1. Modified course: EPIDEM 2602: Application of Molecular Biomarkers in Epidemiology
   Jennifer Abidi (EPIDEM)

   credits], Linda Frank (IDM) and Mohamed Yassin, MD (Medicine)

   credits], Linda Frank (IDM) and Mohamed Yassin, MD (Medicine)

4. Preliminary discussion of new BIOST MS areas of concentration: Health Data Science
   and Computational Genomics, Ada Youk, (BIOST)

5. Revised program: BCHS MPH, Martha Terry (BCHS)

6. Vote on two new courses: HPM XXXX: HPM Professional Development Seminar, 1
   credit each/ presented by Kevin Broom in February

7. Modified course: EPIDEM 2602: Epidemiological Methods 2, Ashley Naimi (EPIDEM)

8. Approval of February Meeting Minutes, All
REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES

1. General Instructions:

   a. Faculty should submit this form and the associated syllabus following the Pitt Public Health Syllabus Guidelines and the Syllabus Checklist (on pages 4 and 5) by e-mail to Patricia Documet, Chair (pdocumet@pitt.edu) and Robin Leaf, EPCC Staff Liaison (ral9@pitt.edu). If you choose not to include all the information detailed on the Syllabus Guidelines in your course syllabus for distribution to students, please attach this information to the proposal.

   b. The initiating Department is asked to submit one hard copy of this completed form with the proper signatures, syllabus and other materials (if any) to Robin Leaf in Student Affairs at least one week prior to the EPCC meeting. If this target date is not met, the proposal will be deferred for consideration at the next meeting scheduled.

   c. You will be contacted by the EPCC Chair or the EPCC Staff Liaison to schedule a presentation and discussion of your program/course proposal with the Committee, if possible at the next scheduled EPCC meeting.

2. Review based on the following (check all which apply):

   ___ New course, not previously approved
   ___ Course title change
   ___ Special topics course content
   ____ Cross-listing only
   (Specify academic unit & course number): __________________________________________
   ___ Course modification (major)
   ___ Pitt Public Health Core Course
   ___ Practicum, internship, field placement

3. Course designation:

   Course Number __2602___ Title __The Application of Molecular Biomarkers in Epidemiology___ Credits ____2

4. Cross-listing:

   If you want to cross-list this course in any other Pitt Public Health department or any other school of the University, specify which department(s) and School(s) and provide brief justification.

5. Course Instructors:

   (Indicate type of Pitt Public Health faculty appointment,* and percentage of total course time/effort anticipated. For any instructor who does not hold a Pitt Public Health faculty appointment, indicate her/his title and affiliation.)

   a. Principal instructor: Jennifer Adibi has a faculty tenure-track appointment. We anticipate that this will be 100% of her effort.

---

* The principal instructor for any Pitt Public Health course must have a primary, secondary or adjunct appointment in the school.
b. Co-instructors (if any):

6. **Statement of the course for Course Inventory.** Include purpose of course; summary of prerequisites, if any; general course content; and method of conducting course (e.g., lecture, laboratory, field work, etc.).

The purpose of the course is to advance knowledge in the practical aspects of molecular epidemiology. Students should have college-level biology, Introduction to Molecular Epidemiology, or the instructor’s permission. The course will primarily be lecture, discussion, and laboratory-based learning. Students will observe assays in the Department of Epidemiology laboratory, gain an appreciation for generating molecular biomarker data, and personally learn how to analyze gene and protein expression in human biospecimens.

7. **Student enrollment criteria/restrictions:**
   
   a. Indicate any maximum or minimum number of students and provide justification for this limitation. 8 would be the maximum.
   
   b. If admission is by permission of instructor, state criteria to be applied. The primary criteria are basic training in epidemiology and biostatistics, and knowledge of central dogma theory (DNA>RNA>protein).
   
   c. Provide a brief description of any prerequisite skills or knowledge areas that are necessary for students entering this course, including any specific course prerequisites or equivalents. Introduction to Molecular Epidemiology College-level biology

8. **Course schedule and allocation of hours:**

   a. Number of course hours per session __2__ Sessions per week __2__ Weeks per academic term ___8___
   
   b. Approximate allocation of class time (hours or %) among instructional activities:

   \[
   \begin{align*}
   \text{Lectures} & \quad 2 \quad (70\%) \\
   \text{Laboratory} & \quad 2 \quad (30\%)
   \end{align*}
   \]

   Other (specify): ___________________________________________________________

   c. Term(s) course will be offered: **Fall X** Spring _____ Summer Term _____ Summer Session _____

9. **Grading of student performance:**

   Indicate the grading system to be used (A, B, C, etc.; H, S, U); provide statement justifying use of system other than letter grade.

   We will use the H, S, U system.

10. **On-line course delivery:**

    Indicate the extent to which you will be using on-line instructional methods in teaching this course by checking all of the options below which apply:
I plan to use the course management aspects of CourseWeb/Blackboard (or equivalent), e.g., grade book, announcements.

I plan to use the interactive features of CourseWeb/Blackboard (or equivalent), e.g., discussion board, etc.

I have designed the course for remote (off-site) learning with little/no classroom attendance required.

I do not plan to use on-line instruction methods for this course (briefly explain)

11. **Relevance of course to academic programs and curricula:**

   a. Describe how this course contributes to learning objectives specified for the curriculum of one or more Pitt Public Health degree or certificate programs. Indicate whether course is required for any specified degree or certificate.

   This course will prepare students to comprehend molecular epidemiology methods in their research which contributes to many of the Epidemiology PhD learning objectives including:
   
   - to identify and locate key sources of data for epidemiologic purposes,
   - to describe epidemiologic and biologic models of disease etiology,
   - to conduct data collection and create data files appropriate for data analysis,
   - to apply quantitative and critical thinking skills to analyze data,
   - and to interpret epidemiologic results in a causal framework.

   This class will be useful for students in the Epidemiology PhD program within the molecular and genetic area of emphasis, but would also be useful to any PhD student.

   b. Describe how this course addresses public health issues involving diversity (gender, race, ethnicity, culture, disability, or family status).

   In all of the units, we will offer examples of how these biomarkers can be used to understand mechanisms that may underline health disparities, differential responses to exposures, higher risk of disease, etc. We will give students an appreciation of the large variability that can be attributed to the environment (social experience, stress, nutrition, chemicals, infections).

12. **Signature and date of principal faculty member (include department/program) making request:**

   Name/Title: Jennifer J. Adibi MPH, ScD/Assistant Professor  Date: Feb 28, 2019

13. **Signature and date of endorsement of department chairperson:**

   Name/Title: Anne Newman MD, MPH/Department Chair  Date: Feb 28, 2019

14. (For cross-listing only) **Signature and date of endorsement of department chairperson:**

   Name/Title: ____________________________  Date: ______________
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I do not plan to use on-line instruction methods for this course (briefly explain)

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Name/Title: Jennifer J. Adibi MPH, ScD/Assistant Professor Date: Feb 28, 2019

13. Signature and date of endorsement of department chairperson:

Name/Title: Anne Newman MD, MPH/Department Chair Date: Feb 28, 2019

14. (For cross-listing only)
Signature and date of endorsement of department chairperson:

Name/Title: Date: 3/1/14
SYLLABUS CHECKLIST FOR NEW AND REVISED COURSES
Addendum to REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES FORM
Objective to assist faculty to ensure syllabus contains the required and necessary elements
to provide students with clear expectations of the course.

NOTE: * indicates a required element of the syllabus. If N/A is checked or this element is not included
complete the information detailed on page two for all instances.

<table>
<thead>
<tr>
<th>Syllabus Area</th>
<th>Recommended Detail</th>
<th>Included in Your Syllabus?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heading</strong></td>
<td><strong>Required</strong></td>
<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Course Number*</td>
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<tr>
<td>Course Title*</td>
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<tr>
<td>Course Meeting Time/Day of Week*</td>
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<tr>
<td>Classroom Location*</td>
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<tr>
<td><strong>Faculty Information</strong></td>
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<tr>
<td>Office Location*</td>
<td></td>
<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Office Hours*</td>
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<tr>
<td>Phone Number*</td>
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<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Email Address*</td>
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<tr>
<td>Teaching Philosophy</td>
<td></td>
<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Teaching Assistant Contact</td>
<td></td>
<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td><strong>Student Expectations in Classroom</strong></td>
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<tr>
<td>Behavior/ Ground Rules (cell phones off, laptops off, etc.)</td>
<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Recording of Lectures</td>
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<td>Yes ☐ No ☒ N/A ☐</td>
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<tr>
<td><strong>Course Summary</strong></td>
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<tr>
<td>Course Description*</td>
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<td>Yes ☒ No ☐ N/A ☐</td>
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<tr>
<td>Learning Objectives*</td>
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<td><strong>Materials</strong></td>
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<td>Required Textbooks/ Articles/Readings</td>
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<td>Yes ☐ No ☒ N/A ☐</td>
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<tr>
<td>Required Software</td>
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<td>Required Equipment (including use of CourseWeb/Blackboard)</td>
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<td>Recommended Material</td>
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<td>Availability of Software for Purchase and/or Use</td>
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<td><strong>Evaluation</strong></td>
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<td>Grading Scale*</td>
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<td><strong>Accommodation of Students with Disabilities</strong></td>
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<td>University Statement*</td>
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<td><strong>Academic Integrity Policy</strong></td>
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<td>Pitt Public Health Statement*</td>
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<td><strong>Diversity/Inclusion Statement</strong></td>
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<td>Pitt Public Health Statement*</td>
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<td><strong>Title IX Statement</strong></td>
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<td>University Statement*</td>
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<td><strong>Schedule</strong></td>
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<td>Topics by Session*</td>
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<td>Reading and Written Assignments by Session*</td>
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<td>Learning Objectives by Session</td>
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<td>No</td>
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<tr>
<td>Test Dates</td>
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<td>No</td>
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<td><strong>Additional Resources</strong></td>
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<td>Health Sciences Library Liaison Contact Information</td>
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<tr>
<td>Writing Center Contact (if course is writing intensive)</td>
<td>Yes</td>
<td>No</td>
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**Required Information Not Included**

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<th>List the Required Detail Not Included</th>
<th>Reason for Not Including</th>
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</tbody>
</table>
Course Meeting Day(s) and Time(s): 2 hour slot/week for lecture course
2 hour slot/week for second lecture OR laboratory course (See syllabus)

Class Locations:
Lectures: A622 Crabtree Hall
Lab-based classes: Public Health Annex 3001

Credit Hours: 2
Term/Academic Year First half Fall 2019 (XXX)

Principal Instructor: Dr. Jennifer J. Adibi MPH, ScD
Department of Epidemiology
Office Location: 5132 Public Health, 130 Desoto Street, Pittsburgh, PA 15261
Tel. 412-624-1913, adibij@pitt.edu

Office Hours: By appointment

Course Description
This course will advance the learning of students interested in molecular epidemiology by teaching practical aspects of measuring, quantifying and modeling levels of RNA and protein in human biological specimens (blood, tissue, etc.). Some topics will include: selecting and validating biomarkers of RNA and protein for application in epidemiologic study design, candidate molecule vs. omics (high-dimensional) approaches, basic know-how in the design and execution of bioassays, and statistical issues in biomarker data analysis. Students will observe the work of a molecular epidemiology laboratory, and have opportunities for hands-on learning.

Course Prerequisites
Prerequisites include undergraduate biology, at least one course in Epidemiology, one course in Biostatistics, and Introduction to Molecular Epidemiology (EPID 2600), or instructor permission.

Learning Objectives
After taking this course, students can:

1) Apply RNA and protein biomarkers to increase knowledge of how a particular exposure (genetic, environmental, physiologic, psychosocial) relates to a health outcome;

2) Map a biomarker to physiologic and pathophysiologic processes, and to measure and model these relationships;

3) Apply low-dimensional and high-dimensional molecular (‘omics’) analyses in epidemiology and learn how to integrate molecular biomarkers into analysis and inference on exposure-outcome relationships;

4) Critically assess internal and external validity in epidemiologic studies in which investigators have analyzed molecular biomarkers. Students will evaluate measurement error, bias, technical and biologic variability, quantitation and statistical methods.

Teaching Philosophy
This course is an opportunity to apply biomarkers in current and future research. The course will be taught as a workshop with information presented as well as opportunities for students to engage in hands-on learning in the laboratory and also with biomarker data sets. Students will become familiar with the Department’s molecular epidemiology laboratory.
Required Textbooks/Articles/Readings
There are no required texts. Required reading (journal articles, protocols) will be posted on the CourseWeb site by the beginning of the semester.

CourseWeb/BlackBoard Instruction
Revisions to this document, schedules, readings, and assignments will be posted to CourseWeb. All students are required to log on weekly and check CourseWeb.

Class Expectations/ Behavior and Ground Rules
We expect students to attend all classes, do weekly readings, and to use class time to engage and articulate their thoughts and questions. We assume many students completed the Introduction to Molecular Epidemiology course (EPID 2600), and will use this time to dive deeper into practical application of molecular biology techniques to epidemiologic questions of interest. Readings, short youtube videos, and assignments (i.e. questions and short answers, analyses and presentation of biomarker data, full critique and presentation of a published molecular biomarker study) will be given to reinforce practical learning. As part of class participation, students will be asked to select and lead discussion on papers in their field of interest.

Grading Scale: The scale for grading will be honors, satisfactory, unsatisfactory (H/S/U).

Student Performance Evaluation
Final grades will be based on: 60% attendance and active participation (answering questions on material being taught); 40% five assignments (short answer questions, analysis of raw biomarker data sets, critique of a published molecular biomarker study). Students will turn in 5 written assignments, and prepare a short presentation for the final class. Attendance and participation are critical to success in this course. You may only miss one class (please let me know in advance). Any other absences must be excused by the instructor. Participation must include active engagement in class discussions and visits to the wet lab.

Assignments and Descriptions
Students will be required to do course readings weekly, and assignments. The assignments listed below are due at the beginning of the class the following week. Class attendance and participation are the most critical assignment and, accordingly, make up 60% of the final grade, combined. There will be 6 assignments to reinforce practical knowledge.

Schedule of Sessions and Assignments

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Lecture:</strong> Introduction and overview of molecular biomarkers and their role in epidemiologic and public health research</td>
<td>J. Adibi</td>
</tr>
<tr>
<td></td>
<td><strong>Assignment:</strong> Read lecture notes, short answers to questions</td>
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<tr>
<td>2</td>
<td><strong>Lecture 1:</strong> Reproducibility</td>
<td>J. Adibi</td>
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<tr>
<td></td>
<td><strong>Lecture 2:</strong> Developing a conceptual framework for research using molecular biomarkers (Logic, DAG theory, the p-value)</td>
<td>J. Adibi</td>
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<tr>
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<td><strong>Assignment:</strong> Short answers to questions</td>
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<tr>
<td>3</td>
<td><strong>Lecture:</strong> mRNA quantitation Part I: conceptual and practical</td>
<td>J. Adibi</td>
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<tr>
<td></td>
<td><strong>Lab:</strong> tissue homogenization, RNA isolation</td>
<td>Lab staff</td>
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<tr>
<td></td>
<td><strong>Assignment:</strong> RNA biomarker data analysis, summary, Part I</td>
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<tr>
<td>4</td>
<td><strong>Lecture:</strong> mRNA quantitation Part II: conceptual and practical</td>
<td>J. Adibi</td>
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<tr>
<td></td>
<td><strong>Lab:</strong> RNA quantitation, reverse transcription, qPCR</td>
<td>Lab staff</td>
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<tr>
<td></td>
<td><strong>Assignment:</strong> RNA biomarker data analysis, summary, Part II</td>
<td></td>
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<tr>
<td>5</td>
<td><strong>Lecture:</strong> Protein quantitation Part I: conceptual and practical</td>
<td>J. Adibi</td>
</tr>
</tbody>
</table>
Lab: quantitative western blot, outline the steps, visualization and quantitation of data

Assignment: Protein biomarker data analysis, summary, Part I

Lab staff

6
Lecture: Protein quantitation: why and how, Part II
Lab: analysis of circulating proteins
Assignment: Protein biomarker data analysis, summary, Part II

J. Adibi
Lab staff

7
Lecture 1: Going from low to high dimensional biomarkers by applying the omics technologies
Lecture 2: Modeling direct vs. indirect effects (interaction, mediation)
Assignment: data analysis exercise

J. Adibi
J. Adibi

8
Lecture 1: Synthesis of course material, student presentations of final assignment.

Assignment: Oral/written critique of an application of a molecular biomarker in epidemiology

J. Adibi/students
J. Adibi/students

Accommodation for Students with Disabilities
If you have any disability for which you may require accommodation, you are encouraged to notify both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union (Voice or TTD 412-648-7890) as early as possible in the term.

Academic Integrity Statement
All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook www.publichealth.pitt.edu/home/academics/academic-requirements. The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

Sexual Misconduct, Required Reporting and Title IX Statement

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:
A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: www.titleix.pitt.edu/report/confidentiality

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:
• Title IX Office: 412-648-7860
• SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.
Other reporting information is available here: www.titleix.pitt.edu/report-0
Statement from the Department of Gender, Sexuality, and Women's Studies
[This statement was developed by Katie Pope, Title IX Coordinator, in conjunction with GSWS instructors.]

Diversity Statement
The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following:
- the course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;
- the University’s Office of Diversity and Inclusion at 412-648-7860 or https://www.diversity.pitt.edu/make-report/report-form (anonymous reporting form).

Copyright Notice
Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

Health Sciences Library and Pitt Public Health Librarian
We encourage students to access the HSLS Molecular Biology online resource for more in-depth information on molecular biology methods, http://www.hsls.pitt.edu/molbio/. They offer regular workshops and tutorials on technologies and data analysis methods.
REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES

1. General Instructions:
   
   a. Faculty should submit this form and the associated syllabus following the Pitt Public Health Syllabus Guidelines and the Syllabus Checklist (on pages 4 and 5) by e-mail to Patricia Documet, Chair (pdocumet@pitt.edu) and Robin Leaf, EPCC Staff Liaison (ral9@pitt.edu). If you choose not to include all the information detailed on the Syllabus Guidelines in your course syllabus for distribution to students, please attach this information to the proposal.

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2. Review based on the following (check all which apply):
   
   X New course, not previously approved
   ___ Course title change
   ___ Cross-listing only
   ___ Course modification (major)
   ___ Special topics course content
   ___ Pitt Public Health Core Course
   x Practicum, internship, field placement

3. Course designation:

   Course Number: TBD
   Title: Part 1: Infection Prevention and Control for Healthcare Settings (2 credits)
   Part 2: Infection Prevention and Control Practicum/Preceptorship (3 credits)
   Credits 2-5

4. Cross-listing:

   If you want to cross-list this course in any other Pitt Public Health department or any other school of the University, specify which department(s) and School(s) and provide brief justification.

   Course would be appropriate for other clinicians or public health professionals in the School of Nursing, Medicine, and Rehabilitation Science since such professionals work in settings where control of infectious diseases is critical.

