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**The policies outlined in this Bulletin are based on conditions at the time of publication and are subject to change.** The University of Oklahoma Health Sciences Center Hudson College of Public Health reserves the right to modify any provision, without prior notice, to conform with current prevailing laws, rules, regulations, and policies, as approved by the appropriate University officers and governing officials.

It is the responsibility of each student of the University of Oklahoma Health Sciences Center to know the rules, regulations, requirements, and academic policies of his/her respective College/Department. Should questions arise in regard to those policies, it is the responsibility of the student to consult with his/her Academic Advisor, Department Chair, Associate Dean for Academic Affairs, or the Dean.

Any student, in accepting admission, indicates his/her willingness to subscribe to and be governed by these rules and regulations and acknowledges the right of the University to take such disciplinary action, including suspension and/or expulsion, as may be deemed appropriate.

It is the priority of the Hudson College of Public Health to assist students having difficulty maintaining standards required in their program of study. Every effort will be made to help students achieve their program of study. Students having such difficulties are urged to seek help by contacting their Advisors as soon as they are aware of the problem.

This Bulletin will answer many of your questions. Students enrolled in the Ph.D. and M.S. degree programs should also consult the ***Graduate College Bulletin*** at: <https://graduatecollegebulletin.ouhsc.edu/>.

### **Non-Discrimination Policy**

Diversity is one of the strengths of our society as well as one of the hallmarks of a great university. The University supports diversity and is committed to maintaining employment and educational settings that are multicultural, multiracial, multiethnic, and all-inclusive. Respecting differences is one of the University's missions.

The University does not discriminate or permit discrimination by any member of its community against any individual based on race, color, religion, political beliefs, national origin, age (40 or older), sex (see Sexual Misconduct, Discrimination and Harassment Policy), sexual orientation, genetic information, gender identity, gender expression, disability, or veteran status in matters of admissions, employment, financial aid, housing, or services in educational programs or activities the University operates.

University policy also prohibits retaliation against a person for filing a complaint of discrimination or harassment under this policy or other applicable federal, state or local laws. This policy also prohibits retaliation against any person who assists someone with a complaint of discrimination or harassment or who participates in any manner in an investigation or resolution of a complaint of discrimination or harassment.

The complete Non-Discrimination Policy and compliant procedure is found on the Institutional Equity Office website.

### **Reasonable Accommodation Policy**

The University of Oklahoma is committed to the goal of achieving equal educational opportunity and full participation for students with disabilities. Consistent with the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act of 1990, as amended. The University of Oklahoma ensures that no "qualified individual with a disability" will be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination solely on the basis of disability under any program or activity offered by The University of Oklahoma.

Accommodations on the basis of disability are available by contacting the Disability Resource Center (DRC) by email, [drc@ou.edu](mailto:drc@ou.edu), or by calling (405) 325-3852 Voice or (405) 325-4173 TDD. Students requesting disability-related services or accommodations are required to submit appropriate documentation to substantiate the disability. DRC staff will review the documentation and send an e-mail to the student's university e-mail account that explains the eligibility determination. Students can expect to receive an initial response within fifteen (15) University business days of the Center's receipt of the documentation. Students with disabilities will then schedule an appointment for an initial intake procedure with the Disability Resource Center staff. During this appointment, DRC staff and the student will engage in an interactive process and discuss any history of accommodation, strengths and limitations, and review policies/procedures.

Information on policies and registration with Disability Resource Center may be found on the DRC website.

### **Equal Opportunity Statement**

The University of Oklahoma, in compliance with all applicable federal and state laws and regulations does not discriminate on the basis of race, color, national origin, sex, sexual orientation, genetic information, gender identity, gender expression, age, religion, disability, political beliefs, or status as a veteran in any of its policies, practices, or procedures. This includes, but is not limited to: admissions, employment, financial aid, and educational services. Full policy is available at <https://studenthandbook.ouhsc.edu/hbSections.aspx?ID=430>.

The Hudson College of Public Health follows all policies of the University of Oklahoma Health Sciences Center set forth in the OUHSC Faculty Handbook <https://www.ouhsc.edu/provost/documents/FacultyHandbookOUHSC.pdf> and the OUHSC Student Handbook <https://studenthandbook.ouhsc.edu/default.aspx>.

Navigation to policies concerning the Code of Ethics, including the Academic Appeals Board, Academic Misconduct, Ethics in Research, Student Professional Behavior in an Academic Program and Sexual Assault, Discrimination and Harassment can be found in the Appendix of this Bulletin. These policies can also be found in the OUHSC Student Handbook.

### **Recruitment Policy**

The University of Oklahoma and the Hudson College of Public Health are committed to a policy of equal opportunity and affirmative action and non-discrimination in the recruitment, admission, and education of students.

**University of Oklahoma Health Sciences Center**  
**Hudson College of Public Health Bulletin**  
**2020-2021**

Visit the College website at: <https://publichealth.ouhsc.edu/>

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Oklahoma City, OK 73104  
Phone (405) 271 2308; Toll Free (877) 805 6901  
Email: [hcoph@ouhsc.edu](mailto:hcoph@ouhsc.edu)

**Mission**

The mission of the Hudson College of Public Health of the University of Oklahoma is to protect and improve the health of the people of Oklahoma, the United States, and other nations through: (1) education, public health workforce development, and cutting-edge research; (2) translation of research and scholarship into public health practice and service; and (3) the development and advocacy of evidence-based health management and policy.

**Vision**

The College will be nationally recognized for providing excellent education for public health practice professionals and for public health research scientists, for innovative research on contemporary issues in public health, and for translating research and scholarship into evidence-based practice, management, and public health policy.

**Core Values**

Excellence – The Hudson College of Public Health strives to achieve excellence in all of its endeavors.

Integrity – The Hudson College of Public Health adheres to the highest standards of honesty, objectivity, transparency, fairness, and ethical conduct at all times.

Public Service – The Hudson College of Public Health exists to serve the citizens of Oklahoma and the United States through efforts to protect and improve their health, and to contribute to international efforts to improve the health of other nations.

Health Equity – The Hudson College of Public Health advocates the principle that all individuals have a right to the opportunity for a healthy life. The College is committed to reducing and eliminating health disparities among populations.

Responsibility – The Hudson College of Public Health strives to make the most effective use of all resources it receives, to use responsibly all state, federal and private funding, and to leverage its resources into additional resources for the College, University, and State of Oklahoma.

Partnership – The Hudson College of Public Health is committed to fostering collegial productive partnerships with all stakeholders who share the vision of protecting and improving the public’s health.

### **Foundational Competencies**

As a member of the Association of Schools and Programs of Public Health, the College curriculum is focused on the Foundational Competencies developed by CEPH and provided in the Appendix of this Bulletin.

### **Strategic Goals for 2016-2020**

- Goal 1: We will achieve excellence in education for all of our students in the classroom didactic teaching and during the experiential learning for every practicum and internship.
  
- Goal 2: We will seek and actively pursue research and scholarship opportunities in public health in order to achieve national and international recognition.
  
- Goal 3: The College will actively pursue opportunities to provide service and professional leadership in various settings and situations.
  
- Goal 4: The College will actively pursue opportunities to strengthen its programs by recruiting well-qualified faculty and seek funding to improve those programs.

## **Academic Information**

### **Application Requirements**

#### **For applicants who are from institutions other than OUHSC or OU**

A complete application to the Hudson College of Public Health will include:

1. Completed Schools of Public Health Application Service (SOPHAS) application ([www.sophas.org](http://www.sophas.org)) and payment of fees. The SOPHAS application requires
  - a. Transcripts  
US applicants: official transcripts from all institutions attended  
International applicants: WES course-by-course or ICAP evaluation of all international coursework ([www.wes.org](http://www.wes.org))
  - b. Three letters of reference
  - c. A personal essay or career goal statement
  - d. A current CV or résumé
  - e. International applicants are required to submit TOEFL scores. The minimum acceptable score is 88 on the internet based test (IBT) for most programs. The MHA program requires a score of 100 IBT; the PhD program in OEH requires a score of 90 IBT. ([www.ets.org/toefl](http://www.ets.org/toefl))
  - f. GRE is required for MHA, MS and PhD programs; the GMAT test may also be submitted for applications to the MHA program.
2. Completed Hudson College of Public Health supplemental application (<https://apps.ouhsc.edu/admissions/>) and payment of fees.

#### **For applicants who are current OU students or OU / OUHSC Alumni**

A complete application to the Hudson College of Public Health will include:

1. Completed Hudson College of Public Health supplemental application (<https://apps.ouhsc.edu/admissions/>) and payment of fee
2. An email informing the Admissions Coordinator of the intent to apply should be sent to [hcoph@ouhsc.edu](mailto:hcoph@ouhsc.edu)
3. A personal essay or career goal statement sent to [hcoph@ouhsc.edu](mailto:hcoph@ouhsc.edu)
4. A current CV or résumé sent to [hcoph@ouhsc.edu](mailto:hcoph@ouhsc.edu)
5. Three letters of reference sent to [hcoph@ouhsc.edu](mailto:hcoph@ouhsc.edu)
6. Official GRE test score report for the MS, PhD, and MHA programs - ETS should be instructed to send the report to code 6902. GRE is not required for the dual BS math/MS biostatistics.

#### **For applicants who are current OUHSC students**

A complete application to the Hudson College of Public Health will include:

1. Completed Change of Major form  
<https://admissions.ouhsc.edu/Portals/1047/assets/ChangeCollegeMajorDegreeOption62016.pdf>
2. A personal essay or career goal statement
3. A current CV or résumé

Detailed Information is available at  
<https://publichealth.ouhsc.edu/ProspectiveStudents/HowToApply.aspx>.

All completed applications will be reviewed by the appropriate Hudson College of Public Health Admissions Committee and a recommendation will be made to the Dean or his designee for the type of admission status to be offered to the applicant. The admission types are described in the following section.

### **Admission Categories**

#### **Full Standing**

The University of Oklahoma Health Sciences Center uses the 4.00 scale to calculate grade point averages, with an “A” equal to 4.00. An applicant must have a baccalaureate or entry level first professional degree from an accredited university or college. Applicants with an undergraduate degree must have a 3.00 grade point average (4.00 scale) in upper division coursework or in the last 60 credit hours of coursework applied to the degree. Applicants with an advanced degree must have an overall grade point average of 3.00 in all coursework required for the degree. The applicant must be in good standing with the college or university where currently enrolled or last attended in order to be considered for admission in full standing to a degree program.

In special cases, an applicant who has completed 12 credit hours or more of graded graduate level coursework in areas that demonstrate the potential to complete the program may be considered for admission. The applicant is encouraged to consult with the college to select the appropriate coursework prior to enrollment. Completion of some quantitative courses will strengthen consideration. The applicant must have completed the coursework at an accredited college or university with a 3.00 grade point average in all graduate work attempted and be in good standing with the college or university where currently enrolled or last attended. Additional academic credit hours that are applicable to the degree program may be used in evaluating a student for admission into a public health degree program.

#### **Special Students**

The Special Student admission category is reserved for individuals holding baccalaureate or professional degrees who are not degree-seeking, but wish to take one or more courses to improve their knowledge and skills in specific areas. For example, a medical professional seeking a board certification that requires completion of certain supplementary courses would be an appropriate candidate for Special Student status. Special Students are under the academic supervision of the Dean or his designee. Students who wish to pursue a degree program within the Hudson College of Public Health must apply to the degree program they wish to pursue. No more than 12 credit hours may be taken as a Special Student.

#### **Probationary Admission**

An applicant who does not meet the minimum 3.00 grade point requirement for admission in full standing may be considered for probationary admission. Only in exceptional situations will



applicants with grade point averages below 3.0 be admitted on probationary status. An interview will be required for students seeking admission on probationary status. Probationary admission to the degree program requires the recommendation of the Admissions Committee and approval of the Dean or his designee. When the student has completed the required conditions of the probationary admission, the student's status will be changed to full-standing in the degree program. Admission on academic probation will depend heavily on other indicators of the applicant's ability to do successful academic work. These indicators might include but are not limited to a strong performance on standardized tests, a high grade point average in the major, or experiences that clearly indicate strong professional and academic ability in a public health area related to the degree of interest. Applications indicating a grade point average of less than 2.75 (4.00 scale) in upper division coursework or in the last 60 credit hours of coursework applied to the baccalaureate degree are not admissible.

A student admitted with a grade point average less than 3.00 must receive letter grades of *A* or *B* in the initial 9 credit hours of graded public health coursework. The 9 credit hours must be courses required for the degree and approved by the student's faculty advisor and the Dean or his designee. It is expected these courses will be completed within one calendar year following initial enrollment. Students who fail to meet the probationary admission requirements will be dismissed from the degree program and denied further enrollment in the Hudson College of Public Health.

#### Deferred Admission and Readmission

Upon being admitted to the Hudson College of Public Health, prospective students are expected to enroll in courses at the University of Oklahoma Health Sciences Center in the semester they are admitted. Upon the approval of the department or Dean or his designee, the Office of Student Services may defer admission for one semester. Longer deferrals require permission of the Dean or his designee. Students are subject to the regulations in effect during their first term of enrollment so long as they maintain continuous enrollments. Students who interrupt their enrollment in the Hudson College of Public Health for more than one year must reapply for admission. If readmitted, they will be subject to the regulations and degree requirements in effect at the time of readmission.

#### Change of Degree or Major

Students in good academic standing may request to change degree option or specialty track within a Program or transfer to another degree program at the Health Sciences Center by completing a Change of College, Major or Degree Option Form. Students on probationary status must move to full-standing status and have an overall graduate grade point average of 3.00 or greater prior to initiating a request for change of status. Students must complete a minimum of nine credit hours of required core coursework prior to applying for a change of status within the Hudson College of Public Health.

A complete change of major application to the Hudson College of Public Health will include:

1. Completed Change of Major form  
[https://admissions.ouhsc.edu/Portals/1047/assets/ChangeCollegeMajorDegreeOption6\\_2016.pdf](https://admissions.ouhsc.edu/Portals/1047/assets/ChangeCollegeMajorDegreeOption6_2016.pdf)
2. A personal essay or career goal statement
3. A current CV or résumé

The Change of Major form is available in the Office of Student Services or online at [https://admissions.ouhsc.edu/Portals/1047/assets/ChangeCollegeMajorDegreeOption6\\_2016.pdf](https://admissions.ouhsc.edu/Portals/1047/assets/ChangeCollegeMajorDegreeOption6_2016.pdf). A new career goal statement and résumé should be submitted as well. The request must be approved by all programs involved.

## **Policy on Graduate Assistants**

A student enrolled in a graduate or professional degree program in the Hudson College of Public Health can be appointed as a graduate assistant. The primary responsibility of a graduate assistant is participation in the research and teaching effort of the department or program. The work effort must contribute to the graduate or professional education of the student and to fulfilling the requirements for the degree.

