and Unique</td>
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<td>aspects of population)</td>
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<tr>
<td>4. Final Paper</td>
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**Method of Assessment Detail:**
4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 193 of 202
4. Describe and apply an understanding of varying stakeholder’s perspectives on current and critical issues pertaining to women's health policy
5. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
6. Evaluate policies for their impact on public health and health equity

Email: cholliday@jhu.edu
Lecture: F 9:00 AM - 11:50 AM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: None.
Permission required for registration after the 1st week of add/drop.
Instructor consent required for undergraduate students.

380.668.01 International Perspectives On Women, Gender, And Health
3 credits - Course offered this year - East Baltimore
Heise, Lori
Examines the ways by which the study of gender informs the study of health in the developing world with a focus on women's health issues. Explores the ways in which gender and sex help us to understand women's health and explain societal patterns of health, disease and well-being. Topics include both reproductive and nonreproductive health issues including mental health and physical health.

Upon successfully completing this course, students will be able to:
1. Articulate and apply an understanding of how gender as a social system and biological sex shape women's health and well-being across the life-course
2. Evaluate the distinction between health differences and health disparities as they apply among and between women, men and gender diverse individuals
3. Identify through ethnographic observation and exploration of available evidence how settings and institutions can become “gendered” and how it affects lived experiences of women
4. Apply an intersectional lens to understand how power, advantage, disadvantage, and gender norms create and maintain health disparities among communities of women and between women and men

Email: lheise1@jhu.edu
Lecture: F 1:30 PM - 4:50 PM
Enrollment: Minimum 1, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail

380.697.01 Health And Wellbeing Of The Urban Poor: Labor Markets, Safety Nets, And The Criminal Justice System (Discontinued)
3 credits - Course offered this year - East Baltimore
Edin, Kathy
Examines the causes and consequences of U.S. urban poverty, its implications for health and wellbeing, and explores strategies for addressing it. Covers the major theoretical explanations scholars have advanced to explain the persistence of urban poverty in the U.S. including labor markets, residential segregation, welfare policy, family structure, and the criminal justice system. Discusses consequences, particularly related to health and wellbeing of the urban poor. Within each topic area, introduces students to a range of interventions aimed at alleviating urban poverty.

Upon successfully completing this course, students will be able to:
1. Explain how characteristics of the American labor market contribute to poverty in the country, and how those same characteristics directly affect the health and wellbeing of the urban poor
2. Describe the history and present of the American social safety net, especially as it is utilized in urban areas
3. Relate the social safety net to health and wellbeing disparities in America
4. Explain the impact of the criminal justice system on health and wellbeing of urban communities
5. Engage in high-level peer-led discourse about issues of market and governmental responses to poverty
6. Produce a written policy analysis, including background research on health implications of poverty and a proposal for intervention
7. Deliver a professional-level expert briefing on an issue of urban poverty and health disparities
Email: kedin1@jhu.edu
Lecture: M 9:00 AM - 12:00 PM
Enrollment: Minimum 10, Maximum 15, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite: None
This course is paired with 380.696, Health and Wellbeing of the Urban Poor: Parents, Families and the Urban Context. Students may take either course or both.

380.712.01 Methods In Analysis Of Large Population Surveys
3 credits - Course offered this year - East Baltimore
Ahmed, Saifuddin
Introduces the practical aspects of design and analysis of large sample surveys. Covers statistical issues of complex surveys involving stratification and clustering, methods of handling missing data, weighting, sample size estimation and allocation, design-based analysis of frequency tables and multivariate methods for complex surveys. Emphasizes applied, rather than theoretical derivation.
Upon successfully completing this course, students will be able to:
1. Take survey design into consideration during analysis and perform design-based analyses of data from complex surveys, such as multistage national surveys
2. Estimate variances with Taylor linearizations, jackknife, and bootstrapping methods in univariate and multivariate statistics
3. Explain advantages and disadvantages and apply design weights
4. Examine data missingness patterns and use appropriate imputation methods for missing data
5. Compare and contrast design-based analyses to multilevel and marginal models for addressing intraclass correlation and design-effects

Email: sahmed3@jhu.edu
Lecture: M 3:30 PM - 5:20 PM
Labs: W 3:30 PM-4:20 PM
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: 140.640 or consent of instructor
Jointly offered with Biostatistics