5. Course Instructors:
   Mohamed Yassin, MD
   Linda Rose Frank, PhD, MSN, ACRN, FAAN
   Other infection preventionists from UPMC Mercy and PUH
(Indicate type of Pitt Public Health faculty appointment, * and percentage of total course time/effort anticipated. For any instructor who does not hold a Pitt Public Health faculty appointment, indicate her/his title and affiliation.)

a. Principal instructor: Mohamed Yassin, MD, Associate Professor of Medicine and Public Health, University of Pittsburgh

b. Co-instructors (if any): Linda Rose Frank, PhD, MSN, ACRN, FAAN, Professor of Public Health, Medicine, and Nursing, University of Pittsburgh

6. **Statement of the course for Course Inventory**

This purpose of this course is to educate public health professionals including clinician and the approaches, procedures, and methods to reduce hospital and institutional acquired infections. Prerequisites for the course include knowledge of biology. Course content will include Part 1 (didactic and interactive, problem based learning through the use of lectures, case studies) and Part 2 (practicum/preceptorship for application of infection prevention principles, methods, guidelines, and approaches in public health practice. The 3 credit component can serve as the practicum for MPH students.

7. **Student enrollment criteria/restrictions:**

a. Indicate any maximum or minimum number of students and provide justification for this limitation.
   - The 2 credit didactic and interactive component of the course is limited to 20 students
   - The 3 credit field work component of the course is limited to 5-6 students per academic year

b. If admission is by permission of instructor, state criteria to be applied.
   - Interviews will be completed for all prospective practicum/preceptorship applicants.
   - Acceptance into the practicum will be based on GPA, science and clinical background, and career goals.

c. Provide a brief description of any prerequisite skills or knowledge areas that are necessary for students entering this course, including any specific course prerequisites or equivalents.
   - Students must have completed undergraduate biology courses.
   - For MPH students, they must have completed the first semester core courses within the Graduate School of Public Health.

8. **Course schedule and allocation of hours:**

Number of course hours per session:

- 2 credit didactic:
  - Sessions per week: 1
  - Weeks per academic term: 12

- 3 credit experiential:
  - 4-8 hours be week or as required to meet 200 hour minimum
  - Week per academic term: 12

b. Approximate allocation of class time (hours or %) among instructional activities:
   - Lectures: 24 hrs. (includes case-based learning)
   - Field work 200 hrs (includes rounds, investigators, laboratory, meetings)

Other (specify): __________________________

a. Term(s) course will be offered:

   a. Part 1: didactic: Fall X Spring X
   b. Part 2: experiential: Spring X Summer Term X

---

February 5, 2019, Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed Yassin, MD, PhD
9. **Grading of student performance:**
   - Part 1: Letter grade
   - Part 2: Letter grade

10. **On-line course delivery:**
    - X I plan to use the course management aspects of CourseWeb/Blackboard
    - X I plan to use the interactive features of CourseWeb/Blackboard, e.g., discussion board, etc.
    - ___ I have designed the course for remote (off-site) learning with little/no classroom attendance required.
    - ___ I do not plan to use on-line instruction methods for this course (briefly explain)

11. **Relevance of course to academic programs and curricula:**
    - a. Describe how this course contributes to learning objectives specified for the curriculum of one or more Pitt Public Health degree or certificate programs. Indicate whether course is required for any specified degree or certificate.

    *Infection prevention and control is an essential activity and priority for many students graduating from the Department of Infectious Diseases and Microbiology (IDM) and taking positions in hospitals and other institutional and community settings. Although not all of these graduates are taking positions as infection control practitioners. However, many are directly responsible to develop policies and monitor infection prevention within various types of settings and roles within healthcare organizations, institutions and programs.

    To date, no such course has ever been offered in the Department of Infectious Diseases and Microbiology or in the Graduate School of Public Health. This course will provide an opportunity for students taking coursework in infectious diseases to expand their knowledge and skills in infection prevention through interactive, case-based learning and field learning.*

    - b. Describe how this course addresses public health issues involving diversity (gender, race, ethnicity, culture, disability, or family status).

12. **Signature and date of principal faculty member (include department/program) making request:**
    - Name/Title: [Signature]  
    - Date: 2/15/19

13. **Signature and date of endorsement of department chairperson:**
    - Name/Title: [Signature]  
    - Date: 6 Feb 2019

14. **(For cross-listing only)**
    - **Signature and date of endorsement of department chairperson:**
      - Name/Title: [Signature]  
      - Date: [Signature]
SYLLABUS CHECKLIST FOR NEW AND REVISED COURSES
Addendum to REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES FORM
Objective to assist faculty to ensure syllabus contains the required and necessary elements
to provide students with clear expectations of the course.
NOTE: * indicates a required element of the syllabus. If N/A is checked or this element is not included
complete the information detailed on page two for all instances.

<table>
<thead>
<tr>
<th>Syllabus Area</th>
<th>Recommended Detail</th>
<th>Included in Your Syllabus?</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>Course Number*</td>
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<tr>
<td>Course Title*</td>
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</tr>
<tr>
<td>Course Meeting Time/Day of Week*</td>
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<tr>
<td>Classroom Location*</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>Email Address*</td>
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<tr>
<td>Teaching Philosophy</td>
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<tr>
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<tr>
<td><strong>Student Expectations in Classroom</strong></td>
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<td>(including use of CourseWeb/Blackboard)</td>
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<td><strong>Diversity/Inclusion Statement</strong></td>
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<td>Learning Objectives by Session</td>
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<td>Test Dates</td>
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<td><strong>Additional Resources</strong></td>
<td>Health Sciences Library Liaison Contact Information</td>
<td>Yes ☐</td>
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<tr>
<td>Writing Center Contact (if course is writing intensive)</td>
<td>Yes ☐</td>
<td>No ☐</td>
</tr>
</tbody>
</table>

**Required Information Not Included**

| List the Required Detail Not Included | Reason for Not Including |
| Reading assignments by session | To be developed |
Graduate School of Public Health
Department of Infectious Disease and Microbiology

Official Title: Infection Prevention and Control in Healthcare Settings
Credit Hours: 2
Course Meeting Day(s) TBD
Time(s) TBD
Class Location: TBD
Course Number: IDM ____

Term/Academic Year: Fall 2019 or Spring 2020

LOGISTICS/CONTACT INFORMATION

- **Course director and Primary Instructor:**
  Mohamed H Yassin, MD, PhD
  Medical Director, Infection Control Hospital Epidemiologist
  Associate Professor of Medicine and Public Health
  Division of Infectious Diseases, School of Medicine, University of Pittsburgh
  Director, Infectious Diseases, UPMC Mercy
  Tel: (412) 232-7798
  Fax: (412) 232-3292

- **Co-Course Director and Co-Instructor:**
  Linda Rose Frank, PhD, MSN, ACRN, FAAN
  Professor of Public Health, Medicine, & Nursing
  Department of Infectious Diseases and Microbiology
  Graduate School of Public Health
  Recipient, University of Pittsburgh, Chancellor’s Public Service Award
  University of Pittsburgh
  Principal Investigator, MidAtlantic AETC
  Chair, City of Pittsburgh, HIV Commission
  412-624-9118 (office)
  412-613-0717 (mobile)

- **Teaching Assistant:** None

- **Student services coordinator:** Chelsea Yonash, IDM

COURSE DESCRIPTION
This course in infection control is a didactic, critical thinking and skill-building course aimed at providing students with a foundation on infection prevention and control in healthcare settings. Students may take this didactic component independently or combine it with an optional practicum/preceptorship of 200 hours within a clinical setting within an infection control department. This course aims to assist students in becoming knowledgeable on hospital-acquired infections, patient isolation practices, infection surveillance, documentation, reporting, and outbreak investigations. The course will be taught by expert practitioners and researchers in infection prevention.
THE SYLLABUS AND CURRICULUM FOR THIS COURSE IS BEING SENT TO ASSOCIATION OF PROFESSIONALS IN INFECTION CONTROL (APIC) SO THAT STUDENTS WILL BE ABLE TO SIT FOR THE EXAM TO FOR CERTIFICATION OF INFECTION CONTROL (CIC). THE APPROVAL PROCESS FOR THIS WILL TAKE AT LEAST 6 MONTHS.

TO BE ELIGIBLE TO RECEIVE CERTIFICATION FROM APIC, STUDENTS MUST TAKE BOTH THE 2 CREDIT DIDACTIC COURSE AS WELL AS THE 3 CREDIT PRACTICUM/PRECEPTORSHIP.

LEARNING OBJECTIVES
1. Discuss the role of the infection prevention team to review and discuss hospital outbreaks and the status of outbreak investigations.
2. Participate in case study reviews including laboratory and microbiological data in developing a plan to investigate an outbreak.
3. Review the hospital infection control policies and patient isolation procedures.
4. Become familiar with the Centers for Disease Control and Prevention definitions of healthcare acquired infections, identify the dynamics of electronic surveillance and the regulatory environment and need for mandatory reporting to the state Department of Health.
5. Using course lectures and online resources, the students will:
   - Develop knowledge of the principles of identifying and documenting healthcare-associated infections;
   - Establish knowledge of the importance and relevance of resistant microorganisms of importance in prevention control practice;
   - Review the epidemiology and risk factors for developing colonization and infection;
   - Review the data supporting important infection control and antibiotic management strategies;
   - Respond to questions about exposures to communicable diseases and appropriate prevention and control strategies, and;
   - Develop knowledge and public health impact and clinical implications of nosocomial infections have on patient safety and healthcare costs.

TEACHING PHILOSOPHY
Education is a two-way street. The student is expected to come to the class prepared to learn and faculty must create an interactive, evidenced-based environment that engages, increases curiosity, critical thinking, investigation, analysis, as well as self-examination to promote change, innovation, and solutions to major infectious disease public health challenges. The science and art of teaching must be focused on the student. Faculty preparation and enthusiasm are key to effective teaching and inspire student success. Successful faculty are committed to improving themselves and their students as we all must be engaged in lifelong learning.

REQUIRED TEXTBOOKS/ARTICLES/READINGS
Online Infectious Disease Society of America (IDSA) course: http://www.fellowscourse.sheainline.org/Default.asp
The overall goals of the on-line curriculum:
1. Describe the role of the healthcare epidemiologist.
2. Analyze when to involve the healthcare epidemiologist and infection control experts - specifically during outbreaks, bioterrorism threats and advanced topics in occupational health management.
3. Discuss how to implement principles of antimicrobial stewardship.
4. Define the epidemiology, surveillance and prevention of healthcare-associated infections including multidrug resistant organisms including Clostridium difficile, surgical site infections and device-associated infections.

Infection Prevention and Control Course, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
SUPPLEMENTAL READINGS/BIBLIOGRAPHY
1. Principles and Practice of Infectious Diseases (Mandell, Bennett and Dolin)
2. Various electronic library resources through the University of Pittsburgh Health Sciences Library System (http://www.hsls.pitt.edu/)
5. Association of Professionals in Infection Control: https://apic.org/Education-and-Events/online-learning
6. https://learningce.shea-online.org/content/primer-healthcare-epidemiology-infection-control-antimicrobial-stewardship#group-tabs-node-course-default2
7. (IDSA) Infectious Diseases society of America (SHEA) Society of Health Care Epidemiology of America https://www.idsociety.org/professional-development/online-courses/infection-control-course/

COURSE WEB/BLACKBOARD INSTRUCTION
All readings and course material will be found on the Blackboard site for this class. The website for Blackboard is http://courseweb.pitt.edu. To login, you must have a Pitt account. Your login ID is the same as your login ID for your Pitt account and your password is the same as for your Pitt account. The site will contain all readings, power point presentations, assignments, and additional information. Students are expected to check Course web at least twice per week or as assigned for assignments, updates, and announcements. All communication with students will be done through their official Pitt email addresses only.

Required or Recommended Software: TBD

Required or Recommended Equipment: all students should have laptop or notebook computer

CLASS EXPECTATIONS/ BEHAVIOR AND GROUND RULES
1. Attendance at classes and practicum
   • Please be advised that not all information for examinations will be covered in class or included in PowerPoint. Students are expected to read or review documents, journal articles assigned.
   • PowerPoints of lectures may be posted on course web dependent on the practice of individual teaching faculty. Attendance at class is essential.
2. Participate in class discussion, reading assignments, and on-line learning resources
3. Successful complete midterm and final exam

Grading Scale
- 90-100%   A
- 80-89%     B
- 70-79%     C
- 60-69%     D
- < 60%      F

STATEMENT ON CLASSROOM RECORDING: To ensure the open discussion of ideas, students may not record classroom lectures, discussion, activities without the advance written permission of the course director and faculty. Such recording if properly approved may be used solely for the student’s own private use. It may not be posted on social media or disseminated in any manner. Mobile phones should be off or on vibrate mode during class. Photos and uploads to social media are prohibited. Use of computers in class is limited to course specific activities.

Infection Prevention and Control Course, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
STUDENT PERFORMANCE EVALUATION
Assignments and Descriptions
*Infection Prevention Didactic course (2 credits)*
- Attendance: 20%
- 4 examinations: 80%

OBJECTIVES AND COMPETENCIES

Clinical Knowledge
Goal: Students will demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care settings. Students are expected to:

Competencies
1. Learn the scientific method of problem solving, evidence-based decision making in infection prevention and control.

Objectives
- Review the literature and develop and knowledge of basic and clinical sciences pertinent to infection control.
- Demonstrate resourcefulness in accessing and using information from multiple sources (printed text, electronic media).
- Recognize limitations in his/her clinical knowledge and demonstrate the resourcefulness of acquiring the necessary information in order to promote excellence in infection prevention.
- Correctly interpret and apply knowledge about infection control practices, patient isolation procedures, infection surveillance and bioterrorism/pandemic influenza preparedness.
- Demonstrate a commitment to life-long learning of infectious diseases.

Case-Based Learning and Improvement
Goal: Students will demonstrate the ability to investigate and evaluate infection prevention cases, to appraise and assimilate scientific evidence to continuously improve patient safety and infection prevention. Students are expected to develop skills and habits to be able to:

Competencies
1. Systematically analyze practice, using quality improvement methods, and identify approaches to implement changes with the goal of improving infection control and patient safety.

Objectives
- Student develop knowledge related to developing approaches for intervention with patients healthcare settings including hospital, clinics, nursing homes, and other settings.
- Students will review case-based data to analyze the trends in hospital acquired infections, correctly interpret these results and identify corrective measures intended to reduce the number and impact on patient care of these types of infections.
- Students will gain knowledge through case studies on evidence-based infection control algorithms used minimize hospital infection outbreaks.
- Designs improvement goals and corresponding short-term plans and strategies to achieve these goals.
DIDACTIC AND SKILL COMPONENT: SCHEDULE AND TOPICS OF CLASSES

Week 1: Introduction to Infection control & hand hygiene (HH):
- Overview of the aspects of Infection control and prevention
- Certification for infection preventionists

Week 2: National Health Safety Network (NHSN) hospital associated infections (HAIs)
- Rates, reporting and definitions.

Week 3: Infection prevention evidence based interventions for major HAIs
- SSI (surgical site infection)
- CLABSI & BSI (central line associated blood stream infection)
- CAUTI & UTI (Catheter associated urinary tract infection)
- VAP (ventilator associated pneumonia) and other types of pneumonia
  Exam #1

Week 4: Healthcare associated infection investigations for outbreak, exposures and increased incidence
- Basics of epidemiology: definition, variables/ line list and statistical examination
- Molecular epidemiology particularly whole genome sequencing (WGS)
- Practice common health care outbreak investigation examples

Week 5: Disinfection and sterilization
- Environmental disinfection
- Surgical instruments, endoscope and ultrasound high level disinfection (HLD) and sterilization
- Use of culture and non-culture methods to examine quality of environmental disinfection infections (HAIs)

Week 6: Isolation
  Exam #2 Midterm Examination
- Basics of types of isolation (contact, droplet and airborne)
- Personal protective equipment
  - Types
  - Demonstration and return demonstration of use
- Basics of ventilation requirement

Week 7: Vaccination and Employee health
- Vaccination of special importance to health care workers (HCW)
- Interaction between employee health and infection prevention
- Overview of major regulatory bodies related to infection prevention
  - DOH, CDC, OSHA, EPA, AAMI, others

Week 8: Basics of Antibiotic stewardship and Microbiology for the infection preventionist (IP)
- Overview of stewardship
- Potential synergy between stewardship and infection prevention
- Important microbiology aspects for infection prevention
  - Definition of Gram negative multidrug resistance
  - Early identification of epidemiologically significant pathogens
  - Basics of WGS interpretation
Week 9: Epidemiologically significant pathogens within healthcare facilities
- MRSA
- VRE
- CR and other GNR-MDRO

**Exam #3**

Week 10: Surveillance within health care facilities
- MDRO surveillance
- HAI surveillance

Week 11: Construction and special population
- Types of problems with air, water and others
- Special areas of interest
  - Operation room
  - Burn Unit
  - BM transplant
  - others

**Week 12: Future of infection prevention, gaps of knowledge and directions for research**

**Exam #4 Final Examination**

ACCOMMODATION FOR STUDENTS WITH DISABILITIES
“"If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term.”

ACADEMIC INTEGRITY STATEMENT
All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook [www.publichealth.pitt.edu/home/academics/academic-requirements](http://www.publichealth.pitt.edu/home/academics/academic-requirements). The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

SEXUAL MISCONDUCT, REQUIRED REPORTING AND TITLE IX STATEMENT

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware:
A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: [www.titleix.pitt.edu/report/confidentiality](http://www.titleix.pitt.edu/report/confidentiality)

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:
Infection Prevention and Control Course, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD

• Title IX Office: 412-648-7860
• SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.
Other reporting information is available here: www.titleix.pitt.edu/report-0

DIVERSITY STATEMENT
The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following: course instructor; the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu; the University’s Office of Diversity and Inclusion at 412-648-7860 or https://www.diversity.pitt.edu/make-report/report-form (anonymous reporting form).

COPYRIGHT NOTICE
Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

HEALTH SCIENCES LIBRARY AND PITT PUBLIC HEALTH LIBRARIAN
Assistance with conducting research related to this course is supported by the Health Sciences Library (www.hsls.pitt.edu). The GSPH, Dr. Barbara Folb can offer assistance as needed in completing course requirement, reports, and documents. www.hsls.pitt.edu/about/staff/profile?name=folb).

UNIVERSITY WRITING CENTER
Writing reports is required for this course. If needed, students may contact the writing center on campus (www.writingcenter.pitt.edu/).
Official Title: Infection Prevention and Control Practicum/Preceptorship  
Credit Hours: 3  

Time: TBD  

Location: UPMC Mercy, Presbyterian, St. Margaret’s, Veteran’s Administration  
(Initially only UPMC Mercy)  

Course Numbers: TBD  

Term/Academic Year: Fall 2019 or Spring 2020  

LOGISTICS/CONTACT INFORMATION  

- Course director and Primary Instructor:  
  Mohamed H Yassin, MD, PhD  
  Medical Director, Infection Control Hospital Epidemiologist  
  Associate Professor of Medicine and Public Health  
  Division of Infectious Diseases, School of Medicine, University of Pittsburgh  
  Director, Infectious Diseases, UPMC Mercy  
  Tel: (412) 232-7798  
  Fax: (412) 232-3292  

- Co-Course Director and Co-Instructor:  
  Linda Rose Frank, PhD, MSN, ACRN, FAAN  
  Professor of Public Health, Medicine, & Nursing  
  Department of Infectious Diseases and Microbiology  
  Graduate School of Public Health  
  Recipient, University of Pittsburgh, Chancellor’s Public Service Award  
  University of Pittsburgh  
  Principal Investigator, MidAtlantic AETC  
  Chair, City of Pittsburgh, HIV Commission  
  412-624-9118 (office)  
  412-613-0717 (mobile)  

- Teaching Assistant: None  
- Student services coordinator: Chelsea Yonash, IDM  

COURSE DESCRIPTION  

This course in infection control is a clinical and institutional experience within a hospital or other clinical settings. Students in this course must take the didactic Infection Prevention course as a pre-requisite for this practicum/preceptorship. Students may complete a minimum 200 hours within a clinical setting within an infection control department. This component aims at assisting students to become proficient in addressing hospital-acquired infections, patient isolation practices, infection surveillance, documentation and reporting, medical record review and collaboration with the infection control practitioners.  