Graduate assistants may be categorized as Graduate Assistants (GA), Graduate Research Assistants (GRA) or Graduate Teaching Assistants (GTA). These categories are defined according to the emphasis placed on the student's responsibilities.

GAs, GRAs, and GTAs may be eligible for waiver of non-resident tuition in accordance with Oklahoma State Regents' Policy and resident tuition as determined by college tuition waiver resources. A student must be appointed a GA, GRA, or GTA by the first day of class in order to receive a non-resident tuition waiver for that semester.

The Internal Revenue Service grants student status to GAs, GRAs, and GTAs that are enrolled for a minimum of half-time. Half-time enrollment for IRS purposes is five credit hours for fall and spring semesters and two credit hours for the summer semester. If the enrollment drops below this minimum, he/she must be reclassified as an employee and will no longer be considered a GA, GRA, or GTA.

Graduate Assistant – The primary responsibility is participation in work effort that contributes to the educational process and development of the student.

Graduate Research Assistant – The primary responsibility is participation in the research effort of the department and the graduate program. The work effort must be related to and should contribute to fulfilling requirements for completing the degree.

Graduate Teaching Assistant – The primary responsibility is in the teaching effort of the department and contributes to the development of the student.

To be appointed a GA, GRA, or GTA, the student must meet the following requirements:

1. The student must be enrolled as a full-time student. Full-time enrollment for a Graduate Assistant is defined as six credit hours for fall and spring semesters and three credit hours for the summer term.
2. The student must be appointed for 10 – 20 hours per week (0.25 to 0.50 FTE) to the assigned work as a GA, GRA, or GTA.
3. The work the student is being appointed for must be related to the student's program of study.
4. The student must receive a minimum stipend of \$500 per calendar month. Students may not receive a stipend that exceeds the annually established maximum without prior approval of the Dean of their college.

#### Appointment Outside the Student's Primary Graduate Department

If the GA, GRA, or GTA appointment is for work experience with a faculty member who does not hold a faculty appointment in the primary department from which the student will receive his/her degree, the information outlined below must be provided to the chair of the department. Students enrolled in the Graduate College should consult the Graduate College Bulletin for additional requirements. The Chair will review this information. Following review by the Chair, if the decision is to support appointment, a recommendation with the supporting documentation will be forwarded to the Dean or his designee. The Dean or his designee will review the materials to determine if the work experience is directly related to the program of study and degree requirements. If the work experience is not directly associated with the program of study, the individual will not qualify for the appointment.

The following documentation must be provided by the student and mentor and must include:

1. A detailed description of duties and how they are related to the program of study.
2. Description of the purpose and scope of the project on which the student would work.
3. Identification of the department and college where the project is located.
4. Identification of the faculty member who supervises the work and definition of the faculty member's association with the primary department and/or education.
5. List of skills that will be developed or learned that are directly related to the graduate program objectives.
6. Statement by the student addressing how this experience will enhance the student's career objectives, including specific and measurable outcomes (i.e., professional presentations, publications, etc.).
7. Statement by the supervising faculty member confirming the scope of the work, its relevance to the program of study, the stipend amount, and percent time appointed.

If the work experience qualifies for appointment as a GA, GRA, or GTA, the appointment will be in the primary department even though the department in which the project is funded will provide the stipend support. The appointment paperwork should originate from the primary

department and include the signature of the Chair. The appointment must meet all requirements, policies, and procedures defined by the primary department for GA, GRA, and GTA appointments in the department.

These policies are consistent with the University of Oklahoma Health Sciences Center Policy on Graduate Assistants as approved by the OUHSC Graduate College (8-1-15). The purpose is to provide an opportunity for students to gain working experience that contributes directly to their graduate and professional academic program of study. It is not the intent to provide a means of employment above and beyond their commitment to their degree program. Any exceptions to these policies must be approved by the Dean or his designee, Hudson College of Public Health.

## **Enrollment Policies**

### Full-Time and Maximum Enrollment

Full-time enrollment for public health students is nine credit hours during the fall and spring semesters and four credit hours during the summer sessions. For students appointed as a Graduate Assistant, Graduate Research Assistant or Graduate Teaching Assistant, full time during the fall and spring semesters is six credit hours and three credit hours during the summer session (see also the Policy on Graduate Assistants section of this Bulletin). Students may not carry more than 16 credit hours per semester or more than nine credit hours per summer session without the permission of the Dean or his designee.

### Health Sciences Center Students Enrolling in Norman Campus Courses

To enroll in Norman campus courses, Health Sciences Center (HSC) students must receive permission from their HSC College. The HSC College will contact the OUHSC Office of Admissions and Records in order to process the Norman campus enrollment.

All Norman Intercampus enrollments – adding, dropping, cancelling, or withdrawing courses – must be processed by the HSC Office of Admissions and Records. HSC students should not use the Norman Online enrollment system to process Norman enrollment.

Norman campus will bill for all tuition and fees that are to be paid to the OU Bursar, located in Buchanan Hall. The HSC Bursar will bill for all tuition and fees that are to be paid to the HSC Bursar, 865 Research Parkway, Rm 240, Oklahoma City. Norman campus courses will be listed on the HSC student's transcript.

### Faculty and Staff Enrollment

To prevent a conflict of interest between the role of student and the role of faculty or staff, the following policy applies to all OUHSC faculty and staff enrolled in coursework and programs. A faculty member may enroll in coursework as a Special Student. If the coursework is in a department in which the faculty member has an appointment, the faculty member must enroll for audit. A faculty member may not enroll for credit and cannot be admitted into a degree program in a department in which he/she holds a faculty appointment or in an academic area of his/her

faculty expertise. A full time faculty member cannot be paid as a public health student or receive a student grant.

Staff may enroll in coursework as Special Students according to the admission requirements of the course or program. A staff member may not enroll for credit in a course that is taught by a faculty member who has supervisory authority over the staff member's employment. An exception can be made by the Dean for a required course taught only by the faculty supervisor. If a staff member is admitted to a degree program within the academic unit in which he/she is employed, the following conditions must apply: 1) The staff member's work and responsibility as an employee must be different from his/her work and responsibility as a student; 2) If the staff member is employed for research effort, the research activity for which the staff member receives payment as an employee cannot be used to meet thesis, dissertation, or field experience requirements; 3) The faculty member with supervisory responsibility for the staff member as an employee cannot serve as the staff member's student advisor; 4) The criteria for the evaluation of the staff member as an employee must be identified and differentiated from the criteria for the evaluation of the staff member as a student; 5) The evaluation of the staff member as a student must not be made by any person with supervisory responsibility over the individual as an employee; and 6) A full time staff member cannot be paid as a public health student or receive a student grant.

#### Auditor

Audit enrollment is for non-credit and used by students who want to take a class for information, not to count toward a degree. A student enrolling as an auditor must meet guidelines as outlined below. Enrollment as an auditor is permitted in all courses, subject to the approval of the instructor(s) and the Dean or his designee of the College in which the course(s) is offered. Enrollment as an auditor must be completed by the last day of enrollment in any term.

Enrollment as an auditor is indicated with an *AU* or *W* grade on the student's permanent academic record and no credit/clock hour values designated. Fee charges and refund policies for audit enrollments are the same as for credit enrollments. Students enrolled "exclusively" as auditors may withdraw only during the fee return period and the enrollment will be canceled. No entry will be made on a permanent academic record.

In accepting a student as an auditor, it becomes the responsibility of the instructor to make clear to the student the instructor's requirements for the audit enrollment. For example, if the student is required to attend regularly, to participate in specific class exercises, perform experiments, take tests, etc., these expectations must be relayed to the student at the time permission is given to enroll as an auditor.

Satisfactory completion of the audit enrollment is identified as an *AU* grade. An instructor, at his/her discretion, may assign a *W* grade to an auditor who, in the instructor's opinion, did not perform according to the specific requirements as identified at the time of enrollment.

A student enrolled exclusively as an auditor may change their enrollment to “credit”, providing the student gains admission to the university during the first two weeks of classes of a semester or the first week of classes of a summer session with the approval of the instructor(s) and appropriate college dean.

A change of enrollment from “credit” to “audit” may be made no later than the end of the sixth week of classes of a semester or the end of the third week of classes of a summer session, providing the student is passing and receives the approval of the instructor and the appropriate dean. A change of enrollment to audit supersedes the original enrollment for credit, and no withdrawal from the credit enrollment is posted to the student’s permanent record. For more information, contact Admissions and Records, BSEB 200, (405) 271-2359 or email [admissions@ouhsc.edu](mailto:admissions@ouhsc.edu).

### Class Attendance

Only those students who are officially enrolled (either for credit or as an auditor) may attend class. Each student is responsible for meeting the requirements of courses in which he or she is enrolled. Specific policies concerning attendance requirements and announced and unannounced examinations are the responsibility of the individual instructor. If absences seriously affect a student’s class work, the instructor is required to report this fact to the appropriate dean, who will transmit the information to the Office of Admissions and Records. Classes are not to be dismissed or rescheduled for extracurricular functions.

### Religious Holidays

It is the policy of the University to excuse the absences of students that result from religious observances, unless such an accommodation would clearly cause undue hardship to the educational and/or university process. In accordance with the procedures stipulated by each college to accommodate varying clinical and educational differences, requests for accommodation of religious holidays must be made within the first week of the term in which the course is offered. Accommodations will be provided without penalty for the rescheduling of examinations and/or required clinical, lab or class work that may fall on religious holidays.

### Request for Leave of Absence

Students may request a leave of absence from their graduate studies for up to but not to exceed 12 consecutive months (three consecutive academic terms). The request must be approved by their advisor, the department chair, and Dean or his designee. Students on probationary status, if granted a leave of absence, will resume their probationary status upon return from their leave. Students receiving financial aid may be required to return a portion of the aid. They must check with their financial aid officer.

### Withdrawing and Dropping Courses

Students should contact the Office of Student Services to initiate the withdrawal or drop procedure. “Withdrawing” from the Health Sciences Center refers to withdrawing from all enrolled courses for a given term. “Dropping” refers to the dropping of one or more courses while remaining enrolled in at least one course for a given term.

Students must consult the academic calendar for grading regulations and deadlines relative to withdrawals and drops. Withdrawing or dropping courses may require students receiving financial aid to return a portion of the aid received. Students must check with their financial aid officer.

#### Administrative Withdrawal

An administrative withdrawal (*AW*) may be assigned to indicate that a student has been involuntarily withdrawn by the institution. Students may receive an *AW* for disciplinary reasons, financial reasons, or inadequate attendance. Such institutional penalties must follow formal institutional procedures. Administrative withdrawals are GPA neutral and approved by the Vice Provost for Academic Affairs & Faculty Development.

For assistance, please contact the Hudson College of Public Health Office of Student Services at (405) 271 2308, or the Office of Admissions and Records at (405) 271-2359.

#### Course Evaluations

Instructors of all didactic courses will provide their students the opportunity to evaluate the courses. Students are strongly encouraged to participate in mid-term and end-of-course evaluations each semester.

## **Grades**

#### Course Credit in the Hudson College of Public Health

Coursework taken at the University of Oklahoma Health Sciences Center outside the Hudson College of Public Health which is to be applied toward fulfilling requirements for a public health degree must be approved for graduate credit and approved by the student's advisor, department chair, and Dean.

#### Grades of A, B, C, D, and F

The grades *A*, *B*, *C*, *D*, and *F* are used in computing grade point averages. In the Hudson College of Public Health, the grades of *A*, *B*, *C*, and *S* are the only passing or satisfactory grades, and the grades of *D*, *F* and *U* are failing. Students who receive a *D*, *F* or *U* grade in a required course must register for the required course the next time it is offered. In such re-enrollment, both grades will be shown on the student's academic record and both will be included in the grade point average calculation. Any student presenting credit from another institution for a course previously failed at the University of Oklahoma Health Sciences Center shall not receive credit for such courses except through validation by the department in which the course was originally failed and approval by the Dean.

It is the prerogative of each department to establish grade requirements above the College minimum.

### Grades of S and U

The grade of *S* (satisfactory) is a neutral passing grade. The grade of *U* (unsatisfactory) is used to indicate that no credit will be given for the course. These grades may be used for seminar courses provided they are taught on a non-competitive basis and all students in the class are graded on this basis. The *S* grade is the only passing grade accepted for special problem courses, individual research, and directed reading courses. The *S* grade may not be used for lecture recitation courses except with the expressed approval of the Dean.

### Grade of I

The grade of *I* (incomplete) is a neutral grade. It is not an alternative to an earned letter grade, but is intended as a temporary grade to be used for a student who, for reasons satisfactory to the instructor, is unable to complete certain identifiable requirements of a course and who cannot be assigned any other grade. Typical instances might be absence from a final examination due to illness or inability to submit a term project due to extenuating circumstances. The instructor will indicate to the student what must be done to complete the course, will set a time limit appropriate to the circumstances and will define the grade to be assigned. Students cannot attend the scheduled course at a future offering in order to complete the *I* grade. The instructor has the option of assigning a grade accordingly if the student fails to perform as required. For instance, if the instructor requires a paper to complete the *I*, and the student does not submit the paper, the instructor may calculate the final grade in the course using the failing grade for that assignment.

If by the end of one year no change in grade has been submitted, the grade of *I* will become permanent on the student's record. After a grade of *I* has become permanent, the student may re-enroll in the course. Credit for courses in which a student has received an *I* at the University of Oklahoma cannot be completed at or transferred from another institution. If the student graduates with a grade of *I* on the record, it becomes permanent.

### Grades of X, S, and U for Enrollment in Thesis and Dissertation Research

The grade of *X* is a neutral conditional grade and indicates that satisfactory progress is being made on thesis and dissertation research courses 5980 and 6980. It is a complete grade when the final entry is either *S* (satisfactory) or *U* (unsatisfactory), indicating either acceptance or rejection of the thesis or dissertation. An intermediate grade of *U* indicating unsatisfactory progress may be given if circumstances warrant.

The grade of *X* is included in credit hours attempted and credit hours earned. Two *U* grades for thesis or dissertation will result in termination of the degree program.

### Grade of W

The grade of *W* (withdrawal) is a neutral grade indicating that the student was enrolled in but withdrew from the course. A *W* will not be recorded if the student's withdrawal is within the first two weeks of a semester or the first week of a summer term, nor will any record be maintained on the student's permanent record.



A student who withdraws from a course with failing grades will receive the grade of *F*.

For students withdrawing from all courses in the first two weeks of class (the first week of a summer session), no grade is recorded. For complete withdrawals occurring after the second week of class (first week of summer), the instructor will assign a grade of *W* or *F* for each course.

Deadlines that must be met when withdrawing or adding or dropping courses are noted in the University's Academic Calendar for each semester. Students are responsible for reviewing the Academic Calendar for specific deadline dates. The Academic Calendar can be found at <https://admissions.ouhsc.edu//AcademicCalendar.aspx>.