380.725.01 The Social Context Of Adolescent Health And Development
3 credits - Course offered this year - East Baltimore
Powell, Terri
Recognizes the social ecological model, social determinants of health framework and the life course perspective as tools to understand adolescent health. Explores the influences of contexts, such as the families and neighborhoods, on adolescent health and well-being. Examines empirical work to consider the role of context in prevention and interventions aimed at adolescents. Integrates service-learning opportunities with traditional learning pedagogies to address adolescent health.
Upon successfully completing this course, students will be able to:
1. Identify the social determinants of adolescent health and development
2. Explain the role of contextual factors in shaping adolescent health and development
3. Demonstrate effective communication and presentation skills with diverse audiences
4. Collaborate with high school youth to develop case studies based on issues relevant to Baltimore adolescents
5. Integrate contextual factors into health promotion strategies for adolescents

Email: terri.powell@jhu.edu
Lecture: M 1:30 PM - 4:20 PM
Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Masters, Doctoral and Adolescent Health Certificate students only
Grading Options: Letter Grade or Pass/Fail
Prerequisite:
Students will team up with high school students from Paul Laurence Dunbar High School to develop Baltimore-based case studies focused on an adolescent health topic. Dunbar students are seniors enrolled in a Public Health Ethics course. Students will be required to meet their high school team mates at Dunbar FOUR times throughout the term (mornings 8a-9:30a). Students will be responsible for transportation. Dunbar is located at 1400 Orleans St (slightly west of campus at the corner of Orleans and Caroline).

380.747.81 International Adolescent Health

Bose, Krishna

Focuses on the major health issues that affect adolescents and the effective interventions/policies to address these issues in the developing world. Explores the meaning and health of adolescence from various contexts around the world through lectures, readings, video clips, panels, and discussions.

Upon successfully completing this course, students will be able to:

1. Define the meaning of adolescence and critically discuss ‘adolescence’ from the context of various world regions and particularly Africa and The Americas
2. Identify the major health and development issues affecting adolescents throughout the globe, with a particular focus on sexual and reproductive health issues and the vulnerability of Urban youth populations; the burden of mental health problems; the importance of Meaningful Youth Engagement for healthy development; how the important role of Males is neglected and can be fostered and finally how the digital frontier is being addressed for this “savvy” generation
3. Describe different types of intervention strategies for selected adolescent health issues and their potential impact in various cultural contexts

Method of Assessment

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<th>Percentage</th>
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<tr>
<td>Participation</td>
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<tr>
<td>Midterm Paper</td>
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<td>Final Paper</td>
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Email: kbose3@jhu.edu

Enrollment: Minimum 10, Maximum 50, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

380.749.01 Adolescent Sexual And Reproductive Health

Trent, Maria; Burke, Anne; Trent, Maria

Explores key topics in adolescent sexual and reproductive health (ASRH). Topics range from the impact of adolescent physical, sexual, and social development on sexual risk-taking behavior to policy and ethical issues influencing adolescent sexual health outcomes. Using a public health framework, important clinical topics such as contraception, teen pregnancy, abortion, and sexually transmitted infections are discussed from a domestic and global perspective.

Upon successfully completing this course, students will be able to:

1. Identify a range of issues important to adolescent sexual and reproductive health
2. Understand key policy topics pertinent to adolescent sexual and reproductive health

Email: mtrent@jhsph.edu
Lecture: TH 9:00 AM - 11:50 AM
Enrollment: Minimum 10, Maximum 25, Waitlist Enabled: Yes
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

380.758.81 Demographic Estimation For Developing Countries (Cancelled - Department)

Helleringer, Stephane

Introduces students to defects or deficiencies often experienced in demographic data for developing countries, and how to quantify the magnitude of errors. Describes approaches to data adjustment, with emphasizing the underlying theory and modeling. Also describes unconventional or indirect methods for estimating basic demographic parameters from robust indicators. Heavily emphasizes practical applications and quantitative calculations.

Upon successfully completing this course, students will be able to:

1. Describe errors typical of demographic data for developing countries
Evaluate data errors and adjust for them

3 Explain methods to estimate fertility, mortality and migration from deficient or defective data

4 Select appropriate methodologies

5 Apply appropriate methods

Email: sheller7@jhu.edu

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Introduction to Online Learning and 380.603 Demographic Methods for Public Health (online or on site) or its equivalent

**380.761.81 Sexually Transmitted Infections In Public Health Practice**

4 credits - Course offered this year - Internet

Rompalo, Anne

Provides a comprehensive and current synthesis of sexually transmitted infections (STIs) in the United States and globally. Examines biologic, behavioral, social, and epidemiologic aspects of sexually transmitted infections (STIs). Focuses, throughout the course, on the diverse factors that contribute to STI prevention and control. Discusses how biologic and behavioral factors influence preventability and control of STIs. Introduces a number of STI prevention and control interventions with an emphasis on evaluation of these interventions. Data-focused and driven by current research study findings and surveillance data. Particularly focuses on considering strengths and weakness of various data sources and study designs and on thinking critically about what's going on 'behind the numbers.'