Acceptance into the practicum will be competitive and include an application and interview process with the course directors and selected infection prevention specialists. Priority for the practicum will be given to students who complete the 2 credit didactic course, IDM ____, Infection Prevention and Control in Healthcare Settings.  

The syllabus and curriculum for this course (IDM ____ ) and Infection Prevention and Control In Healthcare Settings (IDM ____ ) is being sent to Association of Professionals In Infection Control (APIC) so that students will be able to sit for the exam to for certification of infection control (CIC). The approval process for this will take up to 6 months.  

Infection Prevention Practicum, February 12, 2019  
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
To be eligible to receive certification from APIC, students must take both the 2 credit didactic course (IDM _____) as well as the 3 credit practicum/preceptorship (IDM __). 

LEARNING OBJECTIVES
1. Participate as a member of the infection prevention team to review and discuss hospital outbreaks and the status of outbreak investigations.
2. Collaborate and obtain supervision from infection control practitioners on special projects during the practicum component of the course.
3. Participate in the review of medical records including laboratory and microbiological data, developing a plan to investigate an outbreak and compiling the data in a reportable form for the infection control committee.
4. Accompany the infection control practitioners on environment rounds throughout facilities observing the need for sanitation and hygiene in critical areas such as the intensive care units, clinical units, and the operating suites.
5. Review the hospital infection control policies and patient isolation procedures in the infection control policy manual available on the internal health care system-wide website.
6. Become familiar with the Centers for Disease Control and Prevention definitions of healthcare acquired infections, identify the dynamics of electronic surveillance and the regulatory environment and need for mandatory reporting to the state Department of Health.
7. Using online resources, instruction, and experiential learning, the students will:
   - Develop knowledge of the principles of identifying and documenting healthcare-associated infections;
   - Establish knowledge of the importance and relevance of resistant microorganisms of importance in prevention control practice;
   - Review the epidemiology and risk factors for developing colonization and infection;
   - Review the data supporting important infection control and antibiotic management strategies;
   - Respond to questions about exposures to communicable diseases and appropriate prevention and control strategies, and;
   - Develop knowledge and public health impact and clinical implications of nosocomial infections have on patient safety and healthcare costs.

TEACHING PHILOSOPHY
Education is a two-way street. The student is expected to come to the class prepared to learn and faculty must create an interactive, evidenced-based environment that engages, increases curiosity, critical thinking, investigation, analysis, as well as self-examination to promote change, innovation, and solutions to major infectious disease public health challenges. The science and art of teaching must be focused on the student. Faculty preparation and enthusiasm are key to effective teaching and inspire student success. Successful faculty are committed to improving themselves and their students as we all must be engaged in lifelong learning.

REQUIRED TEXTBOOKS/ARTICLES/READINGS
Online Infectious Disease Society of America (IDSA) course: http://www.fellowscourse.shea-online.org/Default.asp
The overall goals of the on-line curriculum:
1. Describe the role of the healthcare epidemiologist.
2. Analyze when to involve the healthcare epidemiologist and infection control experts - specifically during outbreaks, bioterrorism threats and advanced topics in occupational health management.

Infection Prevention Practicum, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
3. Discuss how to implement principles of antimicrobial stewardship.
4. Define the epidemiology, surveillance and prevention of healthcare-associated infections including multidrug resistant organisms including Clostridium difficile, surgical site infections and device-associated infections

SUPPLEMENTAL READINGS/BIBLIOGRAPHY
1. Principles and Practice of Infectious Diseases (Mandell, Bennett and Dolin)
2. Various electronic library resources through the University of Pittsburgh Health Sciences Library System (http://www.hsls.pitt.edu/)
5. Association of Professionals in Infection Control: https://apic.org/Education-and-Events/online-learning
6. https://learningce.sheainline.org/content/primer-healthcare-epidemiology-infection-control-antimicrobial-stewardship#group-tabs-node-course-default2
7. (IDSA) Infectious Diseases society of America (SHEA) Society of Health Care Epidemiology of America https://www.idsociety.org/professional-development/online-courses/infection-control-course/

COURSE WEB/BLACKBOARD INSTRUCTION
All readings and course material will be found on the Blackboard site for this class. The website for Blackboard is http://courseweb.pitt.edu. To login, you must have a Pitt account. Your login ID is the same as your login ID for your Pitt account and your password is the same as for your Pitt account. The site will contain all readings, power point presentations, assignments, and additional information. Students are expected to check Course web at least twice per week or as assigned for assignments, updates, and announcements. All communication with students will be done through their official Pitt email addresses only.

Required or Recommended Software: TBD
Required or Recommended Equipment: all students should have laptop or notebook computer

CLASS EXPECTATIONS/ BEHAVIOR AND GROUND RULES
1. Punctually attend clinical site at scheduled times for practicum as agreed upon by mentor and/or supervisor(s).
2. Participate in meetings, rounds, seminars, or other activities within the clinical site.
3. Prepare and submit an infection prevention project or product such as,
   - Policy or procedure review
   - Development of new policies or procedures
   - Conduct an infection control research project
   - Develop educational programming for clinical staff
   - Develop educational materials

   • Students are encouraged to submit for publication or submission to APIC conference(s).
   • Criteria for grading on report:
     - Completeness of work
     - Clarity of presentation of concepts, ideas, intervention
     - Accuracy of content
     - Analysis of issues

Infection Prevention Practicum, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
Infection Prevention Practicum, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD

STATEMENT ON RECORDING: To ensure the open discussion of ideas, students may not record lectures, discussion, activities that occur in clinical settings. Students may not take photos or post on social media any interactions, photos, or documents of any kind from the clinical setting. Failure to comply with this will result in immediate termination of the practicum for the student and disciplinary action. Mobile phones should be off or on vibrate mode during clinical rounds, meetings and other practicum activities.

STUDENT PERFORMANCE EVALUATION
Assignments and Descriptions
For Infection Prevention Practicum (3 credits)
Attendance: 40%
Research project: 40%
Report (s): 20%

OBJECTIVES AND COMPETENCIES
Public Health Practice
Goal: Students will participate in observational experiences in hospital and community patient care settings to gain experience in infection prevention. Students are expected to:
Competencies
1. Develop knowledge and skills in infectious disease prevention and control.
Objectives
- Review the findings of outbreak investigations and recognize the implications for patient health care and safety.
- Increase knowledge of approaches to implement appropriate practices of patient isolation.
- Effectively and correctly interpret and communicate results in order to promote the practice of sound decision making relevant to infection control.
- Increase skills in the process by which hospital employees and patients are subject to infection control policies.

Clinical Knowledge
Goal: Students will demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care settings. Students are expected to:
Competencies
1. Learn the scientific method of problem solving, evidence-based decision making in infection prevention and control.
Objectives
- Review the literature and develop and knowledge of basic and clinical sciences pertinent to infection control.

Infection Prevention Practicum, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
• Demonstrate resourcefulness in accessing and using information from multiple sources (printed text, electronic media).
• Under supervision, investigate an outbreak and implement a sound plan using the principles of quality improvement and management.
• Apply evidence-based decision making as it pertains to infection control and provide a rational discussion of the approach taken.
• Recognize limitations in his/her clinical knowledge and demonstrate the resourcefulness of acquiring the necessary information in order to promote excellence in infection prevention.
• Correctly interpret and apply knowledge about infection control practices, patient isolation procedures, infection surveillance and bioterrorism/pandemic influenza preparedness.
• Demonstrate a commitment to life-long learning of infectious diseases.

Practice-Based Learning and Improvement

Goal: Students, under supervision, will demonstrate the ability to investigate and evaluate infection prevention cases, to appraise and assimilate scientific evidence, and to continuously improve patient safety and infection prevention. Students are expected to develop skills and habits to be able to:

Competencies
1. Systematically analyze practice, using quality improvement methods, and implement changes with the goal of improving infection control and patient safety.

Objectives
• Student will be able to apply knowledge acquired during the didactic course and infection control practicum in order to suggest approaches for intervention with patients in the inpatient ID services and other targeted sites within the hospital, institution or clinical setting.
• Students will be able to analyze the trends in hospital acquired infections, correctly interpret these results and assist in implementing the corrective measures intended to reduce the number and impact on patient care of these types of infections.
• Students will be able to develop knowledge of evidence-based infection control algorithms minimize hospital infection outbreaks and misinterpretation/misuse of isolation practices.
• Designs improvement goals and corresponding short-term plans and strategies to achieve these goals.

Systems Based Practice

Goal: Students must demonstrate an awareness of and responsiveness to the larger context and system of health care, engage effectively to other resources in the system to provide safe and optimal health care environment. Students will:

Competencies
1. Advocate for improvement of infectious disease prevention, patient, visitors and staff safety.
2. Work in interprofessional teams to enhance patient safety.

Objectives
• Students will be able to participate in outbreak investigations to identify and characterize the nature and epidemiology of the infection and to effectively communicate the conclusions to infection control leadership to change inadequate or harmful system healthcare practices.
• Students will be able to discuss the rationale for patient isolation and infection surveillance as these pertain to patient care and safety.
• Students will be able to correctly interpret trends in hospital acquired infections and address factors contributing to nosocomial infections and measures required to curtail these infections.
• Students will be able to work collaboratively with the infection control practitioners, the infection control director, the directors of the clinical microbiology laboratory and the public health infectious
diseases laboratory, and with other individuals involved in environmental hygiene and sanitation in order to identify nosocomial infection outbreaks and implement an investigation.

- Students will demonstrate the ability to identify, locate and effectively re-communicate critical information to the infection control practitioners and other members involved with infection control and patient safety.

**Professionalism**

**Goal:** Students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles in the conduct of infection prevention. Students will demonstrate:

**Competencies**

1. Compassion, integrity, and respect for others
2. Accountability to patients, institution, and profession

**Objectives**

- Students will demonstrate model professional behavior in addressing colleagues, the infection control practitioners, the infection control director and other individuals involved with infection control and patient safety in both oral and written communications.
- Students will act to promptly report critical information regarding outbreak investigations or patient safety concerns to the infection control practitioners and other individuals involved with infection control and patient safety.
- Students will demonstrate the ability to use culturally-sensitive language in communicating the findings of outbreak investigations and recommendations to the infection control leadership and others involved with infection control, patient safety or direct patient care.
- Students will promote the principles of evidence-based and sound infection control/hospital epidemiology in his/her daily activities.

**Interpersonal and Communication Skills**

**Goal:** Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and teaming with patients, families, and professional associates. Students are expected to:

**Competencies**

1. Communicate effectively with physicians, other health professionals, and health related agencies personnel.
2. Work effectively within an interprofessional team.

**Objectives**

- Students will be able to clearly, efficiently discuss the findings of outbreak investigations and infection surveillance with infection control leadership, other individuals involved with infection control and patient safety, and other providers involved with patient care.
- Students will demonstrate effective listening skills with the infection control practitioners and the infection control director that elicit and provide a sustained and ethically sound relationship with the infection control department.
- Students will always demonstrate a respectful attitude towards the infection control practitioners, the infection control director, and other individuals involved with infection control and patient safety and direct care.
- Students will uphold the principles of providing timely, accurate and legible findings of outbreak investigations and infection surveillance to infection control leadership.
PRACTICUM/PRECEPTORSHIP EXPERIENTIAL LEARNING:
The practicum/preceptorship will provide the students with hands-on experience working within a healthcare infection prevention and control program. This real-world experience will provide the student with an opportunity to build skills in infection prevention and control that could lead to certification from APIC when combined with the 2 credit Infection Prevention didactic course (IDM __). Acceptance into the practicum will be competitive and include an application and interview process with the course directors and selected infection prevention specialists. Priority for the practicum will be given to students who complete the 2 credit didactic course, IDM ____, Infection Prevention and Control in Healthcare Settings.

This component will meet the MPH requirements for a 3 credit practicum. This component will include clinical observation, case-based learning, attendance at rounds, meetings, and other activities that occur within healthcare infection control programs. The aim is to provide the student with opportunities for in-depth learning of specific knowledge, skills, processes, procedures, and policy development of infection prevention practice.

Students will be supervised by infection control physicians, nurses, and other practitioners. Student are expected to participate in the interprofessional team within the specific infection control program and within the healthcare institution or setting. Students are required to complete 200 hours of the practicum/preceptorship. Times and schedule will vary depending on the practicum mentor and supervisors and the needs of the institution.

It is expected that the student will abide by all requirements, expectations, and standards and behavior and attire for the specific institution in which they are completing the practicum/preceptorship.

<table>
<thead>
<tr>
<th>Module</th>
<th>Practicum Clinical Curriculum for Infection Control</th>
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<tbody>
<tr>
<td>Module 1</td>
<td>Introduction to infection control</td>
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<tr>
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<td>Infection reviews</td>
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<td>NHSN definition UTI / CLABSI</td>
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<td>Hand hygiene audits</td>
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<td>draft an educational material for Infection prevention</td>
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<td>Module 2</td>
<td>Construction rounds</td>
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<tr>
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<td>Infection reviews</td>
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<td></td>
<td>NHSN definition Surgical site infection (SSI); Ventilator Associated Pneumonia (VAP)</td>
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<td></td>
<td>ICU Infection Control audits</td>
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<td>Employee Health and vaccination</td>
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<tr>
<td>Module 3</td>
<td>Operating Room rounds</td>
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<td>Present an Infection for review</td>
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<td>Central Sterile Processing (CSP) tour</td>
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<td></td>
<td>Environmental audits</td>
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<td>Investigate possible increased incidence of CDI</td>
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<tr>
<td>Module 4</td>
<td>MDRO Data analysis</td>
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<td>Present an Infection for review</td>
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<td>Endoscope cultures</td>
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<td>Isolation audits</td>
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<td>Draft a policy</td>
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<td>Module 5</td>
<td>Healthcare setting outbreak</td>
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<td>Review of outbreak case studies</td>
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<td></td>
<td>Review of current guidelines and best practices</td>
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<td>Outbreak investigators</td>
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<td>Draft of plan of response</td>
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</tbody>
</table>

UTI; Urinary tract infection, CLABSI; Central Line associated bacteremia, HH; hand hygiene, NHSN; National Health Safety Network, SSI; Surgical site infection, VAP; ventilator associated pneumonia, OR; operation room, CSP; central sterile processing, CDI; Clostridium difficile infection, MDRO; multidrug resistant organisms

ACCOMMODATION FOR STUDENTS WITH DISABILITIES
“"If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term.”“

Infection Prevention Practicum, February 12, 2019
Linda Rose Frank, PhD, MSN, ACRN, FAAN and Mohamed H. Yassin, MD, PhD
ACADEMIC INTEGRITY STATEMENT
All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook [www.publichealth.pitt.edu/home/academics/academic-requirements](http://www.publichealth.pitt.edu/home/academics/academic-requirements). The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

SEXUAL MISCONDUCT, REQUIRED REPORTING AND TITLE IX STATEMENT d)
The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware: A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: [www.titleix.pitt.edu/report/confidentiality](http://www.titleix.pitt.edu/report/confidentiality)

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:
- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.

Other reporting information is available here: [www.titleix.pitt.edu/report-0](http://www.titleix.pitt.edu/report-0)

DIVERSITY STATEMENT
The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following:
- course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;

COPYRIGHT NOTICE
Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See [Library of Congress Copyright Office](https://www.copyright.gov) and the [University Copyright Policy](https://www.pitt.edu/).
HEALTH SCIENCES LIBRARY AND PITT PUBLIC HEALTH LIBRARIAN
Assistance with conducting research related to this course is supported by the Health Sciences Library (www.hsls.pitt.edu). The GSPH, Dr. Barbara Folb can offer assistance as needed in completing course requirement, reports, and documents. www.hsls.pitt.edu/about/staff/profile?name=folb).

UNIVERSITY WRITING CENTER
Writing reports is required for this course. If needed, students may contact the writing center on campus (www.writingcenter.pitt.edu/).
Proposal for Two Areas of Concentration for the MS Degree in Biostatistics: Health Data Science (HDS) and Statistical and Computational Genomics (SCG)
Department of Biostatistics
Graduate School of Public Health
March 2019

(1) Submitted by:
Ada Youk, Associate Professor, Department of Biostatistics
George Tseng, Professor, Department of Biostatistics
Jong Jeong, Professor, Department of Biostatistics
Shyamal Peddada, Chair, Department of Biostatistics

(2) A description of the academic requirements of the new program, a comparison with requirements of similar programs offered by the unit, and a discussion of new courses, internships, research experiences, etc., which must be introduced to offer the program.

The MS degree in Biostatistics currently offered by our department provides rigorous training in applied biostatistical methods and theory. We have successfully trained students for many years and will continue to provide this traditional broad biostatistical training to new generations of students. Our students have been very successful finding good jobs or entering PhD programs. However, the field of Biostatistics is constantly expanding and evolving. Advancements in technology in biomedical and public health research are generating complex high-dimensional and large volume data. Standard biostatistical and computational methods are not always feasible, or even appropriate, for analyzing and interpreting such data. To address the needs of modern high dimensional science, computationally intensive statistical methods have become a fundamental part of scientific research and a critical component in advancing public health. Novel biostatistical methods and computational algorithms are being developed to address these latest challenges. Graduate programs in biostatistics are modifying and expanding their programs to train students to become the next generation of biomedical researchers.

To keep pace with scientific needs, we propose to create two areas of concentration that will complement our current MS program and allow training in high dimensional and ‘omics data: Health Data Science (HDS) and Statistical and Computational Genomics (SCG). These areas of concentration will assure that the Department of Biostatistics will train graduate students suitable for the evolving job market while keeping rigor with traditional methodologies. These areas of concentrations have been under discussion and development by faculty of the Department of Biostatistics for over a year. They include a core set of traditional courses in biostatistics, as well as sets of courses in data science and information science (HDS) and courses and in genomics and computational biology (SCG). The current MS program will incorporate a new Capstone course culminating in an applied thesis that demonstrates the student’s competency in biostatistics as well as oral and written communication skills in general. Students enrolled in an area of concentration will enroll in the Capstone course with the additional requirement that they demonstrate competency in their chosen area of concentration.

The fields of HDS and SCG both require knowledge and training in programming, statistical methodology, and communication skills. Students in either concentration will take courses in statistical theory and methodology, which will provide rigorous statistical foundations. Students in the HDS concentration will take courses in programming languages (e.g. SQL, R, SAS, Python) as well as courses on database analytics, data mining and database management. These computer science related courses will provide foundations for students to store, manage, manipulate and process high dimensional data.
Students in the SCG concentration will take courses in modern computational methods for high dimensional data, genomics and molecular biology. Students will gain a deeper and critical understanding of strengths and limitations of various statistical computational procedures for analyzing, processing and interpreting large-scale data sets (HDS) and genomic data (SCG).