### Repeat Coursework

Students cannot repeat coursework in which they have received a passing grade (*A*, *B*, *C* or *S*). Exceptions can be made for students receiving a *C* grade if the program requires a grade of *A* or *B* in the specific course. A request from the program must be approved by the Dean. Both the original grade and the repeat grade will be included in the calculation of the GPA.

### Transfer Credit

The acceptance of transfer credit from another institution for a public health degree program at the University of Oklahoma Health Sciences Center is determined in accordance with the criteria listed in the *Transfer Credit* section of this Bulletin. Grades of courses transferred for credit will not be included in the GPA computation.

### Grade Point System

Each hour of *A*, *B*, *C*, *D*, and *F* carries a grade point value as follows: *A*-4; *B*-3; *C*-2; *D*-1; and *F*-0. Grades of *S*, *I*, *X*, *U* and *W* carry no grade point value and are not included in the computation of a student's semester or cumulative grade point average.

### Correcting Grades Reported in Error

The instructor initiates the change by filing a Faculty Request for Grade Change form with the Office of Admissions and Records through the Office of Student Services.

## **Standards of Performance and Evaluation**

### Hudson College of Public Health Academic Standards

The Hudson College of Public Health is responsible for review of the performance of the Certificate of Public Health, Master of Public Health (MPH), and Master of Health Administration (MHA) students in accordance with the guidelines described in this publication. The Hudson College of Public Health monitors the students' academic progress and at the end of each semester or summer session, notifies students about their status if they fail to meet the standards of performance required by the College.

All students enrolled in both professional and graduate degree programs offered through the Hudson College of Public Health are expected to receive a letter grade of *A* or *B* in all courses taken. If a student receives a letter grade of *C*, they will be notified by the Associate Dean for Academic Affairs that their academic performance is below the expected standard. Should the student receive a second grade of *C*, they will receive a letter from the Associate Dean for Academic Affairs placing them on notice that any additional grades below a *B* may be grounds for dismissal from the degree program.

If at any time a student receives a failing grade of *D* or *F* in a course or if the student receives a third grade of *C*, the student may be required to meet with a subcommittee of the Admissions and Academic Advisement Committee appointed by the Associate Dean for Academic Affairs to show cause why they should not be dismissed from the degree program. Under special circumstances, the subcommittee may recommend continuation on academic probation due to specific issues as identified by the subcommittee. The subcommittee recommendation will be acted upon by the Associate Dean for Academic Affairs.

If a student in the Certificate, MPH, or MHA degree program is placed on academic probation under this policy and subsequently receives an additional grade of *C* or less, they may be immediately dismissed from the degree program.

If a student is enrolled in the Master of Science (MS) or Doctor of Philosophy (PhD) degree program and is placed on academic probation under this policy and subsequently receives an additional grade of *C* or less, a recommendation may be forwarded to the Graduate Dean that the student be dismissed from the Graduate Program due to failure to maintain satisfactory academic progress.

#### Academic Probation

Students who fail to maintain an overall grade point average of 3.00 in all courses attempted will be placed on academic probation. Students will also be placed on probation if they fail to maintain satisfactory progress as determined by their annual evaluation or in receiving the grade of *U*. Students placed on academic probation for low GPA will be evaluated at the end of each subsequent semester. The probationary status will remain until the student raises the overall GPA to 3.00 or higher. The probationary requirements must be completed within nine credit hours of graded coursework or one calendar year from being placed on probation, whichever comes first. This is the probationary period, during which students must demonstrate satisfactory progress in improving their cumulative grade point average. Students placed on probation for a grade of *U* or for failure to maintain satisfactory progress will be evaluated at the end of the following semester. Receiving a grade of *C*, *D*, *F*, or *U* may be grounds for dismissal prior to completing the probationary period.

At the end of the probationary period, students who achieve a 3.00 cumulative grade point average and/or regain satisfactory progress will be returned to full status and will be allowed to continue their enrollment. Those who fail to achieve a cumulative grade point average of at least 3.00 for all courses awarding grade points may be denied further enrollment after this

probationary period. If the department or program wishes to recommend that the student merits an extension of the probationary period, the extension will be considered a second probationary period. The time limit of this extension must be specified by the department or program and approved by the Dean. The second probationary period will not exceed two consecutive academic terms.

Students are limited to two academic probations. If a student fails to maintain a 3.00 grade point average and the rules require probation for a third time, the student will be denied further enrollment and will be dismissed from the Hudson College of Public Health programs.

### Departmental Standards

Each semester the Office of Student Services under the supervision of the Associate Dean of Academic Affairs will evaluate each student's academic performance. A review of the student's grades will be conducted to determine if the student is in good standing. Students who are not in good standing will be further evaluated and may be required to meet with the Admissions and Academic Advisement Committee as outlined in this section (Standards of Performance and Evaluation) of the Bulletin.

In addition, each student is encouraged to meet with his/her academic advisor each semester to review the student's progress toward meeting degree requirements. In order to enroll each semester, the advisor must approve the student's enrollment//progress. At this time, the advisor should discuss with the student the student's career goals and professional development and academic performance.

Departments are encouraged to annually review all students in their program and should conduct extensive annual reviews on all doctoral students. The review may include, but is not limited to, considerations such as progress toward meeting conditions of admission; completion within the prescribed period of time of those courses in which the student has received the grade of *I*; completion of core course requirements; completion of special prerequisite requirements; progress toward completing practicum requirements; and the general quality of academic performance. The review also may encompass the student's broader scholarly capabilities and professional development. Information on students who are deemed to be making unsatisfactory progress by the program should be sent to the Associate Dean for Academic Affairs for review. The student may be required to meet with a subcommittee of the Admissions and Academic Advisement Committee appointed by the Associate Dean for Academic Affairs to show cause as to why they should not be dismissed from the degree program. Reports or annual evaluations of MS and PhD students must be submitted to the Graduate Dean in accordance with Graduate College policies published in the Graduate College Bulletin.

### Residence Requirements

The primary purpose of residence requirements is to encourage the educational and professional development of individuals seeking advanced degrees. The opportunity for the student to associate with the faculty and other students in the University community, to utilize

the facilities on the campus, and to take advantage of a wide variety of cultural opportunities justifies a relatively extended campus stay. In addition, the University must be in a position to oversee the development of the candidate.

The student must be in residence at the University of Oklahoma and engaged in coursework or research activities prescribed by the major department/program for at least two regular semesters for each degree program.

#### Qualifying for an Advanced Degree or Certificate

To qualify for a degree or certificate, students must achieve an overall grade point average of 3.00 or higher in all courses comprising a part of the degree program. The grade of S, U, I, and X for which no grade points are awarded, are considered neutral in determining the graduating grade point average.

### **Graduation Deadlines**

The date of graduation for each term shall be the last day of final examination in the fall, the date of commencement in the spring and the last day of classes in the summer. Students must be enrolled in a minimum of two credit hours the semester of graduation. Students should complete the graduation application at the time they enroll for their last semester. These dates for an academic year may be found in the Academic Calendar. To entitle a student to graduate as of that date, all work required for the degree and payment of tuition and fees must be completed satisfactorily prior to the first day of classes of the next semester or summer session. It is the student's responsibility to make sure all degree requirements have been met. If the student has not completed all the requirements, the student will become a graduate the following semester. Diplomas are awarded three times a year.

#### Graduation Ceremony

The official commencement for all students is held on the Norman campus each spring. A College convocation is held each spring semester. Students graduating during the summer or fall semester are invited to participate in the following spring commencement and convocation ceremonies.

Students who plan to graduate in the spring or summer terms are eligible to participate in the spring commencement and convocation ceremonies. The student's Committee must state in writing that the student is expected to complete all degree requirements before the end of the summer semester. These requirements include the completion of coursework, the MPH practicum paper and accompanying comprehensive oral examination, the MHA internship requirements and the completion of the MS and PhD thesis and dissertation requirements.

#### Diploma and Fees

During the candidate's last semester, the candidate must file an official Application for Graduation and pay all tuition and fee charges before the degree will be conferred and a

diploma issued. The candidate who plans to participate in the commencement ceremony must purchase a cap and gown.

#### Consent for Letters of Recommendation

In order to maintain compliance with the Family Educational Rights and Privacy Act (FERPA), any member of the faculty or staff who writes a letter of recommendation that includes personally identifiable information obtained from a student or alumnus' education record (grades, GPA, class rank, etc.), should obtain signed authorization from the student.

The Consent Authorization Form and Letter of Recommendation Request form is found on the Admissions and Records website,  
[https://admissions.ouhsc.edu/Portals/1047/assets/documents/Forms/Consent\\_Authorization.pdf](https://admissions.ouhsc.edu/Portals/1047/assets/documents/Forms/Consent_Authorization.pdf).

## Professional Programs

### Certificates

#### **Certificate in Population Health**

The Certificate in Population Health offers a secondary credential for graduate and professional students preparing to enter the healthcare, public policy, or community-based organization sectors, such as medicine, dentistry, nursing, social work, and public administration. The Certificate in Population Health is designed to broaden the student's understanding of population health, population-level determinants of health, health disparities, and improving health disparities through public health research, intervention, and advocacy. The Certificate in Population Health is designed for students who plan to work in careers outside of public health, but who wish to apply concepts of population health and promote health equity in their professional careers.

The admission standards for the certificate program are the same standards in place for the MPH degree program. Refer to the Academic Information section of the bulletin for information on application requirements.

The curriculum for the Certificate in Population Health will consist of the following courses:

#### Required Courses:

- BSE 5113 Principles of Epidemiology
- HAP 5453 U.S. Health Care Systems

Selective Courses: Students will select any two of the following courses with at least one course from OEH or HPS

- OEH 5013 Environmental Health
- HPS 5673 Lifestyle Medicine in Public Health
- HPS 5563 Program Planning for Health Promotion
- HPS 5213 Social & Behavioral Sciences in Public Health
- HAP 5303 Health Policy and Politics
- BSE 5363 Epidemiology and Prevention of Chronic Disease
- BSE 5303 Epidemiology of Infectious Disease

The required number of credit hours equals 12. All coursework completed with a grade of *A*, *B*, or *C* while enrolled in the certificate program may be applied to a Hudson College of Public Health degree program if the student is admitted to the degree program within three years of completing the certificate requirements and the degree program evaluates the coursework as appropriate for the program of study. Credit may apply to a degree for those students admitted more than three years after completing the certificate requirements based on the individual's professional work experience. In no instance will credit be given for any coursework completed in excess of six years prior to admission into a degree program.

All students enrolled in the certificate program must maintain a cumulative grade point average of 3.00 or greater in order to complete the program and receive the certificate. MPH students who have completed the course requirements may petition for award of the certificate provided their GPA in the courses is at least 3.00.

### **Certificate in Healthcare Administration**

The Graduate Certificate in Healthcare Administration is an option for current graduate students in the OU Master of Business Administration program as well as for anyone who has earned an MBA degree from any institution. The graduate certificate program develops a deeper understanding of practices and policies within the healthcare sector for those who wish to use their MBA degree in a healthcare setting.

MBA students who pursue the certificate program will join with the Master of Healthcare Administration (MHA) students in learning the precepts of healthcare administration. The cross-curriculum partnership of this certificate enables the Price College of Business graduate students to utilize pre-existing courses to meet the demands set by the growing healthcare industry.

Admission criteria will be the following: current MBA student in the OU Price College of Business in good standing, or someone with an MBA degree.

Application procedures for current OU MBA students are detailed at

<https://publichealth.ouhsc.edu/Portals/1055/Assets/documents/About%20Us/Certificates/How%20to%20Apply%20to%20the%20MBA%20certificate%20for%20OU%20MBA%20in%20Progress.pdf>.

Application procedures for MBA graduates from OU or any institution can be found at

<https://publichealth.ouhsc.edu/Portals/1055/Assets/documents/About%20Us/Certificates/How%20to%20Apply%20to%20the%20MBA%20certificate%20for%20MBA%20grads.pdf>.

The Graduate Certificate in Healthcare Administration will consist of the following courses:

#### Required Courses:

- HAP 5453 U.S. Health Care Systems

#### Selective Courses:

Students will select any three of the following courses:

- HAP 5203 Health Economics
- HAP 5733 Managed Care and Integrated Systems
- HAP 5613 Financial Management of Health Service Organization
- HAP 5873 Health Information Systems
- HAP 5883 Health Care Quality Management

The required number of credit hours equals 12. All students enrolled in the certificate program must maintain a cumulative grade point average of 3.00 or greater in order to complete the program and receive the certificate.

### **Master of Public Health (MPH)**

The MPH degree is a Hudson College of Public Health professional graduate degree designed to prepare practicing professionals in the field of public health based upon the adopted competencies. The MPH degree offers opportunities for specialization in: Biostatistics, Epidemiology, Health Administration and Policy, Health Promotion Sciences, Environmental Health, and Interdisciplinary Public Health.

All applicants for the MPH degree will indicate their primary MPH program of interest and an alternate program if desired. The application will be reviewed by a committee of faculty from the department hosting the program, or the College's Admissions and Academic Advisement (AAA) Committee in the case of application for the MPH in Interdisciplinary Public Health, and the committee will make an admission recommendation to the Dean. If two programs are indicated and both recommend admission, the applicant may choose between them. If no positive recommendation is made, admission will be denied.

MPH degree programs require 45-46 credit hours of study, depending on the program. All MPH students are expected to complete the core curriculum within the first 21 credit hours of study. Completion of the core courses within the first 21 hours provides foundational knowledge and skills needed for advanced course work and also establishes eligibility to take the National Board of Public Health Examiners (NBPHE) examination for the Certified in Public Health (CPH) credential.

The core curriculum is comprised of:

BSE 5163	Biostatistics Methods I
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health
HAP 5453	U. S. Health Care System
HPS 5211	Qualitative Methods in Public Health

### Program of Study

MPH students are required to file an Outline of Course Work during the first semester of enrollment. This form, which is available from the Office of Student Services, documents degree program course requirements at the time the student enters the program, and provides the student a guideline for courses needed to complete the degree. It is signed by the student and the academic advisor, and any subsequent changes in the student's program course work must be approved by the department or program, documented in writing, and filed with the Office of Student Services.



### Interprofessional Education

All MPH and MHA students are required to participate in the campus-wide Interprofessional Education All Professions Days. The purpose of Interprofessional Education is to engage Public Health students with students from other Colleges in team building exercises and activities that lead to a greater understanding of the integration of disciplines necessary in the delivery of healthcare and the understanding of the social determinants of health. The OKC All Professions Days require participation in two events, one held in the Fall and one in the Spring term. Students must participate in the Fall All Professions Day first. All MPH and MHA students are required to participate in the first year of enrollment. Tulsa students may participate in the Summer Institute Program in Tulsa and complete a one-hour directed readings course in lieu of attending the two All Professions Day events in Oklahoma City. The Office of Student Services will provide a list to the All Professions Days Coordinator regarding who is required to participate. Failure to participate in the training requires prior approval from the Associate Dean for Academic Affairs.