Upon successfully completing this course, students will be able to:

1. Describe the clinical aspects of common STIs including their sequelae

2. Define the epidemiology of selected STIs

3. Explain the theoretical and practical issues related to the design and implementation of STI control intervention

4. Describe the impact of laboratory-based versus syndromic based management strategies on the epidemiology, prevention and control of STIs

5. Describe the economic, social, and political issues influencing development and implementation of STI control programs and supporting policies

6. Demonstrate competence in the development and delivery of a STI-related policy options paper and briefing for decision making by a policy maker (a presentation illustrating the integration of clinical and public health evidence based discuss for policy

Email: arompalo@jhmi.edu

Enrollment: Minimum 16, Maximum 40, Waitlist Enabled: Yes

Grading Options: Letter Grade or Pass/Fail

Prerequisite: Introduction to Online Learning; Principles of Epidemiology (340.601 or equivalent) Public Health Biology 550.630 or equivalent which may include professional experience.

Jointly offered with EPI

Live Talk Session attendance is required as sessions are used for group discussion and student presentations.

**380.762.81 HIV Infection In Women, Children, And Adolescents**

4 credits - Course offered this year - Internet

Brahmbhatt, Heena

Presents the epidemiology of AIDS and HIV infection, risk factors, and social context for women, children, and adolescents, demonstrating how the epidemic in these three populations are linked biologically, epidemically, socially, and politically. Discusses prevention issues, the theoretical bases of prevention programs, and programatic and policy issues. Emphasizes the epidemiological and behavioral factors that have shaped the current epidemic of HIV infection. Expert guest speakers present their work.

Upon successfully completing this course, students will be able to:

1. Discuss distribution and determinants of HIV/AIDS infection among pediatric, adolescent, and female populations

2. Explain some issues in the clinical practice of HIV/AIDS medicine among pediatric, adolescent, and female populations

3. Describe issues unique to HIV-infected females, such as childbearing, breastfeeding, and domestic violence
Email: hbrahmb1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite:

380.765.81 Preventing Infant Mortality And Promoting The Health Of Women, Infants And Children
3 credits - Course offered this year - Internet
Matone, Meredith
Focuses on the historical problems and interventions associated with infant mortality. Describes the scientific basis for maternal and infant mortality. Analyzes causes and consequences in a population and development of a programmatic and policy approach.
Upon successfully completing this course, students will be able to:
1. Describe the scientific basis for infant mortality
2. Discuss the epidemiology of infant health outcomes
3. Analyze the causes and consequences of high infant mortality in a population
4. Develop and critically appraise programmatic approaches and policies to reduce infant mortality rates in a population

Email: mmatone1@jhu.edu
Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Letter Grade or Pass/Fail
Prerequisite: An introductory course in epidemiology is suggested. Knowledge of statistics and familiarity with research methods is also recommended.

380.771.01 Understanding And Changing International Reproductive Health Policy
3 credits - Course offered this year - East Baltimore
Gillespie, Duff; Fredrick, Beth
Introduces students to policy analysis and issues in reproductive health, especially international family planning. Students learn how to analyze policymaking processes and ways to influence these processes through evidence-based advocacy. Case studies are used to analyze policies. Focuses on FP2020, the international partnership launched at the London Summit on Family Planning in 2012. The instructors present an "insider’s" perspective for most cases and will draw heavily on Advance Family Planning (AFP), a multi-country advocacy initiative. Training in the AFP SMART approach to advocacy is a core part of the course.
Upon successfully completing this course, students will be able to:
1. Discuss and analyze multiple dimensions (including the role of ethics and evidence) of the reproductive health policy making process of the U.S. government and other donors, the United Nations, and selected developing countries
2. Evaluate policies for their impact on public health and health equity through analysis of how reproductive health policies affect programmatic and budgetary decisions
3. Explain how reproductive health policies are different from other health and development policies
4. Identify and assess external factors that influence the reproductive health policymaking process and its implementation
5. Advocate for political, social, or economic policies and programs that will improve health in diverse populations through:
   a) development of a decision-maker focused advocacy objective and rationale, and request for action at national or subnational levels within developing countries;
   b) presentation of a rationale for maintaining or graduating foreign aid to a developing country family planning program;
   c) class discussion

Method of Assessment

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<td>1. Participation</td>
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<td>2. Written Assignment(s)</td>
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<tr>
<td>3. Report using the AFP SMART approach</td>
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Email: dgillesp@jhu.edu
Lecture: W 9:00 AM - 11:50 AM
Enrollment: Minimum 8, Maximum 20, Waitlist Enabled: Yes
No undergraduates
Grading Options: Letter Grade or Pass/Fail

380.800.01 MPH Capstone Population, Family And Reproductive Health

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 198 of 202
Departmental Faculty

The MPH Capstone is an opportunity for students to work on public health practice projects that are of particular interest to them. The goal is for students to apply the skills and competencies they have acquired to a public health problem that simulates a professional practice experience.