In addition, the required foundational public health courses and elective courses within GSPH provides public health context to our current MS program and will apply for both concentrations. Also critical to our MS degree, regardless of concentration, is the development of communication skills. Students will take a newly created Capstone course that culminates in a written thesis. This written milestone can be based on an internship experience, work on a research project with a faculty member or an analysis of publicly available research data guided by the course mentors. Students will also participate in statistical consulting by either enrolling in the consulting course or working with researchers outside of the classroom as hourly employees. This will allow students to learn how to ask researchers questions about their projects and to help them formulate the scientific question or hypotheses of interest. They will also learn how to develop robust computational and/or statistical methodology as well as effectively communicate analytical results, so that they are statistically and scientifically valid as well as understandable to the researcher who may not have the statistical expertise. Thus, students enrolling in our program will receive a very comprehensive education that will prepare them well to enter the modern job market.

More precisely, the Learning Objectives are as follows:

Graduates of the MS Program in Biostatistics will be able to:

- Address health problems by appropriate problem definition, study design, data collection, data management, statistical analysis, and interpretation of results
- Demonstrate mastery of the theory underlying statistical methods
- Implement and utilize appropriate statistical methods
- Effectively communicate results of biostatistical analyses to scientific and lay audiences
- Apply research design principles to problems in public health
- Recognize strengths and weaknesses of approaches, including alternative designs, data sources, and analytic methods
- Determine the data best suited to address public health issues, program planning, and program evaluation

In addition, students in the following areas of concentration will be able to:

HDS:
- Transform and map data into proper form for meaningful analyses
- Apply methods for big data and machine learning to reveal patterns, trends and associations
- Effectively use a programming language (such as R and/or Python) for data management and statistical analysis

SCG:
- Transform and map genomic data into proper form for meaningful analyses
- Apply appropriate statistical and computational methods for various ‘omics data
- Effectively use a programming language (such as R) to analyze genomic data
A side-by-side comparison of course curriculum for our MS program in Biostatistics and concentrations in HDS and SCG is outlined in the table below:

<table>
<thead>
<tr>
<th>Core Biostatistics Courses (17 cr)</th>
<th>MS Biostatistics with HDS Concentration (40 cr)</th>
<th>MS Biostatistics with SCG Concentration (40 cr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOST 2025 Biostatistics Seminar - 1 cr</td>
<td>BIOST 2079: Introductory Statistical Learning for Health Sciences – 2 cr</td>
<td>BIOST 2055 Introductory High-throughput Genomic Data Analysis – 2 cr</td>
</tr>
<tr>
<td>BIOST 2039 Biostatistical Methods - 3 cr</td>
<td>INFSCI 2725 Data Analytics – 3 cr</td>
<td>BIOST 2079: Introductory Statistical Learning for Health Sciences – 2 cr</td>
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<tr>
<td>BIOST 2043 Introduction to Theory 1 – 3 cr</td>
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<tr>
<td>BIOST 2044 Introduction to Theory 2 – 3 cr</td>
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<td>BIOST 2049 Applied Regression Analysis – 3 cr</td>
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<td>BIOST 2081 Mathematical Methods for Statistics – 3 cr</td>
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<tr>
<td>BIOST 2087 Biostatistics Consulting Practicum – 1 cr</td>
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<tr>
<td><strong>Additional Required Biostatistics Courses (6 cr):</strong></td>
<td><strong>Health Data Science Required Courses (5 cr):</strong></td>
<td><strong>Statistical and Computational Genomics Required Courses (4 cr):</strong></td>
</tr>
<tr>
<td>BIOST 2050 Longitudinal and Clustered Data - 3 cr</td>
<td>BIOST 2079: Introductory Statistical Learning for Health Sciences – 2 cr</td>
<td>BIOST 2055 Introductory High-throughput Genomic Data Analysis – 2 cr</td>
</tr>
<tr>
<td>BIOST 2066 Applied Survival Analysis - 3 cr</td>
<td>INFSCI 2725 Data Analytics – 3 cr</td>
<td>BIOST 2079: Introductory Statistical Learning for Health Sciences – 2 cr</td>
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<tr>
<td><strong>Required Programming Course (2 cr):</strong></td>
<td><strong>Required Programming Course (2 or 3 cr):</strong></td>
<td><strong>Required Programming Course (2 cr):</strong></td>
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<tr>
<td>BIOST 2093 Introduction to SAS Computing - 2 cr</td>
<td>Choose between:</td>
<td>BIOST 2094 Advanced R Programming – 2 cr</td>
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<td>BIOST 2094 Advanced R Programming – 2 cr</td>
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<td>PHARM 5384 Python for Data Management &amp; Analytics – 3 cr</td>
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<tr>
<td><strong>Required School Courses in EPI/Public Health (6 cr)</strong></td>
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<tr>
<td>EPIDEM 2110 Principles of Epidemiology - 3 cr</td>
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<tr>
<td>PUBHLT 2022 Public Health Grand Rounds – 0 credits (required 2 times)</td>
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<tr>
<td>PUBHLT 2011 Essentials of Public Health – 3 cr</td>
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<tr>
<td><strong>Electives (7 cr):</strong></td>
<td><strong>HDS Electives (7 or 8 cr):</strong></td>
<td><strong>SCG Electives (9 cr):</strong></td>
</tr>
<tr>
<td>At least 7 BIOST elective credits must be taken to reach a total number course credits of 40.</td>
<td>Elective credits from the following list must be taken to reach a total number course credits of 40.</td>
<td>At least 9 elective credits from the following list must be taken to reach a total number course credits of 40.</td>
</tr>
<tr>
<td>Courses other than BIOST must be approved by the academic advisor.</td>
<td>BIOST 2063 Bayesian Data Science – 3 cr</td>
<td>BIOST 2063 Bayesian Data Science – 3 credits</td>
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<tr>
<td></td>
<td>BIOST 2093 Introduction to SAS Computing -2 cr</td>
<td>BIOST 2080 Advanced Statistical Learning – 2 cr</td>
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<td>BIOST 2080 Advanced Statistical Learning – 2 cr</td>
<td>BIOINF 2051 Foundations of Bioinformatics – 3 cr</td>
</tr>
</tbody>
</table>
BIOINF 2051 Foundations of Bioinformatics – 3 cr
INFSCI 2160 Data Mining – 3 cr
INFSCI 2710 Database Management – 3 cr
Courses other than those in the above list must be approved by the academic advisor.
This list is subject to change as new course become available.

BIOSC 1940/2940 Molecular Biology – 3 credits
BIOSC 2140 Genomics – 3 credits
CMPBIO 2070 Computational Genomics – 3 credits
HUGEN 2022 Population Genetics – 2 cr
HUGEN 2031 Chromosome and Human Disease
HUGEN 2040 Molecular Basis of Human Inherited Disease
HUGEN 2070 Bioinformatics for Human Genetics – 3 cr
HUGEN 2080 Statistical Genetics – 3 cr
Courses other than those in the above list must be approved by the academic advisor.
This list is subject to change as new course become available.

Capstone (2 cr)

- **Comprehensive exam:** All MS students must pass a written comprehensive examination that will be given once annually at the end of the first year of study in early May. The MS comprehensive exam consists of two short answer components: one for theory and one for applied methods. The exam is proctored and closed book. The exam is based on the core Biostatistics courses and the school required Epidemiology course. These classes are the theory sequence of BIOST 2043/BIOST 2044 and the applied sequence of BIOST 2039/2049 and EPIDEM 2110. These courses must be taken (or officially exempted) and passed with a B or better grade prior to taking the exam. Students must pass both components of the exam to meet the milestone for graduation. Students who fail either part of the examination on the first attempt will be permitted to take that part of the examination a second time. The examination will be offered during the summer after the first year of study only for students who have not passed either part on the first attempt in order not to delay graduation or decisions about continuation in the program. Students who fail either part of the examination on the first attempt may also choose to wait until the following May to retake the necessary part of exam. Per school policy, students will be dismissed from the program after failing the examination twice.

- **Capstone (new course, syllabus attached):** Students will take the newly created Capstone course to meet the thesis milestone. The capstone course is a heavily directed and mentored statistical
data analysis project leading to an ETD formatted thesis and formal oral presentation of the work. The course format has didactic pieces in the classroom setting with assessments as well as independent work outside of the classroom. There will be weekly feedback given to the students on every assigned assessment. The capstone project may be based on student work with a faculty member, access to a dataset with a research question from an outside source, or work done on a student internship. In addition, if none of these options apply to an individual student, open access datasets from previously funded research projects in the department or open access databases such as Gene Expression Omnibus (https://www.ncbi.nlm.nih.gov/geo/) or UCI Machine Learning Repository (https://archive.ics.uci.edu/ml) will also be available for students to use. These datasets will change every few terms to allow for project variability. All projects must have a public health focus. This course will be an intense data analysis and writing course with the goal of rigorous analytic methods, appropriately summarized analysis results with logical, statistically and scientifically valid conclusions packaged into an ETD formatted acceptable thesis document. The Capstone course will ensure that the written thesis milestone demonstrates the student’s competency in biostatistics (and area of concentration) as well as oral and written communication skills in general. The Capstone will be offered every semester as needed.

- **Internships:** While an internship will not be required, we strongly encourage students to find an internship opportunity over their summer break. Several companies and federal agencies offer summer internship opportunities for MS level students.

- **Schedule of classes:** The standard program is 24-month curriculum but can be compressed into an 18-month curriculum. The 18-month schedule also requires that students enter the program with a strong math background so that BIOST 2081 Mathematical Methods for Statistics does not need to be taken.

- **Declaring area of concentration after enrollment:** Because all students take the core BIOST courses, it will be straightforward for students enrolled in the MS Program to apply to an area of concentration at a later date after discussion with their academic advisor and program director.

- **Additional new courses:**
  BIOST 2079 Introductory Statistical Learning for Health Sciences. This course is required by both HDS and SCG concentrations. It covers modern statistical methods for high-dimensional data analysis such as clustering, machine learning, variable selection and dimension reduction. The course will focus on applications in health and genomic data with multiple hands-on computer lab sessions, homework and final project.

  BIOST 2080 Advanced Statistical Learning. This course will be a required elective for both HDS and SCG concentrations. As the second course in statistical learning following BIOST 2079, this course will cover in-depth theory and insight behind statistical methods introduced in BIOST 2079.
(3) The effects, if any, that the proposed program will have on other units of the University.

One potential effect of the SCG area of concentration may be with the MS in Genome Bioinformatics proposed by the Department of Human Genetics within the Graduate School of Public Health. However, it will be very slight as the MS in Genome Bioinformatics focuses on computational pipelines rather than the statistical and computational aspects of genomics, which is the focus of our SCG concentration. The targeted applicant cohort, training content and job market are almost completely different.

Our proposed HDS areas of concentration are Public Health centric. There is no other program in any other unit within the university that has a similar focus as our concentrations, including the MS program in Computational Biomedicine and Biotechnology proposed by the Department of Computational and Systems Biology in the School of Medicine, as their focus is on precision medicine and biotechnology. Thus, we do not adversely affect any other program within the university, either short or long-term. The impact of our areas of concentration on GSPH as well as the Department of Biostatistics will be very positive. These concentrations are very timely given that many other universities already have degrees or concentrations in these areas. In addition, these two new concentrations will increase the visibility of GSPH as well as our department within Pitt as well as outside the University. Most importantly, while our current MS degree trains students that are in demand on the job market, these new concentrations are addressing new and broadening demands in biomedical and public health research for biostatisticians who are also computational scientists.

(4) A discussion of the budget impact of the program, including both new income and new costs (see the Financial Analysis Guidelines)

Our current MS in Biostatistics enrollment is 15 students per year. As described above, we are introducing two new areas of concentration, SCG and HDS. In the first offering of the new areas of concentration, we expect that some current MS students will choose to enroll in one of the proposed areas of concentration. We anticipate that the proposed areas of concentration will bring incremental students in Years 2 and 3. The incremental gross and net tuition are in the table below.

The three new courses being added to our curriculum (Capstone, BIOST 2079, BIOST 2080) will be taught by current faculty at FTEs of 10%. No new faculty will be hired at this time for teaching these particular courses. The Capstone course will be taught by Ada Youk, Jeanine Buchanich and Jenna Carlson. This will be in addition to their current teaching load. BIOST 2079 will be co-taught by George Tseng and Lu Tang. This class is a replacement for a course that Dr. Tseng already teaches so this new course will not increase his teaching load. BIOST 2080 will be taught by Lu Tang. Dr. Tang is currently in protected time fully supported by departmental funds without teaching during the first tenure-track year but will start to teach from the second year. Therefore, the added teaching responsibility will not be an additional expense. Thus, current faculty and staffing are able to meet the demands of the proposed areas of concentration. We view this as a reallocation of resources rather than incremental resources.

We do not anticipate any changes to our current space, facilities or equipment within the Department and School to accommodate the new areas of concentrations. Overall, the new areas of concentration will increase our total tuition dollars brought to the University as well as tuition incentive back to our School and Department.
<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th></th>
<th>Year 2</th>
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<th>Year 3</th>
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<tr>
<td></td>
<td>MS Biostatistics</td>
<td>MS Biostatistics SCG Concentration</td>
<td>MS Biostatistics HDS Concentration</td>
<td>Total</td>
<td>MS Biostatistics</td>
<td>MS Biostatistics SCG Concentration</td>
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<tr>
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<td>$199,264</td>
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* *Tuition is assumed to be a 30/70 mix of In-State and Out-of-State students, consistent with our current student population*

(5) A list of faculty groups and administrators that have been consulted and a summary of their comments on the proposed program.

We have consulted with several departments and schools across campus to provide feedback for our proposed areas of concentration. We worked with the Paul Cohen, the Dean of the School of Computing and Information (SCI) to assure seats for our Biostatistics students in three Information Sciences courses that will be an integral part of the HDS concentration. We have garnered support from several departments in the School of Medicine (Derek Angus, Chair of Critical Care Medicine and Ivet Bahar, Chair of Computational and Systems Biology), as well as the Institute for Clinical Research Education (Doris Rubio, Director) and Departments of Statistics (Satish Iyengar, Chair) and Biomedical Informatics (Gregory Cooper, Vice Chair). Please see attached letters of support. In addition, we have worked closely with our school’s Executive Associate Dean (Eleanor Feingold) and Associate Dean for Education (Jessica Burke) during the creation of this proposal. We have also had discussions with each chair of the departments in our school.
January 14, 2019

To whom it may concern

Dr. Peddada and his colleagues in the Department of Biostatistics are proposing to offer two important MS programs, one in Health Data Science (HDS) and other in Statistical and Computational Genomics (SCG). I very strongly and enthusiastically support their efforts and the introduction of these programs.

As noted in their proposals, large volumes of complex high dimensional data are routinely generated in biomedical researchers in research labs, pharmaceuticals, state and federal agencies etc. Mining these data to understand various health related exposures, outcomes or other characteristics of interest requires sophisticated training in biostatistics and computational methods.

The proposed MS program in HDS is a very well conceived training program that provides strong foundations for a student to succeed in the job market. There is an urgent need for biostatisticians to mine large public health databases to understand patterns of disease progression or exposure to opioids, environmental toxicants, and so on. Horizontal and vertical integration of such large-scale databases and then to answer scientifically valid questions, requires sophisticated training in modern biostatistical and computational methods, which is accomplished by the MS program in HDS. It includes important courses in modern statistical and machine learning methods and Bayesian data science, appropriate computer science courses offered by our School of Computing and Information (SCI), namely, Data Analytics (INFSCI 2725), Data Mining (INFSCI 2160), Database Management (INFSCI 2710), and various electives offered by the Graduate School of Public Health (GSPH) for gaining domain knowledge of interest to the student. To accommodate the students enrolled in the HDS program, we have agreed to block space for up to 10 students per semester from the Department of Biostatistics to take INFSCI 2725, INFSCI 2160 and INFSCI 2710, offered by our school. The Department of Biostatistics will similarly block space for up to 10 students per semester from SCI to enroll in Introductory Statistical Learning for Health Sciences (BIOST 2079), Advanced Statistical Learning (BIOST 2080) and Bayesian Data Science (BIOST 2063). The course requirements, together with summer internship experience, will provide a very strong training for a MS student enrolled in this program. These students will be highly employable as the job market for health data scientists continues to grow at a very fast rate.

The proposed MS in SCG is also very well thought out program that will train students to perform extremely well in the “hot” computational genomics market. Again, as described in their write-up, increasingly, technological advancements in biomedical research is generating complex high-dimensional genomic data. These genomic data play critical role not only in basic biomedical research, but also in pharma in drug discovery research. An important strength of the proposed SCG program is that it will train students to think critically about various computational methods used in genomics. The students will not only have strong computational background but will also have the strong statistical background to understand the strengths and limitations of various methods according to the type of data and underlying statistical design. As in the case of the proposed HDS program, the course work together with summer internship, will provide a very strong training for a student enrolled in this program. These students will also be highly employable as the job market for computational genomics continues to grow at a very fast rate.
The faculty in the Department of Biostatistics are nationally and internationally renowned experts in their fields. They are highly committed to training and research. The department is introducing important relevant courses as well as hiring faculty with strong research programs and commitment to teaching and mentoring students. Thus, students enrolling into these new programs will receive outstanding contemporary education in two of the hottest fields in terms of the job market. The proposed programs are very timely and urgently needed to train the next generation of students in modern biostatistics.

I am also delighted to learn that the department is proposing to change its name from “Department of Biostatistics” to “Department of Biostatistics and Data Science”. Given the direction the department is taking and the current trends in public health research, this change of name of the department is also very appropriate and timely.

The proposed programs, together with proposed name change, will have a great positive impact on student recruitment not only within the Department of Biostatistics and in the School of Public Heath but also overall recruitment to our university. New programs such as these send an important message to potential applicants and granting agencies that various units within the university are modernizing their programs and that we are a university on the go. Thus, not only the reputation, visibility and ranking of the Department of Biostatistics will improve but so will the Graduate School of Public Health as well as the University of Pittsburgh.

I strongly endorse and support these two programs proposed by the Department of Biostatistics.

Sincerely,

[Signature]

Paul R. Cohen
Founding Dean and Professor
School of Computing and Information
February 18, 2019

Shyamal Peddada, Ph.D.
Chair, Department of Biostatistics
University of Pittsburgh
7126 Public Health, 130 DeSoto Street
Pittsburgh, PA 15261

Dear Dr. Peddada:

I am writing in support of the Department of Biostatistics at the University of Pittsburgh creating concentrations in Health Data Science (HDS) and the Statistical Computational Genomics (SCG). Increasingly, a wide variety of organizations, including universities, pharmaceutical companies, insurance companies, government agencies, and others are generating complex, high dimensional health and other data that require specialized methods to analyze and process them. Accordingly, many biostatistics departments are modernizing their M.S. and Ph.D. programs in response to these growing demands. The proposal by the Department of Biostatistics to create concentrations in HDS and SCG is therefore very timely and important as a way for the department and the graduate school of public health to train the next generation of biostatisticians.

The Department of Biostatistics is in a strong position to add these concentrations to its curriculum. It has a track record of training outstanding M.S. and Ph.D. students, who are employed in government, pharma, and universities. The department faculty members are highly regarded internationally and have expertise in areas that are relevant to the proposed concentrations, including statistical genomics and high dimensional data analysis. I am aware that the department also has developed (and is developing) several new courses on topics that include Bayesian Data Science, Statistical Machine Learning, and Spatial Data Analysis, which are very relevant to the proposed concentrations. I believe that the new concentrations will increase further the department and school’s visibility and the number of strong students who apply and matriculate there. These concentrations will also increase opportunities for training grants and other funding opportunities from federal and other agencies.