### CPH Examination

MPH students are required to take the Certified in Public Health (CPH) Examination. This examination, offered by the National Board of Public Health Examiners (NBPHE), provides public health professionals a credential which demonstrates mastery of core competencies. In addition, this examination provides a mechanism to assess the attainment of CEPH competencies.

Students who have completed 21 credit hours including the core courses may take the examination. The CPH exam is available year round at the PSI Assessment Center. Permission to enroll in the exam will be coordinated by the Office of Student Services. The cost associated with a first attempt of the examination will be paid by the college. Students are responsible for the cost of a second attempt, if needed. Resources are available to help all students with exam preparation.

Advisors will be notified of the exam results so that individual counseling can be provided for students who do not pass the exam after the first attempt.

Students not passing the examination are **required** to take the exam for a second time. Passing the examination is not a criterion for graduation. Once the student has passed the exam and graduated, the student will be Certified in Public Health, and can add the initials CPH to his/her name and degree.

Details about the exam can be found at the following web site: <https://www.nbphe.org/>.

### MPH Culminating Experience

The MPH Culminating Experience is comprised of the following:

- Completion of the CPH 7003 Integrated Public Health Practice course, which is designed to tie together concepts from the individual core courses (BSE 5113, BSE 5163, OEH 5013, HPS 5213, HAP 5453 and HPS 5211) through case studies

- Completion of CPH 7941 Practicum Preparation Seminar, which is designed to help the student identify a relevant practice experience opportunity, secure a Preceptor to guide them through the Practicum, and Complete the Practicum Agreement
- Completion of the 240 contact hour practice experience (CPH 7950 Public Health Practicum-note contact hours do not include preparation and delivery of paper and examination) under the guidance of the Preceptor and faculty advisor
- Completion of all required Practicum forms including the Midcourse Review of Student Progress, Time and Activities Log, Student Evaluation of Practicum and Host Site, and Preceptor Assessment of Student's Performance in Practice
- Preparation and completion of the Practicum Paper, including at least two work products as appendices, and
- Completion of the oral presentation of the Practicum Paper and accompanying comprehensive oral examination.

A student must be in good academic standing and have completed CPH 7941 Practicum Preparation Seminar prior to enrolling in CPH 7950. Enrollment in CPH 7950 is required to begin logging practicum hours.

If the practicum experience is not finalized during the semester of initial enrollment, a grade of "I" may be awarded. The student must complete the Practicum including the Practicum Paper and Work Products within one year from initial enrollment in CPH 7950. If the practicum is completed before the student's last semester of study, the Practicum Paper is to be submitted to the committee; however, the oral presentation of the Practicum Paper, associated comprehensive oral examination, and committee approval of the Practicum Paper and Work Products will not occur until the student's last term of enrollment. The MPH Practicum should be completed as near to the end of a student's program as is possible.

Although the oral comprehensive examination component of the MPH Culminating Experience occurs in conjunction with the Practicum Paper presentation, the examining committee's questions will not be limited to the scope of the practice experience. The student should be prepared to respond to questions on any aspect of their MPH studies.

The Culminating Experience is guided by a committee developed by the student and the student's faculty advisor. At the time the approved practicum agreement is submitted to the Office of Student Services, the committee membership must sign off on the form indicating their agreement to serve as a member of the Culminating Experience committee. The committee will be comprised of a minimum of three faculty, generally two faculty members from the degree department/program and a faculty member from outside the degree department. All members of the committee will have appropriate contributing knowledge of and experience in the student's practicum. Members not holding a faculty appointment in the Hudson College of Public Health must be approved by the Dean or his designee. Practicum Preceptors not holding a faculty appointment may serve on the committee as a non-voting participant.

The committee will have the responsibility to assist and guide the student through the selection of the practicum and writing of the practicum paper and the oral presentation. The committee chair will review the completed paper and determine if it is acceptable for oral presentation to the committee. ***The draft paper including at least two work products in the appendix must be submitted to the committee members a minimum of two weeks prior to the scheduled date of the oral presentation.*** The student, working with the chair of the committee and with concurrence of the committee members, will arrange a time for the presentation. Committee members may require changes to the draft paper prior to or after the presentation. Should revisions to the Practicum Paper be directed by the Culminating Experience Committee following the oral presentation and examination, the Paper will be revised and resubmitted. The final Paper must be approved by the Committee before the student is certified for graduation. The grade assigned in CPH 7950 is based on the preceptor's evaluation, the final paper and oral examination as assessed by the student's committee and the receipt of all practicum forms.

Additional detailed information about the practicum and required forms are available at <https://publichealth.ouhsc.edu/CurrentStudents/MPHPracticum.aspx>.

#### Admission to Candidacy

Students who are doing satisfactory work may normally be admitted to candidacy for a degree as soon as they have enrolled in sufficient hours for the degree. The Admission to Candidacy form

(<https://publichealth.ouhsc.edu/Portals/1055/Assets/documents/Current%20Students/Student%20Forms/AdmissToCandidacyForm.pdf>) should be filed with the Office of Student Services at the beginning of the semester in which the student expects to graduate.

The Academic Calendar <https://admissions.ouhsc.edu//AcademicCalendar.aspx> lists the specific deadline for each semester. Also, at the time the Admission to Candidacy is filed with the Office of Student Services, students should obtain instructions governing the completion of coursework and graduation from the Office of Student Services.

All degree requirements must be completed by the last day before the start of the next semester in order to graduate as of that semester. If everything has not been completed the student must enroll in a minimum of two credit hours the next semester.

If the student does not pass the Culminating Experience, a report must be submitted by the chair of the student's committee to the Office of Student Services indicating what remedial steps the student may take to successfully complete the Culminating Experience. This report must also outline the student's deficiencies. A student who fails a second time will no longer be eligible for a master's degree in the academic program.

### Transfer Credit

The acceptance of transfer credit from another institution for the MPH and MHA degrees is determined in accordance with the following criteria:

1. Twelve transfer hours may be accepted in a 45-hour program and thirteen hours in a 52-hour program. Any other request should not exceed 25% of the degree program.
2. The coursework transferred must represent valid advanced credit earned in courses from an accredited college or university.
3. The credit must carry a grade of *A*, *B*, or *S*.
4. The credit must be applicable to the degree program.
5. The transfer credit must not be more than six years old at the time of admission to the degree program. In special cases, credit more than six years old may be transferred if recommended and validated by the department and approved by the Dean or his designee. The departmental procedures to validate the student's current knowledge and competency must have the approval of the Dean or his designee.
6. Coursework completed at the University of Oklahoma Norman and Tulsa campuses will be considered as residence credit, and upon approval of the department or program and the Dean or his designee, may be used without limitation as credit toward a master's degree.
7. Credit hours previously presented and counted for one master's degree or certificate may not be applied toward satisfying the requirements of a second master's degree or certificate with the exception of approved dual degree programs.
8. All transfer coursework must be approved by the department or program and by the Dean or his designee. Departments or programs with transfer rules more stringent than those listed in this section shall take precedence and shall be listed in the departmental section of this publication.
9. Transfer credit is considered neutral in computing the University of Oklahoma grade point average for the purpose of determining academic status, probation, and graduation.

### Time Limits for Completing Professional Master's Degrees (MPH and MHA)

A student registered in a master's degree program typically will complete work within six calendar years after the student's first enrollment at the Hudson College of Public Health. Departments with shorter time limits have so indicated in the section of this Bulletin that refers specifically to their program.

When additional time is necessary and appropriate, the student and advisor will petition the student's department for an extension. The extension may be denied, in which case the student will be dismissed, or it may be granted with qualification. The department must inform the student, advisor, and Dean of its decision in writing. If the extension exceeds one year, approval by the Dean is required. Extensions needing approval by the Dean will require that the department or program unit certify that the student's knowledge will be current and appropriate to the degree at the time the degree is awarded.

Credit for individual courses taken at the University of Oklahoma or at another accredited university that is to be applied toward a master's degree must not be more than six years old at the time of admission or readmission to the Hudson College of Public Health. No more than one quarter of the credit hours (transfer credit and residence credit) applied toward a master's degree can be more than six years old at the time of graduation.

A student's registration in a master's degree program is terminated upon receiving the degree. To continue studies in the Hudson College of Public Health, re-application in another degree program or as a special student must be made and approved. Course work applied toward the awarded master's degree cannot be applied for credit for a second master's degree. Coursework taken after award of a master's degree may not be applied to a doctoral degree program unless they were taken after acceptance to the program.

#### Double Major Master of Public Health Degree Programs

Students admitted into the MPH degree program through the Hudson College of Public Health may receive an MPH degree with a double major in two separate academic areas within the Hudson College of Public Health. The general requirements for such degree programs are:

1. The student must be accepted by both programs before completing 22 credit hours in the Hudson College of Public Health
2. Both disciplines will be represented as academic faculty advisors for the student. Both advisors will assist the student in coordinating his or her progress and meeting graduation requirements.
3. The student must satisfy all course requirements for both academic areas.

#### Dual Degree Programs

A student may pursue two academic degrees simultaneously via a dual degree program. However, the student must be accepted into the second degree program before the completion of no more than 12 semester hours of study in the first program as required by University policy. Additional information is available from the Office of Student Services. Currently available dual degree programs are:

MPH in Health Promotion Sciences + Master of Social Work

MPH in Health Administration and Policy + Doctor of Medicine

MPH in Health Administration and Policy + Juris Doctor

Master of Health Administration + Juris Doctor

MS in Biostatistics + BS in Mathematics

### Accelerated Dual Degree Program

The accelerated dual degree program establishes a framework of rules by which academic units may offer students the option of earning combined bachelor's and advanced degrees in an accelerated manner. The program allows students with 30 hours of advanced standing credit to earn both the bachelor's and the master's degrees within three to four years of matriculation. Interested applicants should contact the academic programs of interest to design a degree plan. An example of this type of program is the BS in Mathematics / MS in Biostatistics, which is described in detail in the Department of Biostatistics and Epidemiology section of this Bulletin.

## **Graduate Degree Programs**

For all students admitted to the Master's of Science (MS) and Doctor of Philosophy (PhD), the degree authority resides with the OUHSC Graduate College and the student's Dean is the Graduate Dean.

### Master of Science Degree (MS)

The Master of Science (MS) degree is a Graduate College degree and is awarded in recognition of the successful completion of substantial post-baccalaureate study in a chosen field. It may be a course of study designed to serve as a foundation for more advanced work leading to the doctoral degree. Students enrolled in the Master of Science degree programs are responsible for the policies and procedures as defined in this Bulletin and the Graduate College Bulletin, which may be found online at

<https://graduate.ouhsc.edu/CurrentStudents/GraduateCollegeBulletin.aspx>.

### Doctor of Philosophy (PhD)

Students enrolled in the PhD programs are responsible for the policies and procedures as defined in this Bulletin and the Graduate College Bulletin, which may be found online at

<https://graduate.ouhsc.edu/CurrentStudents/GraduateCollegeBulletin.aspx>.

## Academic Departments

### Department of Biostatistics and Epidemiology

#### Mission

The Department of Biostatistics and Epidemiology, which was founded in 1968, was the first University department to combine these two disciplines into a single administrative unit. The objectives of the department are to produce professional biostatisticians and epidemiologists and to give each specialist additional preparation in the other discipline.

The department's programs are designed to prepare students as independent biostatistics and epidemiology researchers with careers in schools of public health and medicine; in health agencies, and medical institutions; or as consultants in the biomedical fields.

#### Professional Degrees Offered

- Master of Public Health (MPH) degree in Biostatistics
- Master of Public Health (MPH) degree in Epidemiology

#### Graduate Degrees Offered

- Dual BS/MS degree in Biostatistics/Mathematics (offered with OU Norman)
- Master of Science (MS) degree in Biostatistics
- Master of Science (MS) degree in Epidemiology
- Doctor of Philosophy (PhD) degree in Biostatistics
- Doctor of Philosophy (PhD) degree in Epidemiology

### Programs of Study

#### Master of Public Health in Biostatistics

##### Course Requirements:

- |                                     |                 |
|-------------------------------------|-----------------|
| • The 6 core courses                | 16 credit hours |
| • Required BSE courses              | 7 credit hours  |
| • Elective BSE courses              | 18 credit hours |
| • Integrated Public Health Practice | 3 credit hours  |
| • Public Health Practicum Courses   | 2 credit hours  |

##### Core Courses for MPH in Biostatistics:

BSE 5163	Biostatistics Method I
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health

HAP 5453 U. S. Health Care System  
HPS 5211 Qualitative Methods in Public Health

Required Courses:

BSE 5001 Problems in Biostatistics and Epidemiology  
BSE 5013 Applications of Microcomputers to Data Analysis  
BSE 5173 Biostatistics Methods II  
CPH 7003 Integrated Public Health Practice  
CPH 7941 Practicum Preparation Seminar – 1 credit hour  
CPH 7950 Public Health Practicum – 1 credit hour (240 contact hours)

Elective Courses:

Epidemiology methods course	3 credit hours
Non-methods Epidemiology course	3 credit hours
Applied Biostatistics courses numbered above 5173	6 credit hours
Other Electives – BSE courses only	6 credit hours

A minimum of 46 credit hours is required for the MPH degree in Biostatistics.

Additional Degree Requirements:

- Computer Literacy  
Students are required to achieve a working knowledge of methods, programming and applications of computers as used in biostatistics and epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completion of BSE 5013 with a passing grade will satisfy this requirement. Students who wish to have more information on the use of computers are encouraged to enroll in BSE 5023 Computer Applications in Public Health (3 hours).
- Basic Knowledge of the Biomedical Sciences  
The course work to satisfy this requirement may be taken at this or another institution, either before or after entering the program. If course work is undertaken to fulfill this requirement, it is in addition to the minimum 46 hours required for the degree.
- CPH Examination  
MPH candidates in biostatistics are required to take the CPH Examination  
Please see the *CPH Exam* section of this Bulletin for detailed information.
- Culminating Experience  
MPH candidates in biostatistics are required to complete the Culminating Experience. The Culminating Experience is guided by a committee developed by the student and the faculty advisor. The committee will be composed of a minimum of three persons: one faculty member in Biostatistics, one member in Epidemiology, and one faculty member in any discipline from the Hudson College of Public Health. Additional faculty members may be added, but are not required. A fourth member can be the preceptor, who must have prior approval of the Hudson College of Public Health Associate Dean of Academic Affairs or Assistant Dean of Academic Affairs in order to serve on the committee. All members of the committee will have appropriate contributing knowledge of and experience in the student's master's paper project. Outside members not holding a faculty appointment in the Hudson



College of Public Health must be approved by the Dean or his designee. Please see the *Culminating Experience* section of this Bulletin for detailed information.