Upon successfully completing this course, students will be able to:

1. Synthesize, integrate and apply the skills and competencies they have acquired to a public health problem that approximates a professional practice experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail
Consent required for all students; Consent from the Capstone Supervisor is Required
Prerequisite: All other MPH core requirements must be taken before or concurrently with the capstone project.
Registration for this 2-credit course is required during the term that an MPH student completes the capstone project (e.g., 4th term for a full-time MPH student).

380.810.01 Field Placement In Population, Family And Reproductive Health
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

380.820.01 Thesis Research In Population, Family And Reproductive Health
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

380.821.01 PFRH Proposal Writing Seminar
2 credits - Course offered this year - East Baltimore
Hughes, M. E.

Focuses on development of dissertation project, writing dissertation proposal, and preparation for Department and Schoolwide Preliminary Exams. Explains dissertation expectations and requirements. Reviews dissertation proposal structure and components. Discusses evaluation of existing research, identification of gaps and topics, and design of research projects. Emphasizes clear communication of ideas. Provides opportunity to present work-in-progress and receive peer feedback. Introduces proposal assessment through review of peers' work. Provides forum to practice Preliminary Exam presentation including answering questions.

Upon successfully completing this course, students will be able to:

1. Demonstrate progress towards completion of a dissertation proposal and successfully completing the School-Wide Preliminary Examination.
2. Recognize and critically evaluate the elements of a research proposal.
3. Provide constructive feedback on research proposals.

Email: mehughes@jhu.edu
Lecture: T 12:00 PM - 1:20 PM

Enrollment: Minimum 1, No maximum enrollment required, Waitlist Enabled: No
PFRH Doctoral Students only.
Grading Options: Pass/Fail
Prerequisite: Must be PFRH Doctoral Student; must have completed second-year comprehensive exams.

380.822.01 PFRH First Year Doctoral Seminar Part 2
1 credits - Course offered this year - East Baltimore
Wang, Xiaobin
Fosters students’ critical and creative thinking skills to develop research questions in their areas of interest. Reviews research articles to demonstrate the critical link between research questions and appropriate research designs. Discusses forums for disseminating research findings. Introduces students to department, school, and community resources for conducting literature searches, developing research designs, funding research, and obtaining IRB approval. Demystifies the doctoral experience through discussion of pathways by recently graduated PFRH doctoral students.

Upon successfully completing this course, students will be able to:
1. Develop literature-informed research questions in their areas of specialization
2. Use critical and creative thinking skills to link scientific questions with appropriate research designs
3. Discuss strategies for obtaining and managing research funding
4. Evaluate different approaches used to communicate research findings
5. Identify resources to support their research within the department, school and Baltimore
6. Establish personal objectives for the doctoral program that reflect their research agenda and career aspirations

Method of Assessment

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<th>Method</th>
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<tr>
<td>Participation</td>
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<tr>
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<td>40</td>
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<td>Presentation(s)</td>
<td>20</td>
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<tr>
<td>Research question assignment</td>
<td>10</td>
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Enrollment: Minimum 3, No maximum enrollment required, Waitlist Enabled: No
Department of Population, Family and Reproductive Health 1st year doctoral students
Grading Options: Pass/Fail

380.830.01 Postdoctoral Research In Population, Family And Reproductive Health
variable credits - Course offered this year - East Baltimore

Information not required for this course type

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

380.840.01 Special Studies And Research Population, Family And Reproductive Health
variable credits 1-22 - Course offered this year - East Baltimore

Prepares students to identify and research the central issues in Population, Family and Reproductive Health.

Upon successfully completing this course, students will be able to:
1. Identify areas of interest for current and future research

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

380.870.01 PFRH Special Studies In Public Health Practice
variable credits Credits will vary according to scope of activity. The preceptor/advisor will determine the number of units. - Course offered this year - East Baltimore

Provides students with the opportunity to receive academic credit for direct involvement in public health practice activities such as: on-site placement with a public health agency, community organization, or academic center involving active participation in public health practice activities; Development of public health practice or policy recommendations based upon current research findings (translation); advocacy activities, for example, testifying in the legislature, and presenting data for the purpose of influencing public health policy or practice; preparation and conduct of a presentation related to a public health problem for a broad audience, including public health practitioners, community members, and other professionals; and direct participation in the activities of community boards or advisory groups.