In summary, I am delighted that the department is planning to introduce these two new concentrations, and I enthusiastically endorse it doing so.

Sincerely,

Gregory F. Cooper, M.D., Ph.D.
Professor of Biomedical Informatics and of Intelligent Systems
Vice Chair, Department of Biomedical Informatics
University of Pittsburgh
To whom it may concern,

Professor Peddada shared with me the proposed curricula for two new MS degrees to be offered by the Department of Biostatistics (one in Health Data Science and the other in Statistical and Computational Genomics). Both these areas are increasingly important in the fields of medicine and the biological sciences. In my role as a department chair in the School of Medicine, I can attest that we are constantly searching for individuals with these skills to join our various research programs. In addition, in my recent role as chair of the search committee for the Chair of Biostatistics (a position now held by Professor Peddada!), it was apparent via my many interactions with the search committee, with a broad swathe of relevant scientists across campus, and with many of the prospective candidates who visited from around the country, that these two areas are emerging priorities deserving of focused study.

As such, it is highly likely that both research institutions and healthcare industries will be increasingly interested in recruiting individuals with Masters level skills in these areas. The proposed programs appear to be contemporary, thoughtful, and led by highly skilled professors. As such, I offer my full endorsement for the programs.

Regards,

Derek C. Angus, MD, MPH, FRCP  
Distinguished Professor and Chair  
The Mitchell P. Fink Endowed Chair  
in Critical Care Medicine
January 10, 2019

Shyamal D. Peddada, PhD
Professor and Chair, Dept. of Biostatistics
University of Pittsburgh
7126 Public Health, 130 DeSoto Street
Pittsburgh, PA 15261

Dear Shyamal:

It is my pleasure to express my full support for your proposal of two new Masters programs, one in Statistical & Computational Genomics and the other in Health Data Science, at the University of Pittsburgh, School of Public Health.

There is a growing demand for educational programs in this area. We recently proposed a Masters degree granting program in the area of Computational Biomedicine and Biotechnology, which will hopefully be approved this month. I believe your programs will nicely complement ours, and I look forward to the opportunity of sharing courses and/or exchanging or co-mentoring students between our programs whenever suitable.

I would like to once again express my enthusiastic support for this important educational endeavor. I look forward to having a strong collaboration between our departments and working together for advancing research and education for training a new generation of researchers/experts in the rapidly emerging fields of quantitative biology, genomics and biomedicine as well as biological and biomedical data science.

Sincerely,

Ivet Bahar, PhD
Distinguished Professor and John K. Vries Chair
Department of Computational and Systems Biology
School of Medicine, University of Pittsburgh
3064 BST3, 3501 Fifth Avenue, Pittsburgh, PA 15213
Phone: 1.412.624.7615 // Fax: 1.412.648.3163
bahar@pitt.edu // http://www.csb.pitt.edu/
Lab: http://www/csb/pitt.edu./Faculty/bahar/
Monday, February 18, 2019

Dr. Shyamal Peddada, Chair
Department of Biostatistics
Graduate School of Public Health

Dear Shyamal,

The Department of Biostatistics is proceeding very methodically in modernizing the department while maintaining their strengths and reputation in traditional biostatistics. First, they have faculty with appropriate expertise in modern high dimensional data, statistical genomics, and causal inference. Second, they are introducing courses in modern topics such as statistical machine learning, Bayesian data science, spatial models etc. The department already has a very robust international reputation as an academic department with faculty having strong teaching and research programs.

The proposed concentrations in Health Data Science (HDS) and in Statistical and Computational Genomics (SCG) are much needed and very timely. The Provost’s office has been very encouraging and are committed towards such efforts. These concentrations are very innovative and contemporary.

In my view, the department has done an excellent job preparing this proposal. With the proposed new concentrations, the department and consequently Graduate School of Public Health, are poised to enhance their reputation globally and thus grow in student enrollment and research opportunities.

As the director of the Institute for Clinical Research Education, I am delighted to see the department move in this direction. We often have trainees inquire about training in data science, such as analyzing big data and the use of machine learning to develop algorithms in health care. The concentrations that the department are developing are in harmony with the needs of our trainees. I foresee several of our trainees pursuing training in these areas.

I congratulate the department for their methodical approach in developing these new programs and I very strongly and enthusiastically endorse these programs.

Sincerely,

Doris M. Rubio, PhD
Professor of Medicine, Biostatistics, Biomedical Informatics, Nursing, and Clinical and Translational Science
Director, Institute for Clinical Research Education
Associate Vice Provost for Faculty
Shyamal Das Peddada, PhD
Chair, Department of Biostatistics
University of Pittsburgh
Pittsburgh, PA 15261

Dear Shyamal,

I am pleased to support of your two proposed new MS degree programs in Health Data Science (HDS) and Statistical and Computational Genomics (SCG). The need for careful analysis of the huge amounts of complex data, often in high dimensions, is increasingly important in biomedical research. Your proposed programs will help to train the current and next generations of biostatisticians to meet these challenges. The programs are quite comprehensive, with courses across Public Health, Arts and Sciences, and SCI. Furthermore, the thesis requirement gives students an opportunity to focus their training on a particular problem and to sharpen their writing skills.

I wish you all the best with both of these programs.

Sincerely,

Satish Iyengar
Professor and Chair
The capstone course is a heavily directed and mentored statistical data analysis project course leading to an ETD formatted thesis and formal oral presentation of the work. This course will be an intense data analysis and writing course with the goal of producing an ETD formatted thesis document containing rigorous analytic methods, appropriately summarized analysis results with logical, statistically and scientifically valid conclusions. The Capstone course will ensure that the written thesis milestone demonstrates the student’s competency in biostatistics (and area of concentration if applicable) as well as oral and written communication skills in general.

**Course learning objectives:**

By the end of this course, a student should be able to:

1. Formulate a research question of interest and translate into clear, testable statistical hypotheses
2. Generate an appropriate data analysis plan to answer the question of interest and test their hypotheses
3. Justify and carry out appropriate standard modelling procedures using real study data, including model interpretation and assessment of model adequacy
4. Develop oral and written communication skills through the description of analytic strategies and the summarization and interpretation of results

**Course Director/Instructor (20%):**

Ada Youk, Ph.D.
Associate Professor
7129 Public Health
Phone: 412-624-5451
E-Mail: ayouk@pitt.edu

**Course Instructors (10% each):**

Jeanine Buchanich, Ph.D.
Associate Professor
7132 Public Health
Phone: 412-624-2423
E-Mail: jeanine@pitt.edu

Jenna Carlson, Ph.D.
Assistant Professor
7130 Public Health
Phone: 412-383-0605
E-Mail: jnc35@pitt.edu

**Time:**

TBD
**Prerequisite:**
Passing of MS BIOST Comprehensive Exam

**Instructor Office Hours:**
TBD

**Recommended Text Books:**
Textbooks are NOT required

**Software:**
Students will choose the statistical software they utilize

**Grading:** H/S/U utilizing specifications grading

Each assignment is graded as Pass/Fail and must be resubmitted (after receiving feedback) as many times as needed to achieve a Pass. Rubrics will be used for each assignment as well as the oral presentation. An assignment that meets the specifications of the rubric on will be considered a pass.

To receive a U in this course, at least one assignment was not passed within 5 revisions.
To receive an S in this course, all assignments must be passed within 5 revisions.
To receive an H in this course, all assignments must be passed with only 1 revision.

**Assessments:** The following assessments will be given throughout the term to allow students the opportunity to practice and receive feedback. These assessments are not graded, but will allow the instructor to expand or reduce the scope of the students project as well as provide additional support if needed.

1. **Diagnostic Assessment:** This assessment is a combination of a writing performance task and an introduction discussion. At the beginning of class instructors will ask that each student write a brief summary of their understanding of a thesis and what the capstone class is meant to do. Students will submit the document (either hard copy or via Courseweb) after about 10-15 minutes and then the class will discuss. First discussion will focus on student perceptions of the capstone class purpose and then talk about the goals of the course as well as what students need to do to be successful and meet the milestone for their degree. After class, course instructors will edit the submitted summary and return to students with feedback on the writing (not necessarily the content).

2. **Self confidence survey:** This survey will be used at the beginning of the term to assess how the students rate their confidence for completing the thesis project. This will allow the instructors to gauge which students they need to keep a closer watch over and be more proactive in probing these students for work and knowledge checks.

3. **Project prospectus:** The project prospectus will be given several weeks into the term
after the students have selected their projects. Instructors will give a set of questions that each student will address to summarize the research question they have selected and the statistical methods they will use to assess the question in a brief summary report. Instructors will use this information to help reduce or expand the scope of the work. They will also use this information to make sure the student is on the correct path in terms of what will be expected in the thesis.

4. Knowledge and skills checklist:

5. Case Study Assessments: There will be four case study articles on Courseweb assigned for reading throughout the semester. For each case study, students will read the article prior to class and will answer directed prompts to paraphrase pieces of research articles during class discussion. Case studies will be used as learning tools for students to see how to properly paraphrase and not plagiarize as well how to properly write each type of section. The focus of each case study is as follows:

   Case Study 1 – literature reviews
   Case Study 2 – statistical analysis plans
   Case Study 3 – summarizing study results
   Case Study 4 – synthesizing the research and previous literature into a discussion section with concluding remarks

6. Mid-Semester Assessment: Course Survey. This one time survey will assess the following:

   Are the case studies and directed paraphrasing activities helpful?
   How is the pace of the course?
   Has the level of instructor interaction been sufficient?
   Do you feel as if you will be able to complete your thesis given the structure and pace of the course?

   Information gathered from this survey will allow instructors to adjust the pace or add more instructor interaction and didactic material if necessary.

Assignments: The assignments are writing tasks and analyses of data that will culminate into the final document, which is an EDT formatted thesis as well as an oral presentation of the thesis.

Assignment 1 - Choose project data and complete the project prospectus. Due before week 3.

Assignment 2 - Formulate research question, submit and get feedback. Due before week 4.

Assignment 3 - Extract necessary data to create an analysis file and generate descriptive statistics to help inform the data analysis plan. Due before week 6.
Assignment 4 - Write literature review for proposed project, submit and get feedback. Due before week 6.

Assignment 5 - Write the statistical analysis plan for project, submit and get feedback. Due before week 7.

Assignment 6 - Submit knowledge and skills checklist. Due before week 7.

Assignment 7 - Follow the analysis plan to complete the necessary analyses. Due before week 10.

Assignment 8 - Prepare a written summary of analysis results from wks 7-9, submit and get feedback. Due before week 11.

Assignment 9 - Write the discussion and conclusion of project work, submit and get feedback. Due before week 12.

Assignment 10 - Prepare EDT document, meet with Joanne in Student Affairs to assess formatting. Due before week 14.

Assignment 11 - Submit EDT document (due before week 15), prepare final presentation, submit and get feedback. Due before week 14.

**Thesis**
All 11 assignments will lead to the final milestone of the EDT formatted thesis with oral presentation.

**Data for Project**
The capstone project may be based on student work with a faculty member, access to a dataset with a research question from an outside source, or work done during a student internship. In addition, if none of these options apply to an individual student, open access datasets from previously funded research projects in the department or open access databases will also be available for students to use. All projects must have a public health focus.

**Timing**
Students will take the capstone in the semester that they intend to graduate. Successfully passing all of the assignments will lead to successful completion of the Capstone. Successful completion of the Capstone will allow the student to pass the final program milestones of successful thesis submission and thesis defense (oral presentation). Appropriate progress in the Capstone is defined as passing all assignments up through assignment 8 on time. Students who are making appropriate progress, but do not complete assignments 9-11 in a timely fashion, will be given an incomplete grade. Graduation for these students will be delayed until the next semester graduation date. For students who are not making appropriate progress by assignment 9, may consider withdrawal from the course.

**Accommodation for Students with Disabilities**
If you have any disability for which you are requesting an accommodation, please notify the instructor and Disability Resources and Services, 140 William Pitt Union (412-648-7890) during the first two weeks of the term ([http://www.studentaffairs.pitt.edu/drs/](http://www.studentaffairs.pitt.edu/drs/)). DRS will verify your disability and determine reasonable accommodations for this course.
**Academic Integrity**
All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook [www.publichealth.pitt.edu/home/academics/academic-requirements](http://www.publichealth.pitt.edu/home/academics/academic-requirements). The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

**Diversity**
The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted. If you feel uncomfortable or would like to discuss a situation, please contact any of the following:

- the course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;
- the University’s Office of Diversity and Inclusion at 412-648-7860 or https://www.diversity.pitt.edu/make-report/report-form (anonymous reporting form).

**Sexual Misconduct, Required Reporting, and Title IX**
The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware: A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: [www.titleix.pitt.edu/report/confidentiality](http://www.titleix.pitt.edu/report/confidentiality)

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:

- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121. Other reporting information is available here: [www.titleix.pitt.edu/report-0](http://www.titleix.pitt.edu/report-0)

Statement from the Department of Gender, Sexuality, and Women's Studies
[This statement was developed by Katie Pope, Title IX Coordinator, in conjunction with GSWS instructors.]
# Biostatistics XXXX
## Capstone
### Course Outline

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<tr>
<th>Week</th>
<th>Learning Objectives</th>
<th>Instructional Activities</th>
<th>Assessments</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-4</td>
<td>In class: Intro and course description</td>
<td><strong>Diagnostic assessment</strong> – writing performance task and introduction discussion</td>
<td>After this class, students will choose their data and complete the project prospectus. Due before week 3.</td>
</tr>
<tr>
<td>2</td>
<td>1-3</td>
<td>In class: Introduction of possible data sets with guest speakers to describe each one (this may be more than 1 lecture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1-2</td>
<td>In class: Case study - how to formulate research question (will have to choose dataset and think about their possible question prior), discuss in class</td>
<td></td>
<td>Formulate research question, submit and get feedback. Due before week 4.</td>
</tr>
<tr>
<td>4</td>
<td>1-2</td>
<td>Self-directed</td>
<td></td>
<td>Extract necessary data and generate descriptive statistics to help inform the data analysis plan. Due before week 6.</td>
</tr>
<tr>
<td>5</td>
<td>1-2</td>
<td>In class: Discuss and dissect examples of literature reviews</td>
<td><strong>Classroom Assessment</strong> - Directed paraphrasing will be used in class to help inform the writing of the literature review.</td>
<td>Write literature review for proposed project, submit and get feedback. Due before week 6.</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>In class: Case study – how to write a methods section and statistical analysis plan, given statistical paper, pull out the methods, given different scenarios, write example statistical plans, discuss in class</td>
<td><strong>Classroom Assessment</strong> - Directed paraphrasing will be used in class to help inform writing a data analysis plan.</td>
<td>Write the statistical analysis plan for project, submit and get feedback. Due before week 7. Submit knowledge and skills checklist. Due before week 7.</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>Self-directed</td>
<td>Mid semester assessment: Course progress survey completed via Courseweb.</td>
<td>Follow the analysis plan to complete the necessary analyses. Due before week 10.</td>
</tr>
<tr>
<td>8</td>
<td>3</td>
<td>Self-directed</td>
<td></td>
<td>Follow the analysis plan to complete the necessary analyses. Due before week 10.</td>
</tr>
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</tr>
<tr>
<td>9</td>
<td>3</td>
<td>Self-directed</td>
<td>Follow the analysis plan to complete the necessary analyses. Due before week 10.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>4</td>
<td>In class: Case study - summarizing results, given scenarios, summarize results and discuss in class.</td>
<td>Classroom Assessment - Directed paraphrasing will be used in class to help inform writing analysis results. Prepare a written summary of analysis results from wks 7-9, submit and get feedback. Due before week 11.</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>4</td>
<td>In class: Case study - discussions/conclusions, given scenarios and sets of results, generate concluding remarks, discuss in class.</td>
<td>Write the discussion and conclusion of project work, submit and get feedback. Due before week 12.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>4</td>
<td>Self-directed and in class. In class will be practice oral presentations</td>
<td>Prepare EDT document, meet with Joanne in Student Affairs to assess formatting. Due before week 14.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4</td>
<td>Self-directed and in class. In class will be practice oral presentations</td>
<td>Submit EDT document (before week 15), prepare final presentation, submit and get feedback. Due before week 14.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>4</td>
<td>In class: present 20 minute final presentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>4</td>
<td>In class: present 20 minute final presentation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PROPOSAL OF NEW PROGRAM
PROCEDURE CHECKLIST

A COPY OF THIS CHECKLIST MUST BE SUBMITTED WITH THE PROPOSAL AT EACH LEVEL

Name of New Proposal
Revisions to the Behavioral and Community Health (BCHS) MPH program

[ ] Name of Faculty and Department Submitting Proposal

Name  Martha Ann Terry, PhD Department Behavioral and Community Health Sciences

[ ] DATE SUBMITTED TO DEPARTMENT CHAIR December 5, 2018

[ x] SIGNATURE AND DATE OF APPROVAL BY DEPARTMENT CHAIR

13 Dec 2018

________________________________________DATE_____________________

[ ] DATE SUBMITTED TO EPCC

[ ] SIGNATURE AND DATE OF APPROVAL BY EPCC

________________________________________DATE_____________________

[ ] DATE SUBMITTED TO PBPC

[ ] SIGNATURE AND DATE OF APPROVAL BY PBPC

________________________________________DATE_____________________

[ ] DATE SUBMITTED TO GSPH COUNCIL

[ ] SIGNATURE AND DATE OF APPROVAL BY GSPH COUNCIL

________________________________________DATE_____________________

[ ] DATE SUBMITTED TO SVC/PBC

[ ] DATE OF APPROVAL BY SVC/PBC

________________________________________

[ ] DATE OF PRESENTATION GIVEN TO GRADUATE COUNCIL

________________________________________

[ ] DATE OF APPROVAL BY PROVOST

If this is a new DEGREE, it must be sent to the Council of Trustees.
[ ] DATE SUBMITTED TO THE COUNCIL OF TRUSTEES __________

[ ] DATE OF APPROVAL BY THE COUNCIL OF TRUSTEES ________
Proposal for Modifications to the Master of Public Health Degree Program  
Department of Behavioral and Community Health Sciences  
Graduate School of Public Health  
University of Pittsburgh

1. A. Overview

a. Individuals Initiating the Proposal

Steven Albert, PhD  
Professor and Chair, Department of Behavioral and Community Health Sciences  
6129 Parran Hall, GSPH  
412.624.3100  
smalbert@pitt.edu

Martha Ann Terry, PhD  
Associate Professor, Department of Behavioral and Community Health Sciences  
6137 Parran Hall, GSPH  
412.624.5887  
materry@pitt.edu

b. Responsibility Center

Department of Behavioral and Community Health Sciences  
Graduate School of Public Health

c. Program to Be Modified

Master of Public Health (MPH), Behavioral and Community Health Sciences (BCHS)

d. Department Affected by the Proposed Program

Department of Behavioral and Community Health Sciences

e. Date of the Proposal: July 25, 2018

1. B. Rationale for Program Modifications

The current core curriculum for the MPH was initially created in 2005, in response to new leadership in the Department of Behavioral and Community Health Sciences and demands of the field. That course of study was modified in 2012, after discussions with students about course redundancy and knowledge they felt was critical for employment. Currently, the departmental core curriculum consists of the following:

a) BCHS 2504 Introduction to Health Communication (3 credits) – Dr.
In addition, all students complete six school-wide core courses, several electives, and a 200-contact hour practicum and a master’s essay or thesis.