- Interprofessional Education Requirement  
All MPH students are required to participate in the campus-wide Interprofessional Education All Professions Days. Please see the *Interprofessional Education* section of this Bulletin for detailed information.
- Students must satisfactorily complete an oral and/or written examination covering the Program of Study and the practicum paper.
- The Faculty expects students to participate in the intellectual activities of the Department (e.g., seminars, special presentations).

### **Master of Public Health in Epidemiology**

#### **Course Requirements:**

- The 6 core courses 16 credit hours
- Required BSE courses 13 credit hours
- Elective BSE courses 12 credit hours
- Integrated Public Health Practice 3 credit hours
- Public Health Practicum Courses 2 credit hours

#### **Core Courses:**

BSE 5163	Biostatistics Methods I
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health
HAP 5453	U. S. Health Care System
HPS 5211	Qualitative Methods in Public Health

#### **Required Courses:**

BSE 5001	Problems in Biostatistics and Epidemiology
BSE 5013	Applications of Microcomputers to Data Analysis
BSE 5193	Intermediate Epidemiologic Methods
BSE 5303	Epidemiology of Infectious Disease
BSE 5363	Epidemiology & Prevention of Chronic Diseases
CPH 7003	Integrated Public Health Practice
CPH 7941	Practicum Preparation Seminar – 1 credit hour
CPH 7950	Public Health Practicum – 1 credit hour (240 contact hours)

#### **Elective Courses:**

Applied Biostatistics courses numbered above 5163	6 credit hours
Other Electives – BSE courses only	6 credit hours

A minimum of 46 credit hours is required for the MPH degree in Epidemiology.

### Additional Degree Requirements:

- **Computer Literacy**  
Students are required to achieve a working knowledge of methods, programming and applications of computers as used in biostatistics and epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completion of BSE 5013 with a passing grade will satisfy this requirement. Students who wish to have more information on the use of computers are encouraged to enroll in BSE 5023 Computer Applications in Public Health (3 hours).
- **Basic Knowledge of the Biomedical Sciences**  
The course work to satisfy this requirement may be taken at this or another institution, either before or after entering the program. If course work is undertaken to fulfill this requirement, it is in addition to the minimum 46 hours required for the degree.
- **CPH Examination**  
MPH candidates in epidemiology are required to take the CPH Examination. Please see the *CPH Exam* section of this Bulletin for detailed information about the CPH Examination.
- **Culminating Experience**  
MPH candidates in epidemiology are required to complete the Culminating Experience. The Culminating Experience is guided by a committee developed by the student and the student's faculty advisor. The committee will be composed of a minimum of three persons: one faculty member in Epidemiology, one member in Biostatistics, and one faculty member in any discipline from the Hudson College of Public Health. Additional faculty members may be added, but are not required. A fourth member can be the preceptor, who must have prior approval of the Hudson College of Public Health Associate Dean of Academic Affairs or Assistant Dean of Academic Affairs in order to serve on the committee. All members of the committee will have appropriate contributing knowledge of and experience in the student's master's paper project. Outside members not holding a faculty appointment in the Hudson College of Public Health must be approved by the Dean or his designee. Please see the *Culminating Experience* section of this Bulletin for detailed information.
- **Interprofessional Education Requirement**  
All MPH students are required to participate in the campus-wide Interprofessional Education All Professions Days. Please see the *Interprofessional Education* section of this Bulletin for detailed information.
- Students must satisfactorily complete an oral and/or written examination covering the Program of Study and the practicum paper.
- The Faculty expects students to participate in the intellectual activities of the Department (e.g., seminars, special presentations).

### **Master of Science in Biostatistics**

#### Course Requirements:

- Foundations and Overview of Public Health course 3 credit hours
- Required BSE courses 24 credit hours
- Elective BSE courses 12 credit hours

Any MS or PhD student who has not previously completed the core MPH courses or earned an MPH degree will be required to complete an overview course in public health. At the first opportunity students should enroll in BSE 5033 Foundations and Overview of Public Health (3 hours).

Required Courses:

BSE 5001	Problems in Biostatistics and Epidemiology
BSE 5013	Applications of Microcomputers to Data Analysis
BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Methods I
BSE 5703	Principles of the Theory of Probability
BSE 5733	Principles of Mathematical Statistics I
BSE 5173	Biostatistics Methods II
BSE 5980	Research for Master's Thesis – 4 credit hours
BSE 5111	Scientific Integrity in Research

Elective Courses:

Epidemiology Courses	6 credit hours
Applied Biostatistics courses numbered above 5173	6 credit hours

A minimum of 39 credit hours is required for the MS degree in Biostatistics.

Additional Degree Requirements:

- Computer Proficiency (met with BSE 5013)  
Students are required to achieve a working knowledge of methods, programming and applications of computers as used in biostatistics and epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completion of BSE 5013 with a passing grade will satisfy this requirement. Students who wish to have more information on the use of computers are encouraged to enroll in BSE 5023 Computer Applications in Public Health (3 hours).
- Basic Knowledge of the Biomedical Sciences  
The course work to satisfy this requirement may be taken at this or another institution, either before or after entering the program. If course work is undertaken to fulfill this requirement, it is in addition to the minimum 39 hours required for the degree.
- Master's Thesis: A student writing a thesis should choose a topic and a thesis committee consistent with procedures established by the sponsoring department and the Graduate College. The committee must consist of a major professor and at least two other graduate faculty members as approved by the Graduate Dean. The minimum requirements for the master's thesis committee composition are:
  1. Major Professor: Biostatistics faculty member
  2. Discipline-specific Member: Biostatistics faculty member
  3. Member from other BSE Discipline: Epidemiology faculty memberNote that a fourth member from outside the Department of Biostatistics and Epidemiology may be included, but is not required.
- Comprehensive Examination

## **BS Mathematics/MS Biostatistics Accelerated Dual-Degree Program**

The program is a modification of an existing Bachelors of Science in Mathematics degree program. It permits students entering the University as freshman to earn both a Bachelor of Science degree in Mathematics and a Master of Science degree in Biostatistics within four to five years. This time period is one or more years shorter than the time normally required completing both degrees. The program is structured so that 24 credit hours of work can be applied to both degree programs.

During the first three years, the students will take a variety of courses in the humanities, in the sciences that relate to biomedical science, and in mathematics. The 12 required courses in mathematics include calculus, linear algebra, probability theory, and other subjects that provide a foundation for the understanding and use of statistics.

Approximately one and a half years of the program will be spent at the Health Sciences Center where the student will take specialized courses involving methods and applications of statistical analysis, data analysis, principles of epidemiology, and public health issues. A research project will culminate in a thesis.

This program will prepare the students for careers in health agencies and medical institutions, for consultation in the biomedical fields, and for biostatistics research. Students may seek to continue their studies at the Health Sciences Center by applying for admission to the Doctor of Philosophy program in Biostatistics.

### **Admission**

The requirements for admission to the program are the same as those for admission to the College of Arts and Sciences. These requirements are listed in the Bulletin and class schedule of the University of Oklahoma.

Students may apply for admission to the Graduate Program provided they have completed (1) at least 45 credit hours of coursework; (2) at least nine of these credit hours are in upper division courses; and (3) the overall GPA and the GPA in all upper division coursework are both 3.00 or better. International students must also submit a TOEFL score of at least 570 paper-based or 88 IBT. Students who have been granted admission to the Graduate Program may begin taking the graduate coursework.

All students, regardless of admission status, are required to maintain a GPA of 3.00 or greater in all coursework completed. The 136 credit hours submitted to satisfy the requirements of the program may not include more than eight credit hours with a grade of C. Moreover, the 136 credit hours submitted to satisfy the requirements of this program may not include any credit hours in courses numbered 4000 or above for which a grade lower than a C was given.

<b><u>UNDERGRADUATE COURSES COUNTED TOWARD THE BS DEGREE</u></b>	<b><u>HOURS</u></b>
<b>General Education Requirement</b> (Students in the program must meet all the general education requirements. The Capstone requirement for the BS degree is satisfied by the thesis required for the MS degree.)	
Core Area I. Symbolic and Oral Communication	9-22
Core Area 11. Natural Science	7
Core Area 111. Social Sciences	6
Core Area IV. Humanities	18
<b><u>Major Requirements in Mathematics</u></b> (No more than 8 hours applied to this program may carry a grade lower than B. No course at the 4000-level or higher with a grade lower than a C may be applied to the program.)	39
<b>MATH 1823</b> Calculus/Analytic Geometry I	3
<b>MATH 2423</b> Calculus/Analytic Geometry II	3
<b>MATH 2433</b> Calculus/Analytic Geometry III	3
<b>MATH 2443</b> Calculus/Analytic Geometry IV	3
MATH 2513 Discrete Mathematical Structures	3
<b>MATH 3333</b> Linear Algebra I	3
<b>MATH 4073</b> Numerical Analysis I	3
MATH 3113 Introduction to Ordinary Differential Equations Q MATH 3413 Physical Mathematics I	3
Choose one of the following:	3
<b>MATH 4323</b> Introduction to Abstract Algebra I	
<b>MATH 4383</b> Applied Modern Algebra	
<b>MATH 4433</b> Introduction to Analysis I	
<b>MATH 4733</b> Theory of Probability or BSE 5703 Theory of Probability	3
<b>MATH 4743</b> Introduction to Mathematical Statistics or BSE 5733 Principles of Mathematical Statistics I	3
<b><u>Major Electives</u></b>	
Choose two courses/six hours from the following courses:	6
<b>MATH 4093</b> Applied Numerical Methods	
<b>MATH 4193</b> Introduction to Mathematics Modeling	
<b>MATH 4323</b> Introduction to Abstract Algebra I	
<b>MATH 4333</b> Introduction to Abstract Algebra II	
<b>MATH 4373</b> Abstract Linear Algebra	
<b>MATH 4433</b> Introduction to Analysis I	
<b>MATH 4443</b> Introduction to Analysis II	
<b>MATH 4753</b> Applied Statistical Methods	
<b>MATH 4773</b> Regression Analysis or BSE 6643 Survival Data Analysis	
<b>MATH 4853</b> Introduction to Topology	
(cont'd on next page)	

MATH 4793 Advanced Applied Statistics or BSE 6663 Analysis of Multivariate Data BSE 5653 Nonparametric Methods	
<b>Major Support Requirements</b> ( <u>One</u> of the following): MBIO 2815 Introduction to Microbiology (lab) or BIOL Human Physiology	4-5
<u>Unrestricted Elective Courses</u> Note: Must be approved by Advisory Committee	20-30
TOTAL UNDERGRADUATE COURSES COUNTED TOWARD THE BS DEGREE	100
<b><u>BS &amp; MS REQUIREMENTS</u></b>	<b><u>HOURS</u></b>
Required Courses in Biostatistics and Epidemiology	17
BSE 5001 Problems in Biostatistics and Epidemiology	1
BSE 5111 Scientific Integrity	1
BSE 5113 Principles of Epidemiology	3
BSE 5163 Biostatistics Methods I	3
BSE 5173 Biostatistics Methods II	3
BSE 5193 Intermediate Epidemiologic Methods	3
BSE 5980 Research for Master's Thesis (3 credit hours)	3
Note: The thesis also satisfies the Senior Capstone Requirement. It may be necessary to enroll in more than three (3) credit hours of BSE 5980; however, only three (3) credit hours may apply to the minimum 136 credit hours required for the dual degree program.	
Any MS or PhD student who has not previously completed all five core MPH courses or earned an MPH degree will be required to complete an overview course in public health. At the first opportunity students should enroll in • BSE 5033 Foundations and Overview of Public Health	3
<u>Graduate Elective Courses</u> <u>Two courses/six hours</u> of the following: Note: These courses may not duplicate the six hours of math electives for the undergraduate major requirements and when offered on a slash listed bases must be the graduate-level course.	6
MATH 4093 Applied Numerical Methods	
MATH 4193 Introduction to Mathematics Modeling	
MATH 4323 Introduction to Abstract Algebra I	
MATH 4333 Introduction to Abstract Algebra II	
MATH 4373 Abstract Linear Algebra	
MATH 4433 Introduction to Analysis I	
MATH 4443 Introduction to Analysis II	
MATH 4853 Introduction to Topology	
MATH 5773 Applied Regression Analysis or BSE 6643 Survival Data Analysis	
MATH 5793 Advanced Applied Statistics	
BSE 6663 Analysis of Multivariate Data	
BSE 5653 Nonparametric Methods	
BSE 5603 Sampling Theory and Methods	
BSE 5663 Analysis of Frequency Data	

BSE 5763	Applied Bayesian Statistics	
BSE 6563	Longitudinal Data Analysis	
<u>Additional Graduate Requirements:</u>		3
One (1) Elective, non-methods epidemiology course approved by committee such as		
BSE 5303	Epidemiology of Infectious Disease	
BSE 5363	Epidemiology of Prevention of Chronic Disease	
BSE 5633	Public Health Strategies for Tobacco Control	
BSE 6363	Cancer Epidemiology and Prevention	
<u>Math/Biostatistics Course</u>		6
Choose two courses from the following in consultation with advisor: These may be selected here if they have not been used to satisfy one of the requirements above.		
BSE 5603	Sampling Theory and Methods	
BSE 5653	Nonparametric Methods	
BSE 5663	Analysis of Frequency Data	
BSE 5763	Applied Bayesian Statistics	
BSE 6563	Longitudinal Data Analysis	
BSE 6643	Survival Data Analysis	
BSE 6663	Analysis of Multivariate Data	
MATH 5793	Advanced Applied Statistics	
BSE 5013	Applications of Microcomputers to Data Analysis	3
Total Credit Hours		38

From time to time, curriculum reviews may indicate that some courses need to be modified, deleted, or replaced. The specific courses listed above as requirements or electives for the program may be changed at any time by joint action of the Department of Mathematics and the Department of Biostatistics and Epidemiology.

Awarding of Degrees:

The BS and MS degrees will be awarded simultaneously after the completion of all requirements.

**Master of Science in Epidemiology**

Course Requirements:

- Foundations and Overview of Public Health course           3 credit hours
- Required BSE courses   21 credit hours
- Elective BSE courses   15 credit hours

Any MS or PhD student who has not previously completed the core MPH courses or earned an MPH degree will be required to complete an overview course in public health. At the first opportunity students should enroll in BSE 5033 Foundations and Overview of Public Health (3 hours).

Required Courses:

BSE 5001	Problems in Biostatistics and Epidemiology
BSE 5013	Applications of Microcomputers to Data Analysis
BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Methods I
BSE 5193	Intermediate Epidemiologic Methods
BSE 5980	Research for Master's Thesis – 4 credit hours
BSE 5303	Epidemiology of Infectious Disease
Or	
BSE 5363	Epidemiology and Prevention of Chronic Diseases
BSE 5111	Scientific Integrity in Research

Elective Courses:

At least nine additional hours in epidemiology courses, including at least one of the following epidemiologic methods courses:

- BSE 5343 Methods in Infectious Disease Epidemiology 3 hours
- BSE 6323 Molecular and Genetic Epidemiology 3 hours
- BSE 6193 Methods in Clinical Epidemiology 3 hours
- BSE 6194 Advanced Epidemiologic Methods 4 hours

Applied Biostatistics courses numbered above 5163 6 credit hours

A minimum of 39 credit hours is required for the MS degree in Epidemiology.