Upon successfully completing this course, students will be able to:
1. Information not required for this course type
FOURTH TERM COURSE SCHEDULE 2019-2020 -- March 23 - May 15, 2020

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No
Grading Options: Pass/Fail

380.883.01 Lessons In Leadership: Applications For Population, Family And Reproductive Health IV
1 credits - Course offered this year - East Baltimore
Blum, Robert
Focuses on instruments and tools that assess leadership styles, strengths and weaknesses. Explores communication strategies used by effective leaders and interview public health leaders to identify how they approach their work. Opportunity to read studies in leadership.
Upon successfully completing this course, students will be able to:
1. Analyze the components of effective leadership strategies used by effective leaders
2. Explore their own leadership styles so as to identify personal strengths and limitations
3. Manage conflict and give effective feedback
4. Practice communication skills associated with leadership
5. Explain team dynamics and effectively use small work groups

Email: rblum@jhu.edu
Lecture: M 4:30 PM - 7:00 PM
Enrollment: Minimum 15, Maximum 45, Waitlist Enabled: Yes
Restricted to graduate students. Preference is given to second year graduate students.
Grading Options: Letter Grade or Pass/Fail
Multi-term with 380.880
Final grade applies to all terms
Credit is only earned by completing 380.880 through 380.883; Grades are issued after completion of the series. Students must enroll consecutively. Failure to enroll consecutively will result in a grade of W.

380.883.01 Lessons In Leadership: Applications For Population, Family And Reproductive Health IV
1 credits - Course offered this year - East Baltimore
Blum, Robert
Focuses on instruments and tools that assess leadership styles, strengths and weaknesses. Explores communication strategies used by effective leaders and interview public health leaders to identify how they approach their work. Opportunity to read studies in leadership.
Upon successfully completing this course, students will be able to:
1. Analyze the components of effective leadership strategies used by effective leaders
2. Explore their own leadership styles so as to identify personal strengths and limitations
3. Manage conflict and give effective feedback
4. Practice communication skills associated with leadership
5. Explain team dynamics and effectively use small work groups

Email: rblum@jhu.edu
Lecture: M 4:30 PM - 7:00 PM
Enrollment: Minimum 15, Maximum 45, Waitlist Enabled: Yes
Restricted to graduate students. Preference is given to second year graduate students.
Grading Options: Letter Grade or Pass/Fail
Multi-term with 380.881
Final grade applies to all terms
Credit is only earned by completing 380.880 through 380.883; Grades are issued after completion of the series. Students must enroll consecutively. Failure to enroll consecutively will result in a grade of W.

380.883.01 Lessons In Leadership: Applications For Population, Family And Reproductive Health IV
1 credits - Course offered this year - East Baltimore
Blum, Robert
Focuses on instruments and tools that assess leadership styles, strengths and weaknesses. Explores communication strategies used by effective leaders and interview public health leaders to identify how they approach their work. Opportunity to read studies in leadership.

4th term information is correct as of March 16, 2020. For latest information visit Course Catalog at http://www.jhsph.edu/courses - Page 201 of 202
Upon successfully completing this course, students will be able to:

1. Analyze the components of effective leadership strategies used by effective leaders
2. Explore their own leadership styles so as to identify personal strengths and limitations
3. Manage conflict and give effective feedback
4. Practice communication skills associated with leadership
5. Explain team dynamics and effectively use small work groups

Email: rblum@jhu.edu

Lecture: M 4:30 PM - 7:00 PM

Enrollment: Minimum 15, Maximum 45, Waitlist Enabled: Yes

Restricted to graduate students. Preference is given to second year graduate students.

Grading Options: Letter Grade or Pass/Fail

Multi-term with 380.882

Final grade applies to all terms

Credit is only earned by completing 380.880 through 380.883; Grades are issued after completion of the series. Students must enroll consecutively. Failure to enroll consecutively, will result in a grade of W.

380.895.01 MPH Practicum: PFRH

variable credits Students who have not met the practicum requirement, must register for at least two credits - Course offered this year - **East Baltimore**

Departmental Faculty

The MPH Practicum is a mentored, hands-on practical public health experience, which involves meaningful participation and interaction with public health professionals.

Upon successfully completing this course, students will be able to:

1. Demonstrate that they have had a mentored public health practicum experience

Enrollment: Minimum 10, No maximum enrollment required, Waitlist Enabled: No

Grading Options: Pass/Fail