In 2016 BCHS invited members of an external review committee to look at the teaching, research and service aspects of the department. The resulting report highlighted some areas for improvement in the curriculum and prompted a review of the required coursework. In a nine-month process, committee members (Jessie Burke, Patricia Documet, James Egan, Elizabeth Felter, Christina Mair, Martha Terry, Jeanette Trauth, and BeLinda Berry, student representative) explored similar programs at other schools and listened to feedback from students. Two messages were clear: Students wanted more flexibility in their coursework, and they wanted courses that taught them practical skills that would make them more employable.

Simultaneously with this departmental curriculum review, changes were being introduced to the school-wide (Graduate School of Public Health – Pitt Public Health) core curriculum, due to new competency requirements issued by the Council on Education in Public Health (CEPH), the school’s accrediting body. These changes meant some minor adjustments to BCHS core courses, which were easily accomplished since the departmental curriculum was undergoing review.

The review committee recommended that the required core for BCHS MPH students be reduced from its current 15 credits to nine credits and that students be given latitude in choosing a minimum of six credits from an approved list of courses, with additional credits earned in courses of the student’s choosing, to add up to at least 45 credits, the program’s minimum.

1. C. Description of the Proposed Modified Program

As a result of this process, the committee proposes the following core curriculum for the BCHS MPH program:

a) BCHS 2520 Theories of Health Education and Health Promotion (1 credit) – Dr. Jeanette Trauth, fall/spring;

b) BCHS 2992 Systems Theories and Approaches (1 credit) – Dr. Stina Mair, fall/spring;
c) BCHS 2990 Social Dynamics (1 credit) – Dr. Steve Albert, fall/spring;
d) BCHS 2525 Introduction to Applied Research Methods (3 credits) – Dr. Patricia Dickey, fall/spring;
e) BCHS 2554 Introduction to Community Health (3 credits) – Dr. Martha Ann Terry, fall; Dr. Chelsea Pallatino spring instructor.

All MPH students must take these five courses, adding up to 9 credits. They must also create and maintain an ePortfolio and complete a 200-contact hour practicum and a master’s essay or thesis. In addition, students will choose a minimum of six credits from the following approved list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCHS 2504 Health Communication</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2515 Worksite Health Promotion</td>
<td>TBD</td>
<td>2</td>
</tr>
<tr>
<td>BCHS 2523 Program Plan &amp; Proposal Writing</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2524 Overview of Health Equity</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2526 Hlth Equity Research: Methods/Interventions</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2558 Health Program Evaluation</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2572 Risk Communication</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 2608 Intro to CBPR</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>BCHS 2609 Translating Research for Policy and Practice</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>BCHS 2610 Concept Mapping</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>BCHS 2612 Project Management</td>
<td>Fall</td>
<td>2</td>
</tr>
<tr>
<td>BCHS 2991 Multilevel Analysis</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>BCHS 3002 Survey Methods</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 3003 Advanced Evaluation Techniques</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BCHS 3015 Comm Mapping &amp; Intro Spatial Analysis</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>PIA 2730 Community Development &amp; Focus Groups OR</td>
<td>Spring</td>
<td>1.5</td>
</tr>
<tr>
<td>NURS 3055 Community Development &amp; Focus Groups</td>
<td>Summer</td>
<td>1.5</td>
</tr>
</tbody>
</table>

These changes will go into effect in the fall of 2018, by which time the school is required to have in place all the school-wide core curriculum revisions.

1. **D. Short- and Long-Term Effects of the Proposed Changes on Other University Programs**

Other University programs that will be impacted by these changes are the joint MPH/MSW and MPH/PhD (Social Work) programs, the joint MPH/PhD (Anthropology) program, and the joint programs with GSPIA (MPH/MID, MPH/MPA, MPH/MPIA). Ability of students to complete any of these joint programs will not be jeopardized since absolute required credits are fewer, and students have latitude to choose six credits of “required” work. The MPH/MSW students will be affected the most, since they will no longer be granted exemptions for BCHS 2525. This is not due to BCHS MPH curriculum changes; rather, it is due to new assessment guidelines put in place by CEPH, requiring that all competencies be assessed in coursework. BCHS 2525 is the course in which all BCHS MPH students will be
assessed for their ability to select and apply qualitative methods, analyze qualitative data and interpret them for application to program and policy development.

1. **E. Evaluation Procedures to Assess Attainment of Objectives Related to the Proposed Changes**

Implementation of the program changes will be evaluated three ways:

1) Current students will be invited to complete a Qualtrix survey in December 2018 that will outline the changes to the program and ask them to rate how responsive the changes were to suggestions they requested. Of particular interest will be the issue of being able to have more latitude in course choice.

2) New students (those matriculating in the fall of 2018) will be asked to complete a Qualtrix survey in early January 2019 that will inquire about their opinions on the latitude in course choice that the new program offers and the degree to which they feel they were advised adequately about their options.

3) BCHS faculty will be asked to complete a Qualtrix survey in the early fall of 2018 and again in January 2019 to identify the number of advisees they have, if they are advisors for joint degree and certificate students, and if advising materials in the MPH handbook have provided enough information about course order, requirements, and when appropriate, joint program and certificate requirements.

Data collected from these three groups of users will suggest adjustments to advising materials, including the checklist and the handbook, and may help identify strategies for making the new program more useful for students.

1. **F. Analysis of the Impact of Changes on Staff and Faculty**

The impacts of these changes are as follows:

a) A new course, BCHS 2992 Systems Theories and Approaches, has been designed and approved by the Educational Policies and Curriculum Committee (EPCC);

b) BCHS 2520 Theories of Health Education and Health Promotion has undergone major revisions related to the reduction in credits from 3 to 1 and has been approved by EPCC;

c) Moving BCHS 2504 and BCHS 2523 to the “required electives” tier of courses frees the instructors (Felter and Hawk, respectively) to develop other courses that align with BCHS’ desire to provide students with more hands-on skills and experience.

1. **G. Three-Year Budget**

Projected budgets for teaching core curriculum:

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY19</td>
<td>$31,496</td>
</tr>
<tr>
<td>FY20</td>
<td>$32,137</td>
</tr>
<tr>
<td>FY21</td>
<td>$32,793</td>
</tr>
</tbody>
</table>
There are limited financial savings as all faculty, with the exception of Chelsea Pallatino, have their primary appointments in BCHS and receive no supplemental payments for teaching core courses.

1. H. Faculty Groups and Administrators Consulted

Those consulted about these changes include the MPH Curriculum Review Committee (see 1.B.) and the BCHS faculty as a whole.

2. Additional Information
The proposed Professional Development Seminar is designed to optimally prepare students to enter the professional health industry workforce. This course would be required for all students pursuing our professional degree programs, the Master of Health Administration (MHA) and the Master of Public Health in Health Policy and Management (MPH-HPM). The course would fall in the first year of the MHA and MPH-HPM curricula, and would be taught as a 0-credit, pass/fail course. Thus, no changes are made to the overall number of credit hours required for the degrees, nor would there be any change to the mix of required and elective credit hours.

The primary goal of the Professional Development Seminar is to help ensure that all students fully utilize the career services provided by the university, are exposed to the broad array of settings and roles within the health industry, and gain exposure to health industry professionals from our key external stakeholder organizations. This proposed course addresses specific specialized accreditation criteria that are required through the MHA accreditation agency, the Commission on Accreditation of Healthcare Management Education (CAHME). The course is designed to enhance our graduation and placement outcomes that are also required to be reported by CAHME. The MPH-HPM Program Director feels strongly that the course would greatly benefit the MPH-HPM students, and the course also supports the attainment of the similar accreditation criteria required by the Council for Education on Public Health (CEPH).

Specific CAHME criteria of interest, addressed by this proposed course, are:

**Criterion II.A.1.** “The Program will make publicly available complete and accurate information regarding its mission; application process; the competencies that form the basis for its curriculum; the content and sequence of its curriculum; teaching, learning and assessment methods; outcomes measures including degree completion and employment rates; and differences among accredited degree offerings.”

The accrediting body requires us to publicly make publicly available our graduation rate and our placement rate. These outcomes are available for prospective students and prospective employers when judging the quality of the Master of Health Administration program. The Professional Development Seminar is designed to make the students more competitive for the job market upon graduation, which will help improve our placement rate (and thereby draw a stronger applicant pool and a larger network of prospective employers).

**Criterion II.A.3.** “The Program will ensure that all students are provided access to academic advising, career counseling, and other support services and that these services are evaluated regularly as a part of the Program’s continuous improvement.”

While all MHA students currently have access to career counseling and other support services, the students are not currently required to seek out these services. The Professional Development Seminar will enable us to coordinate directly with the Career Services Office to ensure that all students utilize the services, thereby remaining in compliance with the accreditation requirements. Ensuring that all students utilize career services in a coordinated and comprehensive manner (e.g. resume workshops, mock interviewing workshops, career and job search advice, networking skills, etc.) helps verify that our students are optimally competitive when entering the job market. Plus, this coordinated approach frees up valuable time to allow the
Career Services Office to focus on students within the other departments within the Graduate School of Public Health.

**Criterion II.A.5.** “The Program will ensure that graduates’ career preparedness is monitored, documented and used for continuous improvement.”

In particular, one of the review elements of this criterion seeks to determine if students obtain placements consistent with Program mission and goals. The Mission Statement for the MHA program is: "The mission of the Masters in Health Administration (MHA) Program is to provide students with the competencies necessary for early to mid-level management positions and to provide the foundation for subsequent professional development, leadership and executive management in organizations involved in the delivery or financing of health care services.” Historically, our students have focused on placements within hospital settings. The placement outcomes therefore do not align with the mission statement, as our students are not currently exposed to many subsectors within the “delivery or financing of health care services”. The Professional Development Seminar fills this void by giving students exposure to health insurance companies, long-term care organizations, physician practices, consulting firms, international healthcare organizations, etc. Gaining exposure to a broader range of organizations within the industry provides students with more options upon graduation. Creating more options assists students with more quickly identify the roles and companies that best fit their career interests, which can enable them to compete better for jobs (hence improving our placement rate).

**Criterion III.B.3.** “The Program will provide experiences for students to gain an understanding of, and to interact with, a variety of healthcare professionals and organizations.”

Lastly, the Professional Development Seminar exposes students to a greater variety of professionals and organizations than is currently addressed within the courses that make up the curriculum. The proposed course will provide exposure to providers, nursing staff, functional area experts (e.g. finance, supply chain, performance improvement, etc.), entrepreneurs, policymakers, analysts, etc. The proposed course will also provide exposure to nursing homes, assisted living centers, medical group practices, biotech firms, insurers, governmental agencies, policy think tanks, etc.

In short, the proposed course enriches the existing course infrastructure by helping meet the specialized accreditation requirements outlined in the accreditation standards of the Commission on Accreditation of Healthcare Management Education. Moreover, the proposed course enhances the professional development of our students, better prepares them for the workforce, makes them more competitive in the job market, and helps them find the most optimal fit within a large, complex industry that provides many options besides just hospital settings. It accomplishes these goals without placing additional academic requirements on the students, nor does it necessitate eliminating existing courses. This particular zero-credit course is structured in a manner consistent with peer programs around the country that are highly ranked and CAHME-accredited.
Educational Policies and Curriculum Committee  
Graduate School of Public Health  
University of Pittsburgh  
(Revised: 6/7/2018)

REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES

1. General Instructions:
   a. Faculty should submit this form and the associated syllabus following the Pitt Public Health Syllabus Guidelines and the Syllabus Checklist (on pages 4 and 5) by e-mail to Patricia Docunet, Chair (pdocunet@pitt.edu) and Robin Leaf, EPCC Staff Liaison (ral9@pitt.edu). If you choose not to include all the information detailed on the Syllabus Guidelines in your course syllabus for distribution to students, please attach this information to the proposal.
   b. The initiating Department is asked to submit one hard copy of this completed form with the proper signatures, syllabus and other materials (if any) to Robin Leaf in Student Affairs at least one week prior to the EPCC meeting. If this target date is not met, the proposal will be deferred for consideration at the next meeting scheduled.
   c. You will be contacted by the EPCC Chair or the EPCC Staff Liaison to schedule a presentation and discussion of your program/course proposal with the Committee, if possible at the next scheduled EPCC meeting.

2. Review based on the following (check all which apply):
   X New course, not previously approved
   ___ Course title change
   ___ Cross-listing only
   (Specify academic unit & course number):
   ___ Course modification (major)
   ___ Special topics course content
   ___ Pitt Public Health Core Course
   ___ Practicum, internship, field placement

3. Course designation:
   Course Number ___TBD___ Title _HPM Professional Development Seminar_ Credits ___0___

4. Cross-listing:
   If you want to cross-list this course in any other Pitt Public Health department or any other school of the University, specify which department(s) and School(s) and provide brief justification.
   ___N/A___
5. **Course Instructors:**

(Indicate type of Pitt Public Health faculty appointment,* and percentage of total course time/effort anticipated. For any instructor who does not hold a Pitt Public Health faculty appointment, indicate her/his title and affiliation.)

a. Principal Instructor: Kevin Broom, PhD, 75%, primary appointment in Health Policy and Management

b. Co-instructors (if any): Elizabeth Van Nostrand, JD, 25%, primary appointment Health Policy and Management

6. **Statement of the course for Course Inventory.** Include purpose of course; summary of prerequisites, if any; general course content; and method of conducting course (e.g., lecture, laboratory, field work, etc.).

The Professional Development Seminar is designed to optimally prepare students to enter the health industry workforce. This course will be required for all students pursuing our two professional graduate degree programs, the Master of Health Administration (MHA) and the Master of Public Health in Health Policy and Management (MPH-HPM). The primary goal of the Professional Development Seminar is to help ensure that all students fully leverage the career services provided by the university, are exposed to the broad array of settings and roles within the health industry, and gain exposure to health industry professionals from our key external stakeholder organizations.

The Professional Development Seminar consists of year-long, interactive sessions designed to prepare students to become successful leaders within the health industry upon graduation. Each semester consists of at least 10 sessions grouped into two major components that will collectively equip students with a set of essential skills: (1) Workforce Preparation and (2) Professional Development. Each session will include a 60-90 minutes of developmental activities, workshops, presentations and open discussions. Each session will be led by one or more facilitators, guest speakers, or moderators/panelists. Upon conclusion of the facilitated portion of each session, a 10-15 minutes of questions and answers, during which students are expected to ask pertinent questions and engage in the productive discussions aimed at enhancing your career preparedness.

This course design addresses specialized accreditation criteria required through the MHA accreditation agency, the Commission on Accreditation of Healthcare Management Education (CAHME). The course also supports the attainment of related accreditation criteria required by the Council for Education on Public Health (CEPH).

7. **Student enrollment criteria/restrictions:**

a. Indicate any maximum or minimum number of students and provide justification for this limitation.

Enrollment will be 30-40 students per year, with a targeted enrollment of 20-25 MHA and MHA/MBA students, and 10-15 MPH-HPM and JD/MPH-HPM students.

b. If admission is by permission of instructor, state criteria to be applied.

Students must be enrolled in the MHA, MHA/MBA, MPH-HPM or JD/MPH-HPM programs.

c. Provide a brief description of any prerequisite skills or knowledge areas that are necessary for students entering this course, including any specific course prerequisites or equivalents.

No prerequisites.

---

* The principal instructor for any Pitt Public Health course must have a primary, secondary or adjunct appointment in the school.
8. Course schedule and allocation of hours:
   a. Number of course hours per session _1.5_  Sessions per week _1_  Weeks per academic term _10-12_
   b. Approximate allocation of class time (hours or %) among instructional activities:
      Lectures _20%_  Seminars _70%_  Recitations ______  Field work ______  Laboratory ______  Other (specify):  Interactive Workshops 10% ______
   c. Term(s) course will be offered: Fall _X_  Spring _X_  Summer Term _____  Summer Session ______

9. Grading of student performance:
   Indicate the grading system to be used (A, B, C, etc.; H, S, U); provide statement justifying use of system other than letter grade.
   Pass/Fail

10. On-line course delivery:
    Indicate the extent to which you will be using on-line instructional methods in teaching this course by checking all of the options below which apply:
    _X_  I plan to use the course management aspects of CourseWeb/ Blackboard (or equivalent), e.g., grade book, announcements.
    _____  I plan to use the interactive features of CourseWeb/Blackboard (or equivalent), e.g., discussion board, etc.
    _____  I have designed the course for remote (off-site) learning with little/no classroom attendance required.
    _X_  I do not plan to use on-line instruction methods for this course (briefly explain)

The course will be face-to-face, with no online component.

11. Relevance of course to academic programs and curricula:
    a. Describe how this course contributes to learning objectives specified for the curriculum of one or more Pitt Public Health degree or certificate programs. Indicate whether course is required for any specified degree or certificate.

   The course will be directly supportive of the MHA Competency Model, as required under Criterion III.A.1 of the Commission on Accreditation of Healthcare Management education. The course will support the attainment of the following competencies within the MHA Competency Model and the MPH-HPM Competency Model:
   - Communication
   - Systems Thinking
   - Professionalism
   - Self-Development
   - Strategic Orientation

   The course will be required for both the MHA and the MPH-HPM programs.
11. **Relevance of course to academic programs and curricula (continued):**

b. Describe how this course addresses public health issues involving diversity (gender, race, ethnicity, culture, disability, or family status).

The course will serve as another primary avenue of exposing MHA and MPH-HPM students to health industry professionals across multiple diversity characteristics (gender, race, ethnicity, culture, disability, or family status). And, those professionals will be welcomed and encouraged to address diversity-related health issues during their talks. While students already gain exposure to these issues (and professionals) within their existing courses and their integrative experiences, their exposure could always be improved. This course provides many additional opportunities for exposure to diversity-related issues.

12. **Signature and date of principal faculty member (include department/program) making request:**

   Name/Title: [Signature]  
   Date: [Signature]

13. **Signature and date of endorsement of department chairperson:**

   Name/Title: [Signature]  
   Date: [Signature]

14. **(For cross-listing only)**

   **Signature and date of endorsement of department chairperson:**

   Name/Title: ___________________________  
   Date: ___________
# Educational Policies and Curriculum Committee

**Graduate School of Public Health**

**University of Pittsburgh**

**(11/19/2013)**

**SYLLABUS CHECKLIST FOR NEW AND REVISED COURSES**

Addendum to REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES FORM

*Objective to assist faculty to ensure syllabus contains the required and necessary elements to provide students with clear expectations of the course.*

NOTE: * indicates a required element of the syllabus. If N/A is checked or this element is not included, complete the information detailed on page two for all instances.