Additional Degree Requirements:

- Computer Proficiency (met with BSE 5013)  
Students are required to achieve a working knowledge of methods, programming and applications of computers as used in biostatistics and epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completion of BSE 5013 with a passing grade will satisfy this requirement. Students who wish to have more information on the use of computers are encouraged to enroll in BSE 5023 Computer Applications in Public Health (3 hours).
- Basic Knowledge of the Biomedical Sciences  
The course work to satisfy this requirement may be taken at this or another institution, either before or after entering the program. If course work is undertaken to fulfill this requirement, it is in addition to the minimum 39 hours required for the degree.
- Master's Thesis: A student writing a thesis should choose a topic and a thesis committee consistent with procedures established by the sponsoring department and the Graduate College. The committee must consist of a major professor and at least two other graduate faculty members as approved by the Graduate Dean. The minimum requirements for the master's thesis committee composition are:
  1. Major Professor: Epidemiology faculty member
  2. Discipline-specific Member: Epidemiology faculty member
  3. Member from other BSE Discipline: Biostatistics faculty member



Note that a fourth member from outside the Department of Biostatistics and Epidemiology may be included, but is not required.

- Comprehensive Examination

### **Doctoral Program Requirements**

1. A master's degree in either biostatistics or epidemiology from an accredited institution, provided that the academic and experience requirements for such a degree are equivalent to those required for the Master's degree at the University of Oklahoma Health Sciences Center.
2. A graduate grade point average of at least 3.5.
  - a. A student admitted with a grade point average less than 3.50 must earn at least a 3.00 grade point average, with no C's, in the initial 9 hours of graded graduate course work. The 9 hours must be courses required for the degree. It is expected these course will be completed within one calendar year following initial enrollment. Failure to meet these criteria may result in program dismissal.
3. Written evidence of research experience, if available. These materials will be evaluated for creativity and overall quality. Special preference will be given to applicants with research experience.
4. Proof of language proficiency for international applicants: TOEFL score of 88 or above.
5. GRE test, taken within the last 5 years, is required for all degrees and programs.
6. Additional prerequisite requirements for the Doctoral degree in Biostatistics include:
  - a. Calculus and Analytic Geometry I. Topics covered include equations of straight lines; Conic sections; functions, limits and continuity; differentiation, maximum- minimum theory and curve stretching.
  - b. Calculus and Analytic Geometry II. Integration and its applications; the calculus of transcendental functions; techniques of integration; and the introduction to differential equations.
  - c. Calculus and Analytic Geometry III. Polar coordinates, parametric equations, sequences, infinite series, vector analysis.
  - d. Calculus and Analytic Geometry IV. Vector calculus; functions of several variables; partial derivatives; gradients, extreme values and differentials of multivariate functions; multiple integrals; line and surface integrals.
  - e. A course in Linear Algebra

## **Doctor of Philosophy in Biostatistics**

The Doctor of Philosophy (PhD) is an advanced research-oriented Graduate Program which requires in-depth study of and research in Biostatistics.

### 1. Prerequisites:

Students applying to the PhD in Biostatistics must have completed a Master's degree program (MPH or MS) in Biostatistics or a related field. With approval of the Department and Graduate Dean, up to 40 credit hours from the Master's program may be counted toward the PhD.

Depending on their background, the student's Advisory Committee may also require the student to enroll in additional elective courses that cover topics that students ordinarily complete in their MS or MPH curricula that are prerequisites for Doctoral level courses. These may be completed after enrolling in the PhD program. These include the following courses:

#### BSE Required Courses (19 credit hours)

BSE 5001	Problems in Biostatistics and Epidemiology
BSE 5013	Applications of Microcomputers to Data Analysis
BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Methods I
BSE 5173	Biostatistics Methods II
BSE 5193	Intermediate Epidemiologic Methods
BSE 5663	Analysis of Frequency Data

Any MS or PhD student who has not previously completed the core MPH courses or earned an MPH degree will be required to complete an overview course in public health. At the first opportunity students should enroll in BSE 5033 Foundations and Overview of Public Health (3 hours).

### 2. Required Courses:

The student must earn at least 30 credit hours in coursework at the University of Oklahoma after admission to the PhD program. The student is required to take the following courses as either a PhD student or in completing his/her MS or MPH degree.

#### Graduate College:

BSE 5111 Scientific Integrity in Research	1 credit hour
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NOTE: Further training in responsible conduct of research (RCR) is required after four years, so students in their 5th year are required to enroll in the Advanced RCR course:

- BMSC 6011: Integrity in Scientific Research II

#### BSE Required Courses:

General/Epidemiology Courses:	5 credit hours
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BSE 5153 Clinical Trials  
BSE 6192 Grant Writing

Theory Courses:

During first year of Doctoral coursework: 6 credit hours

BSE 5703 Principles of the Theory of Probability  
BSE 5733 Principles of Mathematical Statistics I

Following the first year of Doctoral coursework: 6 credit hours

BSE 5743 Principles of Mathematical Statistics II  
BSE 6553 Linear Models

Applied Biostatistics: 12 credit hours

BSE 5653 Non-Parametric Methods  
BSE 6563 Longitudinal Data Analysis  
BSE 6643 Survival Data Analysis  
BSE 6663 Multivariate Biostatistics

3. Elective Courses (at least 6 credit hours total):

The student must complete at least six additional credit hours of elective coursework in the Department of Biostatistics and Epidemiology. This coursework must be approved in advance by the student's Advisory Committee. The following courses do not satisfy this requirement: BSE 5980, 6950, or 6980.

4. Dissertation:

The student must enroll in at least 20 credit hours in Research for Doctoral Dissertation (BSE 6980). No more than 25 credit hours in BSE 6980 may be applied toward the minimum 90 credit hours required for the degree.

5. Other Requirements:

- a. Students are required, prior to initiation of Doctoral research, to complete training in Responsible Conduct of Research (RCR) and Protection of Human Research Subjects. The training includes completion of the CITI course for Human Subjects Research (Social-Behavioral-Educational Basic module), and successful completion of a one credit course in RCR approved by the Department.
- b. Students are required to attend all departmental and Hudson College of Public Health seminars during the spring and fall semesters.
- c. Students are required to enroll in a minimum of six credit hours during the spring and fall semesters.
- d. Students are required to achieve a working knowledge of methods, programming, and applications of computers as used in Biostatistics and Epidemiology. This knowledge may be acquired by formal class work or by experience acquired either before entering or during the course of the program. Completing BSE 5013 with a passing grade constitutes the minimum level of knowledge associated with this requirement.

- e. Students are required to achieve a basic knowledge of the biomedical sciences as they relate to human health and disease. This requirement may be satisfied in one or more areas. Any coursework needed to satisfy this requirement may be taken at this or another institution, either before or after entering the program. One example of an applicable course is Principles of Pathobiology (PATH 6024).
- f. Tools of research that increase research proficiency are required. Research tools include competence in the use of computerized databases, and in the oral and written presentation of research data. The faculty will validate students' acquiring of tools of research as they assess students' performance on (1) the written qualifying examination, (2) the general and oral examinations, and (3) the dissertation.
- g. Students must pass a written qualifying examination at the end of the first year of doctoral coursework, which must include BSE 5703 and BSE 5733. The qualifying examination will consist of two parts, each roughly four hours long. One part will focus on knowledge of statistical theory and mathematical statistics, and the other will assess ability to process, analyze, and interpret data collected to answer a research question.
- h. Students must pass a General Written and Oral Examination.
- i. Students must complete the defense of the dissertation within five years of the end of the semester within which the General Written and Oral Examination was successfully completed. If the time expires before the dissertation is completed, the coursework must be revalidated by retaking and passing the General Written and Oral Examination.

### **DOCTORAL STUDENT TEACHING REQUIREMENTS**

Students are required to participate in a teaching activity. Doctoral students will have a range of teaching experience opportunities. These experiences must be obtained in teaching epidemiology or biostatistics. The exact experiences and potential opportunities for teaching experiences should be discussed by the student and their advisor and/or advisory committee. Under the guidance of the course instructor or the faculty mentor, teaching experiences may include:

- Teaching graduate level courses in epidemiology or biostatistics
- Developing course material
- Delivering lectures
- Leading review and discussion sections
- Writing and grading homework assignments
- Writing and grading exams

Participation in teaching activities will be documented on the Annual Graduate Student Progress Report. Students are required to identify available teaching opportunities and to contact the instructor of record to arrange for their participation in the teaching activity. Students are required to spend at least 40 hours participating in teaching activities in total where this total reflects the above listed activities as well as preparation for these activities.

In addition, students are responsible for requesting that their teaching activity be evaluated by the faculty of record for the activity (e.g., course instructor), the target audience, and/or the student's advisor. Evaluation forms may be requested from the student's advisor.

## **Doctoral Program in Epidemiology**

The Doctor of Philosophy (PhD) is an advanced, research-oriented Graduate Program which requires in-depth study of and research in Epidemiology.

### 1. Prerequisites (15-18 credit hours)

Students applying to the PhD in Epidemiology must have completed a Master's degree program (MPH or MS) in Epidemiology or a related field with coursework in epidemiology and biostatistics. Additional consideration will be given to those who have completed a professional doctoral degree.

Prerequisite courses include:

- BSE 5163 Biostatistics Methods I or equivalent (3 credit hours)
- BSE 5013 Applications of Microcomputers to Data Analysis – SAS computing or equivalent (3 credit hours)
- BSE 5113 Principles of Epidemiology or equivalent (3 credit hours)
- BSE 5303 Epidemiology of Infectious Diseases or equivalent (3 credit hours)
- BSE 5363 Epidemiology and Prevention of Chronic Diseases or equivalent (3 credit hours)

Students may take these prerequisite courses during the doctoral degree program and these courses will apply towards the 90 credit hour requirement, but will not count towards the Required (Section 2) or Elective (Section 3) credit hour requirements.

Any MS or PhD student who has not previously completed the core MPH courses or earned an MPH degree will be required to complete an overview course in public health. At the first opportunity students should enroll in

- BSE 5033 Foundations and Overview of Public Health 3 hours

With approval of the Department and the Graduate Dean, up to 40 credit hours from the Master's program may be counted toward the PhD.

### 2. Required Courses (37 credit hours total)

Departmental Epidemiology Courses (21 credit hours)

Students are required to complete a minimum of 21 credit hours of epidemiology beyond BSE 5113, BSE 5303 and BSE 5363 (pre-requisite requirements). Epidemiology courses taken during the Master's degree program can be applied towards this 21 credit hour minimum.

The following epidemiology courses must be completed as part of the 21 credit hour requirement and may be completed during the Master's or doctoral degree:

BSE 5193 Intermediate Epidemiology	3 hours
BSE 6192 Grant Writing	2 hours
BSE 6194 Advanced Epidemiologic Methods	4 hours

Two of the following three methods courses:

BSE 5343 Methods in Infectious Disease Epidemiology	3 hours
BSE 6323 Molecular and Genetic Epidemiology	3 hours
BSE 6193 Methods in Clinical Epidemiology	3 hours

Two additional courses in epidemiology as approved by the Advisory Committee. 6 hours

Departmental Biostatistics Courses (15 credit hours)

Students are required to complete a minimum of 15 credit hours of biostatistics beyond BSE 5163 Biostatistics Methods I and BSE 5013 Applications of Microcomputers to Data Analysis. Biostatistics courses taken may be taken during the Master's degree or the doctoral degree.

The following biostatistics courses, or equivalent, are required:

BSE 5173 Biostatistics Methods II	3 hours
BSE 5663 Analysis of Frequency Data	3 hours

The following biostatistics courses, or equivalent, are suggested:

BSE 6643 Survival Data Analysis	3 hours
BSE 6663 Multivariate Biostatistics	3 hours
BSE 6563 Longitudinal Data Analysis	3 hours

Graduate College Requirement: (1 hour)

The responsible conduct of research (RCR) course may be completed during the Master's degree or at the first available offering during the doctoral degree program.

BSE 5111 Scientific Integrity in Research	1 hour
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NOTE: Further training in RCR is required after four years from the initial course. Students who are beyond four years of their initial training are required to enroll in the Advanced RCR course at the first available offering:

BMSC 6011: Integrity in Scientific Research II	1 hour
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Completion of the RCR courses will be documented in the Report of the Doctoral Advisory Conference form and in the Annual Graduate Student Progress Report.

3. Elective Courses (6 credit hours)

Students must select at least 6 hours of elective courses in epidemiology, research methods, or any topic area related to the dissertation research as approved by the Advisory Committee in addition to those listed above. These must be approved by the student's

Advisory Committee. Courses taken during the Master's degree program can be applied towards this six hour requirement. The following courses may not be used to satisfy this requirement: BSE 5980, 6950, or 6980.

4. Dissertation

Students must enroll for at least 22 credit hours in Research for Doctoral Dissertation (BSE 6980). Up to 25 total credit hours in BSE 6980 may be counted toward the degree.

5. Additional Requirements and Expectations of Doctoral Students

- a. Students are required, prior to initiation of doctoral research, to complete training in Responsible Conduct of Research (RCR). The training includes completion of the CITI course for Human Subjects Research (Social-Behavioral-Educational Basic module) and successful completion of a one credit course in RCR approved by the Department. Further training in RCR is required after four years from the initial course. Students who are beyond four years of their initial training are required to enroll in the Advanced RCR course (BMSC 6011) at the first available offering.
- b. Students are required to attend all departmental and Hudson College of Public Health seminars during the spring and fall semesters.
- c. Students may be enrolled part-time (minimum six credit hours in fall and Spring semesters) while completing their coursework requirements but are expected to enroll full-time once they begin their dissertation research.
- d. Students are required to have a working knowledge of methods, programming, and applications of computers as used in Epidemiology prior to admission. This knowledge may be acquired by formal class work or by experience acquired before entering the program. Having completed BSE 5013 (or equivalent) with a passing grade will satisfy this requirement.
- e. Students are required to achieve a working knowledge of the biomedical sciences as they relate to human health and disease. This requirement may be satisfied in one or more areas. Any coursework needed to satisfy this requirement may be taken at this or another institution, either before or after entering the program. One example is Principles of Pathobiology (Path 6024).
- f. Tools of research are required. The purpose of the research tool is to increase research proficiency by developing competence in those skills deemed necessary for successful research performance. Such skills might include the ability to employ techniques of gathering, analyzing and/or presenting research data or reading, writing, or speaking one or more foreign languages in which there occurs significant technical publications in the student's area of research.
- g. Students must pass a general written and oral examination. Students must complete the defense of the dissertation within five years of the end of the semester within which the general examination was successfully completed. If the time expires before the dissertation is completed, the coursework must be revalidated by retaking and passing the general examination.
- h. Regardless of whether or not the doctoral dissertation is based on original data or secondary data analysis, doctoral students should have a range of experiences in

primary data collection. These experiences may be gained either prior to or during the doctoral training program. Students must have experience in at least five of these processes, with at least one from each tier. The exact experiences and potential opportunities for primary data collection will be agreed upon by the students and their Advisory Committee as part of their program plan.

Experiences Involving Contacts with Research Participants:

- Questionnaire administration (interview or mailed)
- Subject recruitment, follow-up, or retention activities
- Working with the community to implement research
- Environmental, occupational or personal exposure monitoring
- Collection of measurements on study participants

Experiences Involving Data Collection:

- Medical or other record abstraction
- Biospecimen collection
- Laboratory analysis
- Staff training and certification
- Editing and coding of data as it is collected, including that associated with a systematic review of meta-analysis
- Database development or management.

Experiences Involving Instrument Development:

- Development and testing of study protocols or IRB applications
- Questionnaire/abstraction form design and pre-testing, including that associated with a systematic review or meta-analysis
- Designing and implementing quality control activities.

## **DOCTORAL STUDENT TEACHING REQUIREMENTS**

Students are required to participate in teaching activities. Doctoral students will have a range of teaching experience opportunities. These experiences must be obtained in teaching epidemiology or biostatistics. The exact experiences and potential opportunities for teaching experiences should be discussed by the student and their advisor and/or advisory committee. Under the guidance of the course instructor or the faculty mentor, teaching experiences may include:

- Teaching graduate level courses in epidemiology or biostatistics
- Developing course material
- Delivering lectures
- Leading review and discussion sections
- Writing and grading homework assignments
- Writing and grading exams

Participation in teaching activities will be documented on the Annual Graduate Student Progress Report. Students are required to identify available teaching opportunities and to contact the instructor of record to arrange for their participation in the teaching activity.



Students are required to spend at least 40 hours participating in teaching activities in total where this total reflects the above listed activities as well as preparation for these activities.

In addition, students are responsible for requesting that their teaching activity be evaluated by the faculty of record for the activity (e.g., course instructor), the target audience, and/or the student's advisor. Evaluation forms may be requested from the student's advisor.

#### Committee Structures for Doctor of Philosophy Students

As part of the admission process, the department faculty, in concert with the department chair, will review the candidate's file relative to research and other interests and appoint an appropriate faculty advisor who will serve as chairperson of the students' Advisory Conference Committee.

#### 1. Advisory Conference Committee

This Committee shall:

- a. Be appointed by the faculty advisor in concert with the student and the department chair in the first semester of the student's pursuit of the doctoral degree.
- b. Approve the program of study.
- c. Coordinate with the departmental faculty the compilation and administration of the student's written portion of the general examination and administer the oral portion of the examination.
- d. Submit a report to the Graduate Dean indicating whether the student passed or failed the general examination and a recommendation for Admission to Candidacy.
- e. Assist the student in the appointment of the permanent doctoral committee in the first semester following admission to candidacy. This assignment is made after the following actions have been taken by the candidate:
  - 1) The students must obtain agreement from a faculty member who will direct the dissertation and act as chair of the permanent doctoral committee. The chairperson may be selected from either Biostatistics or Epidemiology depending on the major thrust of the proposed dissertation. The selection of the chair of the permanent doctoral committee may be made from among all faculty authorized by the Graduate Dean to chair doctoral committees.
  - 2) In consultation with the selected chairperson, the student will request other faculty members to serve on the permanent doctoral committee. Final approval of this committee rests with the departmental chair and the Graduate Dean.

If the student and the advisory conference committee disagree on the composition of the permanent doctoral committee, or any other matter, the conflict shall be resolved at one (1) of the following levels in the order listed:

- a. The Chairman of the Department of Biostatistics and Epidemiology
- b. The Dean of the Hudson College of Public Health
- c. The Dean of the Graduate College

## 2. Permanent Doctoral Committee

This Committee shall:

- a. Approve the prospectus for the dissertation.
- b. Provide technical guidance in the research.
- c. Supervise, particularly through the chairperson of the permanent doctoral committee, the organization, collection of references, techniques, methods of analysis, conclusions, and the writing of the dissertation.
- d. Approve the reading copy.
- e. Approve the defense of the dissertation.

## 3. Composition of Committees

The Advisory Conference Committee and the Permanent Doctoral Committee shall each be represented by the following disciplines:

- a. Epidemiology Majors:
  - 1) At least two Epidemiologists
  - 2) At least one Biostatistician
  - 3) At least one faculty from outside the Department of Biostatistics and Epidemiology
- b. Biostatistics Majors:
  - 1) At least two Biostatisticians
  - 2) At least one Epidemiologist
  - 3) At least one faculty from outside the Department of Biostatistics and Epidemiology

Both the advisory conference committee and the permanent doctoral committee will consist of a minimum of five faculty members. No more than two members of the committee can lack authorization to direct a doctoral dissertation.

### General Examinations and Admission to Candidacy

A student may take the general examination when the student's advisory conference committee has determined they have completed sufficient coursework and any tools of research as described in the Committee's report. The examination tests the student's mastery of a number of related fields as well as the capacity for synthesis, sound generalizations, and critical analysis.

After completion of the Master's degree, a doctoral student is normally expected to complete all the degree requirements to take the general examination within three years of full-time enrollment after entering the Doctoral program.

The general examination will be offered annually. The department chair will schedule examination dates and times at least six weeks before the exam takes place, after consultation with eligible students, the student's Advisory Conference Committee members, and

departmental faculty. Written examination questions will cover the following areas:

1. Biostatistics Majors:

- Basic Biostatistical Methodology
- Advanced Biostatistical Methodology
- Biostatistical Theory
- Epidemiological Principles and Methods

2. Epidemiology Majors:

- Basic Biostatistical Methodology
- Epidemiological Principles and Methods
- Advanced Epidemiologic Methods: application of advanced epidemiologic methods to the design of one or more studies related to a designated research question.

The written portion of the general examination is prepared by the examination committee, which may be a committee of the entire departmental faculty. Individual departmental faculty will write questions that cover each of the required areas and provide these to the examination committee. The examination committee will review and coordinate with the departmental faculty the development of the student's general examination. The examination committee is responsible for the administration of the written portion of the general examination.

The faculty member who submitted the question(s), as well as other faculty, will grade the question(s) and report their evaluation to the examination committee. The examination committee will evaluate the student's overall performance and the committee chair will present the results to the departmental faculty for a decision on pass/fail or remediation. The chair of the examination committee will transmit the final decision to the student. It is the responsibility of the student's advisory conference committee to interact with the student to schedule the oral portion of the general examination or arrange the re-examination and/or remediation for those students whose performance is unsatisfactory.

To proceed to the oral examination, the student must achieve an "unqualified pass" on the written examination; a majority of the examination committee must vote that the student has passed each of the components of the written examination.

If the student fails the first written examination, the Department Chair reports the failure to the Graduate Dean, and the student is allowed a second attempt. A student can fail individual components of the examination as well as the entire examination, taken as a whole. The student must repeat the components that were failed. The student must take the second examination at the next scheduled written comprehensive examination. Failure to receive an unqualified pass on the second attempt will result in the student's termination from the doctoral program.

The student's advisory conference committee, including the committee's outside member, administers the oral examination as authorized by the Graduate College. Additional

departmental faculty may take part (as non-voting members) with the approval of the chair of the advisory conference committee. A successful pass on the oral examination entitles the student to be recommended for Admission to Candidacy by the Graduate Dean and to proceed toward the dissertation. If at least two voting members dissent from a judgment that the student's performance on the oral examination is satisfactory, the advisory conference committee will be adjourned, the entire departmental faculty will consult and deliberate to decide the outcome of the oral examination. The faculty's deliberation should consider the student's performance on the written exam and their coursework. Subsequent to the discussion of departmental faculty, the advisory conference committee will reconvene for a final vote. The final authority to decide the outcome of the oral examination resides with the advisory conference committee.

#### Faculty Evaluation of Student Progress

Progress of doctoral students is monitored by their major Advisor based on meetings at least bi-monthly. If a student is not making satisfactory progress in his/her doctoral program as determined by the major advisor, in consultation with the advisory/dissertation committee, the major advisor will write to the student setting forth the deficiencies and what must be done to remediate them.

The student and graduate advisor/dissertation committee chair shall complete an annual evaluation of the student's progress toward the degree. Dissertation committee members will be involved in the review for those students who have passed their comprehensive exams. The progress report will include goals and a plan of action towards degree completion. In addition, the student completes a summary of scholarly achievements during the reporting period and develops a plan for continued professional development with advisor input. The report is to be completed by the student and faculty advisor. The advisor is required to meet with the student to review and discuss the report. In addition, for students who have passed the comprehensive exams, the dissertation committee chair and other committee members are required to meet with the student to review and discuss the report.

A student may be retained in the department only so long as he/she continues to make satisfactory progress toward the degree.

#### The Dissertation Prospectus

A dissertation prospectus must be approved and signed by the doctoral dissertation committee. It should include the title of the dissertation research, an abstract, a summary of the background and significance of the proposed research, specific aims, and a description of the proposed research design and methods. A complete reference list should also be included. The signed prospectus shall be filed with the department.

The prospectus is intended to be a general description of the work proposed, and review and signature by the doctoral dissertation committee represents an understanding between the student and the doctoral dissertation committee as to the conduct of the doctoral dissertation research. Substantial revisions from the prospectus that arise during the course of the research must be reviewed and approved by the dissertation committee.

## **Departmental of Biostatistics and Epidemiology Faculty**

**Michael Anderson**, PhD, Associate Professor, Biostatistics

Education: PhD - Kansas State University, 2009; MS - Kansas State University, 2006; BA - Utah State University, 2003

Professional Affiliations: American Statistical Association, The International Biometric Society, Eastern North American Region

Current Research Interests: Bayesian methods of classifying unknown DNA sequences, viral RNA sequences, microarray tissue samples, Bayesian software development, Probability models for classification and prediction

**Laura A. Beebe**, PhD, Chair, Professor, Epidemiology

Education: PhD - University of Oklahoma, 1997; MPH - University of Oklahoma, 1989; BS - Phillips University, 1987

Professional Affiliations: Society for Research in Nicotine and Tobacco, American Evaluation Association, Delta Omega

Current Research Interests: Applied evaluation research, effectiveness of state quitlines, emerging tobacco products, nicotine dependence, effectiveness of public health communications campaigns

**Janis Campbell**, PhD, GISP, Associate Professor, Epidemiology; Presidential Professor

Education: PhD – University of Oklahoma, 1997; MA – University of Oklahoma, 1989; BA – University of Oklahoma, 1987

Professional Affiliations: American Public Health Association, Oklahoma Public Health Association, Oklahoma Cancer Registrars Association, Phi Beta Kappa - University of Oklahoma Chapter, National Association of Central Cancer Registries

Current Research Interests: Cancer prevention and research (OU Community Networks Program and Oklahoma Central Cancer Registry), community based participatory research with American Indian tribes and organizations (REACH US)

**Sixia Chen**, PhD, Assistant Professor, Biostatistics

Education: BS, Mathematics and Applied Mathematics, 2007, Fudan University; PhD, Statistics, 2012, Iowa State University

Professional Affiliations: American Statistical Association, International Chinese Statistical Association

Current Research Interests: Missing data analysis, Survey sampling, data integration, Machine learning methods, Empirical likelihood, Nonparametric smoothing method, Small area estimation and Statistical disclosure control analysis

**Kai Ding**, PhD, Associate Professor, Biostatistics

Education: BS, Statistics, 2002, Fudan University; MS, Statistics, 2005, University of Kentucky; PhD, Biostatistics, 2010, University of North Carolina at Chapel Hill

Professional Affiliations: American Statistical Association

Current Research Interests: Survival analysis, Machine learning, Semiparametric modeling, High dimensional data, Cancer and Ophthalmology

**Summer Frank-Pearce**, PhD, Assistant Professor of Research, Biostatistics

Education: BS, Zoology, University of Oklahoma, 2000; MPH Biostatistics, University of Oklahoma Health Sciences Center, 2008; PhD, Biostatistics, University of Oklahoma Health Sciences Center, 2016

Professional Affiliations: Stephenson Cancer Center, Associate Member of Cancer Prevention and Control Program; Society for Research on Nicotine and Tobacco; American Statistical Association; American Public Health Association

Current Research Interests: Tobacco, Multilevel/Mixed Model Methods, Longitudinal Data Analysis, Missing Data Problems

**Tabitha Garwe**, PhD, Associate Professor, Epidemiology

Education: BS, Medical Laboratory Sciences, University of Zimbabwe, 1997; MPH, Epidemiology, University of Oklahoma, 2000; PhD, Epidemiology, University of Oklahoma, 2010

Professional Affiliations: American Trauma Society, Society for Epidemiologic Research, Pediatric Trauma Society, Delta Omega

Current Research Interests: Trauma and Critical Care outcomes, Trauma Systems (health services), Surgical Outcomes, Quantitative and Clinical epidemiologic Methods

**James George**, MD, George Lynn Cross Research Professor, Departments of BSE and Medicine, Clinical Epidemiology

Positions: Chief, Hematology-Oncology – Oklahoma, 1990-1999; Faculty – College of Medicine, University of Texas at San Antonio, 1970-1990

Education: Post-Doctoral training – Vanderbilt, Walter Reed Army Institute of Research, University of Rochester; MD – Ohio State, 1962

Professional Affiliations: American Society of Hematology, American Society for Clinical Investigation

Current Research Interests: Studies of patients with disorders of blood platelets: The Oklahoma Thrombotic Thrombocytopenic Purpura (TTP) Registry; an inception cohort for studies of etiology, clinical course, and long-term outcomes; studies of novel treatments for immune thrombocytopenic purpura (ITP)

**Kimberly Hollabaugh**, MS, Instructor, Biostatistics

Education: MS Biostatistics, University of Oklahoma Health Sciences Center, 2010

Current Research Interests: Cardiovascular health, Tobacco-related health disparities, SAS programming and standardization

**Amanda Janitz**, PhD, Assistant Professor, Epidemiology

Education: PhD Epidemiology, University of Oklahoma Health Sciences Center, 2015; MPH Epidemiology, University of Oklahoma Health Sciences Center, 2009; Bachelor of Science in Nursing, University of Oklahoma Health Sciences Center, 2006;

Professional Affiliations: Society for Epidemiologic Research

Current Research Interests: Epidemiology of childhood cancer, environmental epidemiology, cancer health disparities, geographic information systems in public health sciences

**Katrin Gaardbo Kuhn**, PhD, Assistant Professor, Epidemiology

Education: Bachelor of Medicine, University of Copenhagen, 2009; PhD Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, 2002; Master of Science in Medical Parasitology, London School of Hygiene & Tropical Medicine, 1997; Bachelor of Science in Zoology, Royal Holloway University of London, 1996

Professional Affiliations: European Centre for Disease Prevention and Control, World Health Organization, European Joint Programme on One Health, European Society for Clinical Microbiology and Infectious Diseases, Royal Society of Tropical Medicine and Hygiene UK.