<table>
<thead>
<tr>
<th>Syllabus Area</th>
<th>Recommended Detail * Required</th>
<th>Included in Your Syllabus?</th>
</tr>
</thead>
<tbody>
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<td>Late Assignment Policy</td>
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<td><strong>Accommodation of Students with Disabilities</strong></td>
<td>Pitt Public Health Statement*</td>
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<td><strong>Academic Integrity Policy</strong></td>
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<td>Health Sciences Library Liaison Contact Information</td>
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<td>Writing Center Contact (if course is writing intensive)</td>
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Required Information Not Included

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Graduate School of Public Health
Department of Health Policy and Management
HPM Professional Development Seminar
Course Meeting Day and Time TDB (Once weekly for 1.5 hours)
Class Location TBD
Credit Hours 0
Fall/Spring 2019-2020

Logistics/Contact Information (required)
Instructors: Kevin Broom, PhD, MBA
Elizabeth Van Nostrand, JD
Office: GSPH A626
GSPH A733
Phone: 412-624-0898
412-383-2231
email: kevinbroom@pitt.edu
evannostrand@pitt.edu
Office Hours: TDB
TBD

Course Description (required)

The Professional Development Seminar is designed to optimally prepare students to enter the health industry workforce. This course will be required for all students pursuing our two professional graduate degree programs, the Master of Health Administration (MHA) and the Master of Public Health in Health Policy and Management (MPH-HPM). The primary goal of the Professional Development Seminar is to help ensure that all students fully leverage the career services provided by the university, are exposed to the broad array of settings and roles within the health industry, and gain exposure to health industry professionals from our key external stakeholder organizations. This design of this course addresses specialized accreditation criteria required through the MHA accreditation agency, the Commission on Accreditation of Healthcare Management Education (CAHME). The course also supports the attainment of related accreditation criteria required by the Council for Education on Public Health (CEPH).

Over the past 50 years, America’s health industry has evolved from a decentralized collection small practices and free-standing hospitals into an increasingly complex web of integrated or affiliated organizations providing medical care, public health services, insurance coverage, legal and consulting advice, pharmaceutical and medical supplies, and research and technological support for thousands of individuals. The transformation of the American health industry has greatly expanded the range of career opportunities for bright, aspiring professionals, from traditional roles as hospital administrators to an ever widening and diverse range of options across the entire health sector. Students preparing for health policy and management careers need to be well trained in the core areas of health management, health policy and public health. Succeeding in today’s increasingly complex and challenging health environment requires students to develop the professional behavior, values and ethics necessary to transform into eager life-long learners. Additionally, students need exposure to a wide range of industry professionals from across many of the subsectors within the health industry. Historically, graduates from these two professional graduate programs pursued narrow career paths, mostly focusing on hospital settings and insurance companies. This course seeks to broaden industry exposure, thereby expanding the career options for our students.
Learning Objectives (required)

The course is designed to provide students with the practical skills and insights they need to successfully launch their careers, ensuring they land with organizations that are a good “fit” for their personal and professional goals, interests and values. As such, the six specific learning objectives of this course are:

1. Demonstrate the practical skills needed to secure their residencies and practica, as well as post-graduate jobs or fellowships, including:
   a. defining their career goals
   b. construct an effective resume
   c. compose effective cover letters
   d. demonstrate effective interviewing skills
   e. apply effective networking skills
2. Compare and contrast the wide range of post-graduate career options and pathways available in the health industry;
3. Debate the impact of the ongoing changes in the health industry;
4. Articulate the qualities of outstanding health industry leaders.
5. Construct individual professional goals and interests from the experience and advice of successful professionals at various stages of their careers;
6. Compare/contrast the wide array of settings and roles in the health industry, and
7. Commit to engaging in lifelong learning;

Teaching Philosophy (optional)

The Professional Development Seminar consists of year-long, interactive sessions designed to prepare students to become successful leaders within the health industry upon graduation. Each semester consists of at least 10 sessions grouped into two major components that will collectively equip students with a set of essential skills: (1) Workforce Preparation and (2) Professional Development. Each session will include a 60-90 minutes of developmental activities, workshops, presentations and open discussions. Each session will be led by one or more facilitators, guest speakers, or moderators/panelists. Upon conclusion of the facilitated portion of each session, a 10-15 minutes of questions and answers, during which students are expected to ask pertinent questions and engage in the productive discussions aimed at enhancing your career preparedness.

Required Textbooks/Articles/Readings (required)

No textbook required. The Professional Development Seminar is not designed to be a traditional academic course, as it has no required readings or exams.

Supplemental Readings/Bibliography (optional)

TBD

CourseWeb/BlackBoard Instruction (if applicable)

For some sessions, relevant materials may be posted on the course’s Blackboard web site. Students are expected to read the material and, when appropriate, check one or more designated and relevant websites prior to attending each session. The course will not have any online or hybrid components.
Required or Recommended Software (if applicable)
N/A

Required or Recommended Equipment (if applicable)
N/A

Class Expectations/ Behavior and Ground Rules (optional)
As aspiring health care leaders, students must always approach this course as professionals. Consistent with the course requirements and expectations, as well as the competencies the course is designed to help students develop, this includes arriving to sessions prepared and on time, remaining for the full session, dressing appropriately, paying attention, contributing thoughtfully to discussions, being respectful of and courteous to others, not eating or chewing gum, and being sure all electronic devices are silenced and not used during the session. Regular class attendance is an important part of one’s graduate education and professional development. Students are required to attend all sessions and are expected to come prepared, engage in each activity, and demonstrate they are keeping abreast of developments in the health industry by asking pertinent questions and participating in the discussions. Attendance will be taken at each class. To receive credit for attendance, students must sign the attendance sheet for each session. Exceptions must be brought to the attention of the faculty member before missing the session (i.e. proactively) or immediately upon missing a session (with a valid reason for missing out on a professional development opportunity).

Grading Scale (required)

The course is designed to be a Pass/Fail course.

Student Performance Evaluation (Assessments and Weights) (required)

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<th>Requirement</th>
<th>Weight</th>
<th>Remarks</th>
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<tr>
<td>Attendance</td>
<td>40%</td>
<td>Must attend 90% of sessions.</td>
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<td>Session Participation</td>
<td>40%</td>
<td>Must actively participate in 50% of sessions.</td>
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<tr>
<td>Journal Reviews</td>
<td>20%</td>
<td>Two journals built over each semester of the seminar.</td>
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Assignments and Descriptions (optional)

TBD
## Schedule of Sessions and Assignments (required)

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<tr>
<td>1</td>
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<td>Self-Awareness and Self-Promotion</td>
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<td>6</td>
<td>Resume Writing</td>
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<td>7</td>
<td>Fundamentals of Building a Network</td>
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<td>8</td>
<td>Mock Interviewing Workshop</td>
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<td>9</td>
<td>Networking and Career Planning</td>
<td>Professional Development</td>
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<tr>
<td>10</td>
<td>Outpatient Operations/Practice Management</td>
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<td>Post-Acute Services and Long-Term Living</td>
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<td>12</td>
<td>Finding a Career Pathway in Public Health</td>
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<td>13</td>
<td>Journal Reviews and Group Discussion</td>
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<td>1</td>
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<td>Hot Topics in Public Health &amp; Health Policy</td>
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<td>8</td>
<td>International Healthcare</td>
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The semester schedule for the Professional Development Seminar avoids holidays, mid-terms, and final exam periods. Additionally, the Professional Development Seminar will avoid the week of ACHE in the spring semester.

### Accommodation for Students with Disabilities (required)

“If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term.”
Academic Integrity Statement (required)

All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook [www.publichealth.pitt.edu/home/academics/academic-requirements](http://www.publichealth.pitt.edu/home/academics/academic-requirements). The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

Sexual Misconduct, Required Reporting and Title IX Statement (required)

The University is committed to combating sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware: A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: [www.titleix.pitt.edu/report/confidentiality](http://www.titleix.pitt.edu/report/confidentiality)

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:
- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.
Other reporting information is available here: [www.titleix.pitt.edu/report-0](http://www.titleix.pitt.edu/report-0)

Statement from the Department of Gender, Sexuality, and Women's Studies

Diversity Statement (required)

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following:
- the course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;

Copyright Notice (if applicable)
Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

Health Sciences Library and Pitt Public Health Librarian (if applicable)

N/A

University Writing Center (if applicable)

N/A

Sources: Center for Instructional Design and Distance Education (CIDDE) [current center name: University Center for Teaching and Learning], Syllabus Template and Syllabus Checklist, Office of Disability Resources and Services, and EPCC syllabus checklist.
Graduate School of Public Health
Department of Health Policy and Management
HPM Professional Development Seminar

Course Meeting Day and Time TDB (Once weekly for 1.5 hours)
Class Location TBD
Credit Hours 1
Fall 2019-2020

Logistics/Contact Information (required)

Instructors: Kevin Broom, PhD, MBA & Elizabeth Van Nostrand, JD
Office: GSPH A626 & GSPH A733
Phone: 412-624-0898 & 412-383-2231
email: kevinbroom@pitt.edu & evannostrand@pitt.edu
Office Hours: TDB & TBD

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4. Articulate the qualities of outstanding health industry leaders.
5. Construct individual professional goals and interests from the experience and advice of successful professionals at various stages of their careers;
6. Compare/contrast the wide array of settings and roles in the health industry, and
7. Commit to engaging in lifelong learning by engaging in activities of a professional organization.

Teaching Philosophy (optional)

The Professional Development Seminar consists of year-long, interactive sessions designed to prepare students to become successful leaders within the health industry upon graduation. Each semester consists of at least 10 sessions grouped into two major components that will collectively equip students with a set of essential skills: (1) Workforce Preparation and (2) Professional Development. Each session will include a 60-90 minutes of developmental activities, workshops, presentations and open discussions. Each session will be led by one or more facilitators, guest speakers, or moderators/panelists. Upon conclusion of the facilitated portion of each session, a 10-15 minutes of questions and answers, during which students are expected to ask pertinent questions and engage in the productive discussions aimed at enhancing your career preparedness.

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Grading Scale (required)
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Student Performance Evaluation (Assessments and Weights) (required)

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<td>20%</td>
<td>Journal reflecting on sessions throughout the seminar.</td>
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</tbody>
</table>

Assignments and Descriptions (optional)
TBD
### Schedule of Sessions and Assignments (required)

<table>
<thead>
<tr>
<th>Week/Session</th>
<th>Topic</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professionalism</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Residency Matching Process</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Communication Skills</td>
<td>Professionalism and Workforce Preparedness</td>
</tr>
<tr>
<td>4</td>
<td>Etiquette Dinner</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Self-Awareness and Self-Promotion</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Resume Writing</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Fundamentals of Building a Network</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mock Interviewing Workshop</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Networking and Career Planning</td>
<td>Professional Development</td>
</tr>
<tr>
<td>10</td>
<td>Outpatient Operations/Practice Management</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Post-Acute Services and Long-Term Living</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Finding a Career Pathway in Public Health</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Journal Reviews and Group Discussion</td>
<td>Reflection</td>
</tr>
</tbody>
</table>

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- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121. Other reporting information is available here: www.titleix.pitt.edu/report-0

Statement from the Department of Gender, Sexuality, and Women's Studies

Diversity Statement (required)

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted.

If you feel uncomfortable or would like to discuss a situation, please contact any of the following:
- the course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;
- the University’s Office of Diversity and Inclusion at 412-648-7860 or https://www.diversity.pitt.edu/make-report/report-form (anonymous reporting form).

Copyright Notice (if applicable)

Course material may be protected by copyright. United States copyright law, 14 USC section 101, et sec., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

Health Sciences Library and Pitt Public Health Librarian (if applicable)

N/A

University Writing Center (if applicable)

N/A

Sources: Center for Instructional Deign and Distance Education (CIDDE) [current center name: University Center for Teaching and Learning], Syllabus Template and Syllabus Checklist, Office of Disability Resources and Services, and EPCC syllabus checklist.
Graduate School of Public Health
Department of Health Policy and Management
HPM Professional Development Seminar

Course Meeting Day and Time TDB (Once weekly for 1.5 hours)
Class Location TBD
Credit Hours 1
Spring 2019-2020

Logistics/Contact Information (required)
Instructors: Kevin Broom, PhD, MBA   Elizabeth Van Nostrand, JD
Office: GSPH A626     GSPH A733
Phone: 412-624-0898     412-383-2231
e-mail: kevinbroom@pitt.edu     evannostrand@pitt.edu
Office Hours: TDB TBD

Course Description (required)

The Professional Development Seminar is designed to optimally prepare students to enter the health industry workforce. This course will be required for all students pursuing our two professional graduate degree programs, the Master of Health Administration (MHA) and the Master of Public Health in Health Policy and Management (MPH-HPM). The primary goal of the Professional Development Seminar is to help ensure that all students fully leverage the career services provided by the university, are exposed to the broad array of settings and roles within the health industry, and gain exposure to health industry professionals from our key external stakeholder organizations. This design of this course addresses specialized accreditation criteria required through the MHA accreditation agency, the Commission on Accreditation of Healthcare Management Education (CAHME). The course also supports the attainment of related accreditation criteria required by the Council for Education on Public Health (CEPH).

Over the past 50 years, America’s health industry has evolved from a decentralized collection small practices and free-standing hospitals into an increasingly complex web of integrated or affiliated organizations providing medical care, public health services, insurance coverage, legal and consulting advice, pharmaceutical and medical supplies, and research and technological support for thousands of individuals. The transformation of the American health industry has greatly expanded the range of career opportunities for bright, aspiring professionals, from traditional roles as hospital administrators to an ever widening and diverse range of options across the entire health sector. Students preparing for health policy and management careers need to be well trained in the core areas of health management, health policy and public health. Succeeding in today’s increasingly complex and challenging health environment requires students to develop the professional behavior, values and ethics necessary to transform into eager life-long learners. Additionally, students need exposure to a wide range of industry professionals from across many of the subsectors within the health industry. Historically, graduates from these two professional graduate programs pursued narrow career paths, mostly focusing on hospital settings and insurance companies. This course seeks to broaden industry exposure, thereby expanding the career options for our students.
Learning Objectives (required)

The course is designed to provide students with the practical skills and insights they need to successfully launch their careers, ensuring they land with organizations that are a good “fit” for their personal and professional goals, interests and values. As such, the six specific learning objectives of this course are:

1. Compare and contrast the wide range of post-graduate career options and pathways available in the health industry;
2. Debate the impact of the ongoing changes in the health industry;
3. Articulate the qualities of outstanding health industry leaders.
4. Construct individual professional goals and interests from the experience and advice of successful professionals at various stages of their careers;
5. Compare/contrast the wide array of settings and roles in the health industry, and
6. Commit to engaging in lifelong learning by engaging in activities of a professional organization.

Teaching Philosophy (optional)

The Professional Development Seminar consists of year-long, interactive sessions designed to prepare students to become successful leaders within the health industry upon graduation. Each semester consists of at least 10 sessions grouped into two major components that will collectively equip students with a set of essential skills: (1) Workforce Preparation and (2) Professional Development. Each session will include a 60-90 minutes of developmental activities, workshops, presentations and open discussions. Each session will be led by one or more facilitators, guest speakers, or moderators/panelists. Upon conclusion of the facilitated portion of each session, a 10-15 minutes of questions and answers, during which students are expected to ask pertinent questions and engage in the productive discussions aimed at enhancing your career preparedness.

Required Textbooks/Articles/Readings (required)

No textbook required. The Professional Development Seminar is not designed to be a traditional academic course, as it has no required readings or exams.

Supplemental Readings/Bibliography (optional)

TBD

CourseWeb/BlackBoard Instruction (if applicable)

For some sessions, relevant materials may be posted on the course’s Blackboard web site. Students are expected to read the material and, when appropriate, check one or more designated and relevant websites prior to attending each session. The course will not have any online or hybrid components.

Required or Recommended Software (if applicable)

N/A
Required or Recommended Equipment (if applicable)

N/A

Class Expectations/ Behavior and Ground Rules (optional)

As aspiring health care leaders, students must always approach this course as professionals. Consistent with the course requirements and expectations, as well as the competencies the course is designed to help students develop, this includes arriving to sessions prepared and on time, remaining for the full session, dressing appropriately, paying attention, contributing thoughtfully to discussions, being respectful of and courteous to others, not eating or chewing gum, and being sure all electronic devices are silenced and not used during the session. Regular class attendance is an important part of one’s graduate education and professional development. Students are required to attend all sessions and are expected to come prepared, engage in each activity, and demonstrate they are keeping abreast of developments in the health industry by asking pertinent questions and participating in the discussions. Attendance will be taken at each class. To receive credit for attendance, students must sign the attendance sheet for each session. Exceptions must be brought to the attention of the faculty member before missing the session (i.e. proactively) or immediately upon missing a session (with a valid reason for missing out on a professional development opportunity).

Grading Scale (required)

The course is designed to be a Pass/Fail course.

Student Performance Evaluation (Assessments and Weights) (required)

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Weight</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>40%</td>
<td>Must attend 90% of sessions.</td>
</tr>
<tr>
<td>Session Participation</td>
<td>40%</td>
<td>Must actively participate in 50% of sessions.</td>
</tr>
<tr>
<td>Journal Review</td>
<td>20%</td>
<td>Journal reflecting on sessions throughout the seminar.</td>
</tr>
</tbody>
</table>

Assignments and Descriptions (optional)

TBD
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<td></td>
</tr>
<tr>
<td>2</td>
<td>Payers/Insurance</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hospital Operations</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Masters Essay Preparation</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Innovation/Entrepreneurship/Biotech</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Performance Improvement</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hot Topics in Public Health &amp; Health Policy</td>
<td>Professional Development</td>
</tr>
<tr>
<td>8</td>
<td>International Healthcare</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Physician/Admin Relationships</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Masters Essay Preparation</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Race and the Opioid Crisis</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Pursuing Fellowships</td>
<td></td>
</tr>
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<td>13</td>
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REQUEST FOR APPROVAL OF NEW COURSES AND COURSE CHANGES

1. General Instructions:
   a. Faculty should submit this form and the associated syllabus following the Pitt Public Health Syllabus Guidelines and the Syllabus Checklist (on pages 4 and 5) by e-mail to Patricia Docemet, Chair (pdocemet@pitt.edu) and Robin Leaf, EPCC Staff Liaison (ral9@pitt.edu). If you choose not to include all the information detailed on the Syllabus Guidelines in your course syllabus for distribution to students, please attach this information to the proposal.
   b. The initiating Department is asked to submit one hard copy of this completed form with the proper signatures, syllabus and other materials (if any) to Robin Leaf in Student Affairs at least one week prior to the EPCC meeting. If this target date is not met, the proposal will be deferred for consideration at the next meeting scheduled.
   c. You will be contacted by the EPCC Chair or the EPCC Staff Liaison to schedule a presentation and discussion of your program/course proposal with the Committee, if possible at the next scheduled EPCC meeting.

2. Review based on the following (check all which apply):
   ___ New course, not previously approved                  ___ Course modification (major)*
   ___ Course title change                                  ___ Special topics course content
   ___ Cross-listing                                         ___ Pitt Public Health Core Course
          (Specify academic unit & course number):              ___ Practicum, internship, field placement

3. Course designation:
   Course Number _EPIDEM 2187_   Title _Epidemiologic Methods 2___ Credits _3_

4. Cross-listing:
   If you want to cross-list this course in any other Pitt Public Health department or any other school of the University, specify which department(s) and School(s) and provide brief justification.

5. Reason for request:
   In a few sentences, describe the motivation behind this application.
   Updated and modernized the curriculum for a central course in the Department.

* Changes to credits will require a new course number and significant title changes may require a new course number
6. **Course Instructors:**

(Indicate type of Pitt Public Health faculty appointment,* and percentage of total course time/effort anticipated. For any instructor who does not hold a Pitt Public Health faculty appointment, indicate her/his title and affiliation.)

a. Principal instructor: Ashley I. Naimi, Assistant Professor, Epidemiology. 100% Effort.

b. Co-instructors (if any):

7. **Statement of the course for Course Inventory.** Include purpose of course; summary of prerequisites, if any; general course content; and method of conducting course (e.g., lecture, laboratory, field work, etc.).

This course is an introduction to advanced epidemiologic and statistical methods. The focus of the course is on the fundamental theoretical and applied aspects of using data to answer research questions. Students will be introduced to the causal inference framework and how it relates to standard (e.g., linear and logistic regression) and novel (e.g., inverse probability weighting, g formula) analytic methods. This framework will be used to motivate lectures on study design, bias (information, selection, confounding), statistical inference, and machine learning. Students will learn how to apply these methods using R.

This course is accompanied by an optional weekly recitation where students will be introduced to the R programming environment, and the R Studio IDE. This recitation will follow the course topics in parallel, enabling students to gain hands on experience with topics covered in lectures. It is highly recommended that all students attend this recitation.

The course is designed for students in the Graduate School of Public Health who have a solid understanding of epidemiological concepts and introductory statistical methods and have some experience programming using a standard statistical software package. The specific prerequisites are EPIDEM 2180, BIOSTAT 2041, and BIOSTAT 2042

8. **Student enrollment criteria/restrictions:**

a. Indicate any maximum or minimum number of students and provide justification for this limitation.

Maximum 40.

b. If admission is by permission of instructor, state criteria to be applied.

c. Provide a brief description of any prerequisite skills or knowledge areas that are necessary for students entering this course, including any specific course prerequisites or equivalents.

Skills covered in EPIDEM 2180, BIOSTAT 2041, AND BIOSTAT 2049

9. **Course schedule and allocation of hours:**

*The principal instructor for any Pitt Public Health course must have a primary, secondary or adjunct appointment in the school.
a. Number of course hours per session _1.5_ Sessions per week _2_ Weeks per academic term ______

b. Approximate allocation of class time (hours or %) among instructional activities:

Lectures _3_ Seminars _____ Recitations _1_ Field work _____ Laboratory ______
Other (specify): __________________________________________________________

c. Term(s) course will be offered: Fall _x_ Spring _____ Summer Term _____ Summer Session _____

10. **Grading of student performance:**
Indicate the grading system to be used (A, B, C, etc.; H, S, U); provide statement justifying use of system other than letter grade.

Letter grades will be used.

11. **On-line course delivery:**

Indicate the extent to which you will be using on-line instructional methods in teaching this course by checking all of the options below which apply:

___ x ___ I plan to use the course management aspects of CourseWeb/ Blackboard (or equivalent), e.g., grade book, announcements.

___ I plan to use the interactive features of CourseWeb/Blackboard (or equivalent), e.g., discussion board, etc.

___ I have designed the course for remote (off-site) learning with little/no classroom attendance required.

___ I do not plan to use on-line instruction methods for this course (briefly explain)

12. **Relevance of course to academic programs and curricula:**

a. Describe how this course contributes to learning objectives specified for the curriculum of one or more Pitt Public Health degree or certificate programs. Indicate whether course is required for any specified degree or certificate.

This course is an update of an existing course required for graduation from the PhD program in Epidemiology. It covers basic and advanced principles of analytic reasoning, interpretation of results from a variety of statistical methods, and use of advanced techniques (causal inference, machine learning, R, RStudio).

b. Describe how this course addresses public health issues involving diversity (gender, race, ethnicity, culture, disability, or family status).

As it is an analytic methods course, it does not address any of these issues.

13. **Signature and date of principal faculty member (include department/program) making request:**

Name/Title: Ashley I. Naimi, Ph.D., Assistant Professor  
Department of Epidemiology

Date: 03/04/19
14. **Signature and date of endorsement of department chairperson:**

   Name/Title: Anne B. Newman, MD, MPH  
   Chair, Department of Epidemiology  
   Professor of Epidemiology and Medicine  
   Director, Center for Aging and Population Health  

   Date: 3/4/19  

15. (For cross-listing only)  
   **Signature and date of endorsement of department chairperson:**

   Name/Title: ________________________________  

   Date: __________
<table>
<thead>
<tr>
<th>Syllabus Area</th>
<th>Recommended Detail * Required</th>
<th>Included in Your Syllabus?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heading</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Number*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Course Title*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Course Meeting Time/Day of Week*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Classroom Location*</td>
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<td>No</td>
</tr>
<tr>
<td><strong>Faculty Information</strong></td>
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</tr>
<tr>
<td>Office Location*</td>
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</tr>
<tr>
<td>Office Hours*</td>
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<td>Phone Number*</td>
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<tr>
<td>Email Address*</td>
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</tr>
<tr>
<td>Teaching Philosophy</td>
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</tr>
<tr>
<td>Teaching Assistant Contact</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Student Expectations in Classroom</strong></td>
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<tr>
<td>Behavior/ Ground Rules (cell phones off, laptops off, etc.)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Recording of Lectures</td>
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<tr>
<td><strong>Course Summary</strong></td>
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<td>Course Description*</td>
<td>Yes</td>
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<td>Learning Objectives*</td>
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<tr>
<td><strong>Materials</strong></td>
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<tr>
<td>Required Textbooks/ Articles/Readings</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Required Software</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Required Equipment (including use of CourseWeb/Blackboard)</td>
<td>Yes</td>
<td>No</td>
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<td>Recommended Material</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Availability of Software for Purchase and/or Use</td>
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<td>No</td>
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<td>Evaluation</td>
<td>Yes ☒</td>
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<td>Grading Criteria/Rubric</td>
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<td>Late Assignment Policy</td>
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</tr>
<tr>
<td>Accommodation of Students with Disabilities</td>
<td>Yes ☒</td>
<td>No ☐</td>
</tr>
<tr>
<td>University Statement*</td>
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<tr>
<td>Academic Integrity Policy</td>
<td>Pitt Public Health Statement*</td>
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<tr>
<td>Diversity/ Inclusion Statement</td>
<td>Pitt Public Health Statement*</td>
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<tr>
<td>Title IX Statement</td>
<td>University Statement*</td>
<td>Yes ☒</td>
</tr>
<tr>
<td>Schedule</td>
<td>Topics by Session*</td>
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<tr>
<td>Reading and Written Assignments by Session*</td>
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<td>No ☐</td>
</tr>
<tr>
<td>Learning Objectives by Session</td>
<td>Yes ☐</td>
<td>No ☒</td>
</tr>
<tr>
<td>Test Dates</td>
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<td>Additional Resources</td>
<td>Health Sciences Library Liaison Contact Information</td>
<td>Yes ☐</td>
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<td>Writing Center Contact</td>
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Required Information Not Included

<table>
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</table>
Course Director: Ashley Naimi, PhD  
Assistant Professor of Epidemiology  
University of Pittsburgh  
Pittsburgh, PA  15261  
Phone: 412-624-7397  
Email: ashley.naimi@pitt.edu  
Office Hours: By Appointment

Teaching Assistant: TBD

Class Schedule: Tuesday and Thursday 3:00-4:15 p.m. in TBD. Optional Recitation, Monday, time and location TBD

Summary of Course: This course is an introduction to advanced epidemiologic and statistical methods. The focus of the course is on the fundamental theoretical and applied aspects of using data to answer research questions. Students will be introduced to the causal inference framework and how it relates to standard (e.g., linear and logistic regression) and novel (e.g., inverse probability weighting, g formula) analytic methods. This framework will be used to motivate lectures on study design, bias (information, selection, confounding), statistical inference, and machine learning. Students will learn how to apply these methods using R.

Additional Information: This course is accompanied by an optional weekly recitation where students will be introduced to the R programming environment, and the R Studio IDE. This recitation will follow the course topics in parallel, enabling students to gain hands on experience with topics covered in lectures. It is highly recommended that all students attend this recitation.

The course is designed for students in the Graduate School of Public Health who have a solid understanding of epidemiological concepts and introductory statistical methods and have some experience programming using a standard statistical software package. The specific prerequisites are EPIDEM 2180, BIOSTAT 2041, and BIOSTAT 2049

Teaching/Learning Objectives: Upon completion of this course, the student will be able to:
1. Articulate the conditions under which correlation = causation, and why
2. List basic principles of deductive reasoning and identify formal and informal fallacies
3. Use various regression modeling techniques to estimate associations
4. Use regression models to implement g computation, IP-weighting, and double robust methods
5. List what is required for the identification of causal effects
6. Properly interpret p values and confidence intervals
7. Outline the distinctions between epidemiologic and statistical inference
8. Outline the distinctions between bias and asymptotic consistency
9. Use generalized linear models appropriately
10. Use selected machine learning methods (CART, Random Forests)
11. Describe overfitting and how to use cross-validation to avoid it.
12. Use R and R Studio
13. Be able to think critically about how to (and how not to) analyze data

**Required Textbook:** None

**Supplemental Textbooks (Optional):**


**Extra Readings:** None

**Required Software:**

R: https://www.r-project.org/
RStudio: https://www.rstudio.com/products/rstudio/download/

**CourseWeb/BlackBoard Instruction:** The University of Pittsburgh’s CourseWeb (Blackboard) will be used for this course. Lecture notes, homework assignments and data sets required for homework completion can be obtained from the course website. The Blackboard website is http://courseweb.pitt.edu/

**Assignments and Descriptions:** Assignments will involve applying the methods covered in class to simulated and empirical datasets. These will consist of a total of 8 small group problem sets, each worth 10%. These problem sets will be distributed to the class the lecture before they are due.

Each assignment will be discussed in class. One group will be expected to present the results to their assignment to the class, as well as discuss any difficult concepts. Class presentations will count for 10% of the homework grade. All individuals in each group will receive the same numeric grade for the assignments and presentation.

The final exam will consist of a take home exam that will require students to answer questions on theory and analyze a provided dataset to obtain answers to specific research questions.

**Student Performance Evaluation:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Homework Assignments</td>
<td>60%</td>
</tr>
<tr>
<td>Class Presentation</td>
<td>10%</td>
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<tr>
<td>Final Exam</td>
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**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
</tr>
<tr>
<td>A-</td>
<td>90-92%</td>
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<tr>
<td>B+</td>
<td>87-89%</td>
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<tr>
<td>B</td>
<td>83-86%</td>
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<tr>
<td>B-</td>
<td>80-82%</td>
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<td>C</td>
<td>70-79%</td>
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<tr>
<td>D</td>
<td>60-69%</td>
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<tr>
<td>F</td>
<td>&lt; 60%</td>
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</tbody>
</table>

**CourseWeb/BlackBoard Instruction:** The University of Pittsburgh’s CourseWeb (Blackboard) will be used for this course. Lecture notes, homework assignments and data sets required for homework
completion can be obtained from the course website. The Blackboard website is http://courseweb.pitt.edu/

Accommodation for Students with Disabilities

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services, 140 William Pitt Union, 412-648-7890 as early as possible in the term.

Academic Integrity Statement

All students are expected to adhere to the school’s standards of academic honesty. Cheating/plagiarism will not be tolerated. The Graduate School of Public Health’s policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook www.publichealth.pitt.edu/home/academics/academic-requirements. The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

Sexual Misconduct, Required Reporting and Title IX Statement

The University is committed to combatting sexual misconduct. As a result, you should know that University faculty and staff members are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University’s Title IX office so that the victim may be provided appropriate resources and support options. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am somehow made aware.

There are two important exceptions to this requirement about which you should be aware: A list of the designated University employees who, as counselors and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: www.titleix.pitt.edu/report/confidentiality

An important exception to the reporting requirement exists for academic work. Disclosures about sexual misconduct that are shared as part of an academic project, classroom discussion, or course assignment, are not required to be disclosed to the University’s Title IX office.

If you are the victim of sexual misconduct, Pitt encourages you to reach out to these resources:

- Title IX Office: 412-648-7860
- SHARE @ the University Counseling Center: 412-648-7930 (8:30 A.M. TO 5 P.M. M-F) and 412-648-7856 (AFTER BUSINESS HOURS)

If you have a safety concern, please contact the University of Pittsburgh Police, 412-624-2121.

Other reporting information is available here: www.titleix.pitt.edu/report-0

Statement from the Department of Gender, Sexuality, and Women's Studies

[This statement was developed by Katie Pope, Title IX Coordinator, in conjunction with GSWS instructors.]

Diversity Statement

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity. Every member of our community is expected to be respectful of the individual perspectives, experiences,
behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted. If you feel uncomfortable or would like to discuss a situation, please contact any of the following:

- the course instructor;
- the Pitt Public Health Associate Dean for Diversity at 412-624-3506 or nam137@pitt.edu;

### Schedule of EPI Methods 2 Topics

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Tu Aug 28</td>
<td>Course Overview, Introduction to Logic</td>
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<tr>
<td></td>
<td>Th Aug 30</td>
<td>Causal Inference (Potential Outcomes, Estimands)</td>
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<tr>
<td>2</td>
<td>Tu Sep 4</td>
<td>Causal Inference (Identifiability, Assumptions)</td>
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<tr>
<td></td>
<td>Th Sep 6</td>
<td>G Formula</td>
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<tr>
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<td>Statistical Inference</td>
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<td>Bias</td>
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<td>Th Nov 8</td>
<td>Machine Learning: Prediction and Estimation</td>
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<td>12</td>
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<td>Machine Learning 1: CART</td>
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<td>Machine Learning 2: Random Forests</td>
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<td>Thanksgiving Break</td>
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<td>Tuesday</td>
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<td>Nov 27</td>
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<td>Machine Learning 3a: Cross-Validation &amp; Ensemble Learning</td>
<td>Machine Learning 3b: Cross-Validation &amp; Ensemble Learning</td>
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<td>15</td>
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<td>Tu</td>
<td>Th</td>
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<td>Putting it all together (homework due)</td>
<td>Q &amp; A (Take Home Exam)</td>
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<td>Dec 11</td>
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<tr>
<td></td>
<td>Exam Post Mortem</td>
<td>Learning Resources</td>
</tr>
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</table>
New course: HPM XXXX

Dr. Kevin Broom, HPM, presented a new zero credit course, HPM Professional Development Seminar, to the committee. The proposed course is designed to prepare HPM students to enter into the health industry workforce. The course would be a requirement for all HPM students in the MHA and MPH programs. The course would be added to the first year curriculum and, as presented to the committee, would be taught as a 0-credit, pass/fail course. With a zero credit course there would not be any changes made to the overall number of required credits for either degree program.

The course would provide students with skills to assist them in securing internships and future job opportunities. It would also expose them to the breadth of health industry professions, and expand the current pattern of alumni working mostly in the hospital sector. The course learning objectives are based on other high ranking CAHME accredited schools, of which the MHA program is accredited by. The course was designed not to have exams, projects, or case studies but instead to focus on professional development and an overall exposure of health professions. The course will have a self-reflection component which will allow students to reflect on their future professional goals. Student attendance and participation are also a key component to this course. At least two other schools at Pitt, Law & GSPIA, have courses like this for their students.

The committee raised the question of why the course was not split into two separate courses, as the content is different between the terms. Having the presented course be split would assist in tracking completion of both components for graduation. The Committee was express the concern that if the course was to be offered as one catalog number, where students would register for the course twice, it could become confusing for them who start in the spring term or for students who might need to take a leave of absence. Mary Derkach, Assistant Dean for Student Affairs, informed the committee that a yearlong course, longer than one semester is not feasible at the University. The outcome was that this course would need to have two separate classes that you have to complete in sequential order.

The Committee discussed the zero credit component of this proposal and noted that throughout the school there are other zero credit courses, departmental seminars and Grand Rounds. Dr. Jessica Burke, Associate Dean for Education noted that she has been in touch with the Provost’s Office and is currently having the discussion with them on whether a zero credit can still be offered at the University. The first step was to move through EPCC, while Dr. Burke discusses the larger component of the credits associated with the course. She will update Dr. Broom and the committee on the outcome. As part of this discussion, the committee brought up the potential issue for programs to have multiple zero credit required courses and whether there should be a limit to them.

The Committee requested that Dr. Broom modified the 7th learning objective on the syllabus to a measurable verb, i.e. commit to lifelong learning by engaging in activities of a professional organization.
If the credits are changed, then there would need to be a larger evaluation of the course content.

The committee recommended to:
- Separate the content into two courses over two terms with two different course numbers (i.e. Prof Dev 1, Prof Dev 2). Dr. Broom needs to two proposals, with separate syllabi, for courses. He will receive this feedback via formal letter from the committee chair, and once Dr. Burke receives an update from the Provost’s Office she will follow-up with Dr. Broom and the committee.

**ACTION:**
The committee will defer to vote on the course(s) to the March meeting, while Dr. Burke has the conversation with the Provost’s Office.

**Modified course: EPIDEM 2920**
Dr. Nancy Glynn (EPIDEM) presented the modified course, *Grant Writing*, on behalf of Dr. Lisa Bodnar as she is currently on sabbatical. The proposal is to increase the course credits from two to three. This course has been evolving over the past years since Dr. Bodnar took over as course director. This course was last taught during the spring 2018 term, and it is now being moved to the fall term. The shift of the timing will better assist students in EPIDEM as they will have prepared their specific aims, as part of the program requirement. The course then will assist students in drafting the components required for a K or other grant. Also, the didactic material and the out of class deliverables of this course now equate to three credits.

**ACTION:**
The committee voted to approve the course with minor changes, no need to come back to EPCC. The changes are: Include a complete grading scale in the syllabus (with D and F as potential); and remove the pre-requisite of the EPIDEM 2185 Introduction to SAS course as the skills gained within that course are not needed for the modified course.

**Vote on GRE Summary & Proposal**
The committee revisited the potential to remove the GRE as a requirement for admission, due in part to a recently published article and the announcements made by Pitt’s School of Medicine and Graduate School of Public and International Affairs to both drop the requirement of GRE scores. This discussion was a continuation from September 2018, and a prior discussion on testing bias which began in March 2017.

At the core of this issue were the two Pitt schools dropping the requirement, the trend of test optional admissions, and the discussions on whether removing the GRE as a requirement would increase diversity of applicants and students.

Each committee member went back to their departments to report on this discussion that spanned months, and they each brought back comments to the committee. We confirmed that all Pitt Public Health departments now use a holistic admissions process in reviewing applications, which the literature recommends.

During the past months, we learned that the “aspirational” schools of public health have not dropped the GRE requirement. We also learned that a sizeable proportion of admitted applicants who are in underrepresent categories do not matriculate. Attracting them would help us increase diversity.
**ACTION:**
The committee voted to recommend that the school maintain the GRE admission requirement, as there is not a compelling reason at this time to drop it.

Dr. Documet as committee chair will draft a letter to accompany the compiled report. The draft letter will first be circulated among the committee for approval. Following approval, the letter and report will be sent to the Dean to be presented at an upcoming Council meeting.

Prior to completing the report, Dr. Documet will follow-up with Dr. Cindy Bryce, Associate Dean for Student Affairs and the Office of Student Affairs for clarification, in appendix B, in the report out of their office.

The report will contain a literature review with a complete bibliography, a list of the departmental/program decisions regarding the GRE requirement, and appendices containing the report from Dr. Bryce and Student Affairs, as well as all of the articles reviewed.

The letter will also note that the committee recommends discussing the current trends and the needs of the school every two years, unless otherwise needed prior to that date. It will also contain the recommendations to increase diversity, some of which Student Affairs is already implementing.

The January 2019 meeting minutes were approved.

The meeting was adjourned at 3:19 pm. The next EPCC meeting is March 7 at 1:30pm in room 1149.

The April EPCC meeting scheduled for the first week of the month has been moved to Thursday, April 11 at 1:30pm to meet in room 1149.