Current Research Interests: Infectious diseases, disease outbreak detection and investigation, surveillance and monitoring of infectious diseases, food-and waterborne infections, zoonoses, One Health, climate and environmental change

**Sydney Martinez**, PhD, Assistant Professor, Epidemiology

Education: PhD Epidemiology, University of Oklahoma Health Sciences Center, 2016; MPH Epidemiology, University of Oklahoma Health Sciences Center, 2010; Bachelor of Science in Health and Exercise Science, University of Oklahoma, 2008;

Professional Affiliations: Society for Research on Nicotine and Tobacco, American Evaluation Association, Society of Behavioral Medicine

Current Research Interests: Tobacco control, cancer, diabetes, dissemination and implementation science, health disparities

**Nasir Mushtaq**, PhD, MBBS, MPH, Associate Professor, Epidemiology – Tulsa George Kaiser Family Foundation Chair in Public Health Epidemiology

Education: PhD – University of Oklahoma Health Sciences Center, 2011; MPH – University of Oklahoma Health Sciences Center, 2006; MBBS – Rawalpindi Medical College, 2001

Professional Affiliations: Society for Research on Nicotine and Tobacco, American Association for the Advancement of Science (AAAS) Science Program for Excellence in Science, Pakistan Medical & Dental Council

Current Research Interests: Epidemiology of chronic diseases, epidemiologic methods tobacco control research particularly smokeless tobacco, tobacco dependence, scale development and psychometric validation, clinical research, global health

**Jennifer David Peck**, PhD, Professor and Vice Chair, Epidemiology, Presidential Professor

Education: PhD – University of North Carolina, 2000; MS – Texas A & M University, 1995; MS – Texas A & M University, 1992; BA – University of Texas at Arlington, 1989

Professional Affiliations: Society for Epidemiologic Research, Society for Pediatric and Perinatal Epidemiologic Research

Current Research Interests: Reproductive and perinatal epidemiology; reproductive health effects of exposure to endocrine disrupting compounds; investigation of clinical, lifestyle and environmental factors related to infertility treatment outcomes and pregnancy complications

**Gary E. Raskob**, PhD; Dean, Hudson College of Public Health; Professor Biostatistics and Epidemiology; Professor of Medicine, Clinical Epidemiology

Education: PhD – University of Oklahoma, 1999; MSc – McMaster, 1985; BSc – Toronto, 1982

Professional Affiliations: American Association of University Professors, American College of Clinical Pharmacology, American Federation for Clinical Research, American Heart Association, American Medical Writers Association, American Society of Hematology, Canadian Society for Clinical Investigation, International Society on Thrombosis & Haemostasis, New York Academy of Sciences, Oklahoma Public Health Association, Phi Kappa Phi, University of Oklahoma Chapter, Society for Clinical Trials

Current Research Interests: Methods to improve the diagnosis of thrombosis, clinical trials of thrombosis prevention

**Jessica A. Reese**, PhD, Assistant Professor of Research, Epidemiology

Education: PhD – Epidemiology, University of Oklahoma Health Sciences Center, 2016; MS – Epidemiology, University of Oklahoma Health Sciences Center, 2008; Bachelor of Science in Zoology and Biomedical Sciences, University of Oklahoma, 2005

Professional Affiliations: Oklahoma Public Health Association

Current Research Interests: Cardiovascular Disease, American Indian health, Diabetes, Child and Maternal Health, Hematology

**Deirdra Terrell**, PhD Associate Professor, Epidemiology; Presidential Professor

Education: PhD – University of Oklahoma Health Sciences Center, 2008; MPH – University of Oklahoma Health Sciences Center, 2000; BS – Oklahoma Baptist University, 1998

Professional Affiliations: Oklahoma Public Health Association, American Society of Hematology, International Society for Quality of Life Research

Current Research Interests: patient-reported outcomes, mixed methodology, Life after recovery from thrombotic thrombocytopenic purpura (TTP);, novel treatments for primary immune thrombocytopenia (ITP)

**Sara K. Vesely**, PhD Professor, Biostatistics; David Ross Boyd Professor; Associate Dean for Academic Affairs

Education: PhD - University of Oklahoma, 1998; MPH – University of Oklahoma, 1994; BA – University of Oklahoma, 1993

Professional Affiliations: American Statistical Association, American Public Health Association, American Society of Hematology, Delta Omega

Current Research Interests: clinical trials methodology, long term outcomes in patients with thrombotic thrombocytopenia purpura (TTP);youth assets; hematological malignancies; training of healthcare professionals in epidemiologic and biostatistical methodology; pediatric hematology; systematic reviews and guideline development

**Aaron Wendelboe**, PhD Associate Professor, Epidemiology; Williams Companies Presidential Professor

Position: EIS Officer, New Mexico, 2006–2008



Education: PhD – University of North Carolina, 2006; MS – University of Utah, 2002; BS – Brigham Young, 2000

Professional Affiliations: American Public Health Association

Current Research Interests: Infectious diseases, with a particular focus on methods relating to outbreak investigations and disease surveillance. Some of the projects on which I have been working include, COVID-19, venous thromboembolism surveillance, opioid use in an HIV and HCV-infected population, and infection control and prevention. I am also engaged in applying current technology to disease surveillance, such as machine learning, natural language processing, and Bayesian statistics.

**Mary Williams**, PhD Assistant Professor, Epidemiology; Assistant Professor, Department of Family and Community Medicine, School of Community Medicine George Kaiser Family Foundation Chair in Public Health Biostatistics

Education: Ph.D. in Epidemiology, University of Oklahoma Health Sciences Center, 2013; M.S. in Epidemiology, University of Oklahoma Health Sciences Center, 2008; M.S. in Exercise Physiology and Health Promotion. University of Oklahoma, 1987

Professional Affiliations: American Public Health Association, Oklahoma Public Health Association, Society of Epidemiologic Research, Society for Research on Nicotine and Tobacco

Current Research Interests: Epidemiologic research methods related to chronic and infectious disease in underserved, marginalized, and hard-to-reach populations; Community Engaged and Community-Based Participatory Research; Tobacco use and cessation; Nutrition; Physical activity; Hepatitis C; Novel Coronavirus (COVID-19)

**Chao Xu**, PhD, Assistant Professor, Biostatistics

Education: PhD – Tulane University 2018, M.ENG. - University of Shanghai for Science and Technology 2011

Professional Affiliations: Institute of Mathematical Statistics

Current Research Interests: statistical genetics and bioinformatics with special emphasis on high-dimensional statistics in big genetic data; general statistical methods, obesity, cancer, cardiovascular disease and other complex diseases

**Yan Daniel Zhao**, PhD, Professor, Biostatistics; Presidential Professor; Associate Dean for Research

Education: PhD – Iowa State University 2002, MS – Iowa State University 1998, BS – Peking University 1996

Professional Affiliations: American Statistical Association

Current Research Interests: Biomarker-driven seamless clinical trial design; multiple testing and adaptive designs in clinical trials; sample size and power calculations for nonparametric tests; survey sampling; statistical disclosure control

**Ying Zhang**, PhD, Associate Professor, Biostatistics

Education: PhD – School of Public Health, West China University of Medical Sciences, 1998; MS – School of Public Health, West China University of Medical Sciences, 1994; Bachelor of Medicine - West China University of Medical Sciences, 1991

Professional Affiliations: American Statistical Association, American Heart Association, American Diabetes Association

Current Research Interests: Time-to-event and longitudinal data analyses for independent or correlated outcomes, categorical data analysis, model building, study design and sample size, genetic epidemiology and pathophysiology of cardio-metabolic diseases that include but not limited to diabetes, heart diseases, stroke, and non-alcoholic fatty liver disease,, American Indian health.

## Department of Health Administration and Policy

### Mission

The mission of the Department of Health Administration and Policy (HAP) is to prepare future healthcare leaders through excellence in education and practice.

### Professional Degrees Offered

- Master of Public Health in Health Administration and Policy (MPH) degree
- Master of Public Health in Health Administration and Policy – Juris Doctor Dual Degree (MPH-JD)
- Master of Health Administration (MHA) degree
- Master of Health Administration – Juris Doctor Dual Degree (MHA-JD)

### Department Policies

All students are expected to comply with policies regarding academic and scholarly integrity and professional behavior in an academic program at the University of Oklahoma Health Sciences Center. These policies can be found in the *OUHSC Faculty Handbook*

<https://provost.ouhsc.edu/Portals/1037/assets/documents/FacultyHandbookOUHSC.pdf?ver=2018-10-30-111311-860>.

### *Use of electronic devices in class*

The instructor of record in each class may implement a policy regarding the use or prohibition of electronic devices during class time. It is not permissible for a student to use electronic devices in the classroom for activities unrelated to course work.

## **Programs of Study**

### **Master of Public Health in Health Administration and Policy (MPH)**

The Master of Public Health in Health Administration and Policy is designed to prepare students for careers that apply health management and policy skills.

#### Admission Requirements:

See the Admission Requirements in the Academic Information section of this Student Bulletin.

#### Course Requirements:

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| • MPH Core Courses                  | 16 credit hours                   |
| • Required HAP Courses              | 18 credit hours                   |
| • Elective Courses                  | 6 credit hours                    |
| • Practicum Preparation Seminar     | 1 credit hour                     |
| • Integrated Public Health Practice | 3 credit hours                    |
| • Public Health Practicum           | 1 credit hour (240 contact hours) |

HCOPH MPH Core Courses:

BSE 5163	Biostatistics Methods I
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health
HAP 5453	U. S. Health Care Systems
HPS 5211	Qualitative Methods in Public Health

A total of 16 credit hours

Required HAP Courses:

HAP 5183	Organizational Theory and Behavior
HAP 5203	Health Economics
HAP 5623	Health Forecasting and Budgeting
HAP 5303	Health Policy and Politics
HAP 5883	Health Care Quality Management

And one of the following:

HAP 5353 Public Health Law

OR

HAP 7403 Experiencing Public Health Law

A total of 18 credit hours

Other required courses:

CPH 7003	Integrated Public Health Practice
CPH 7941	Practicum, Preparation Seminar
CPH 7950	Public Health Practicum (1 credit hour, 240 contact hours)

A total of 5 credit hours

Electives - a total of six credit hours

A minimum of 45 credit hours is required for the MPH degree in the Department of Health Administration and Policy.

Additional Degree Requirements for the MPH

Students must meet with their advisor at least once every semester. The faculty advisor is responsible for updating the student's permanent record which is filed in Student Services. Students may not arrange a practicum if on academic probation.

MPH candidates in the Department of Health Administration and Policy are required to take the CPH Examination, to complete the Culminating Experience, and to meet the Interprofessional Education requirement. Full information can be found in the *CPH Exam* section of this Bulletin, the *Culminating Experience* section of this Bulletin, and the *Interprofessional Education* section of this Bulletin.

## **Master of Public Health in Health Administration and Policy – Juris Doctor Dual Degree (MPH-JD)**

The MPH-JD dual degree program offers the opportunity for a student to receive dual credit for coursework. The traditional MPH is 45 credit hours and completed within the Hudson College of Public Health. The traditional JD is 90 credit hours and completed within the College of Law. Through the MPH-JD dual degree program, the Hudson College of Public Health awards 9 credit hours towards the MPH for courses taken at the College of Law, and the College of Law awards 9 credit hours towards the JD for courses taken at the Hudson College of Public Health.

### **Admission Requirements:**

A candidate must be admitted to both schools independently. For the MPH criteria, please see the Admission Requirements in the Academic Information section of this Student Bulletin.

### **Course Requirements:**

- MPH Core Courses 16 credit hours
  - Required HAP Courses 18 credit hours
  - Elective Courses\* 6 credit hours
- \* These elective hours will be fulfilled through College of Law coursework.
- Practicum Preparation Seminar 1 credit hour
  - Integrated Public Health Practice 3 credit hours
  - Public Health Practicum 1 credit hour (240 contact hours)

### **MPH Core Courses:**

BSE 5163 Biostatistics Methods I  
BSE 5113 Principles of Epidemiology  
HPS 5213 Social and Behavioral Sciences in Public Health  
OEH 5013 Environmental Health  
HAP 5453 U. S. Health Care Systems  
HPS 5211 Qualitative Methods in Public Health

A total of 16 credit hours

### **Required HAP Courses:**

HAP 5183 Organizational Theory and Behavior  
HAP 5203 Health Economics  
HAP 5623 Health Forecasting and Budgeting  
HAP 5303 Health Policy and Politics  
HAP 5883 Health Care Quality Management

And one of the following:

HAP 5353 Public Health Law

OR

HAP 7403 Experiencing Public Health Law

A total of 18 credit hours

Other required courses:

CPH 7003 Integrated Public Health Practice  
CPH 7941 Practicum, Preparation Seminar  
CPH 7950 Public Health Practicum (1 credit hour, 240 contact hours)  
A total of 5 credit hours

Electives\* - a total of six credit hours

\* These elective hours will be fulfilled through College of Law coursework.

A minimum of 45 credit hours is required for the MPH degree in the Department of Health Administration and Policy. The student and the faculty advisor will choose appropriate law courses for credit at the Hudson College of Public Health.

Students are required to be familiar with and meet all current College of Law graduation requirements for the JD. Those requirements are available at the College of Law website <https://www.law.ou.edu/>.

Additional Degree Requirements for MPH-JD:

Students must meet with their advisor at least once every semester, and they will plan courses in both the Hudson College of Public Health and the College of Law. Students are responsible for informing their advisors about academic performance at both colleges. The faculty advisor is responsible for updating the student's permanent record which is filed in Student Services. Students may not arrange a practicum if on academic probation.

MPH-JD candidates in the Department of Health Administration and Policy are required to take the CPH Examination, to complete the Culminating Experience, and to meet the Interprofessional Education requirement. Full information can be found in the *CPH Exam* section of this Bulletin, the *Culminating Experience* section of this Bulletin, and the *Interprofessional Education* section of this Bulletin.

**Performance Expectations**

Students will gain competencies, which were developed by the Council for Education in Public Health (CEPH) for the Master's Degree in Public Health. A complete list of competencies is available on the college web site at

<https://publichealth.ouhsc.edu/CurrentStudents/Competencies.aspx>. Upon completing the Program, a student should have mastered the required competencies.

HAP MPH Concentration Competencies:

- HAP 1 Develop and analyze financial statements including key ratios and indicators.
- HAP 2 Evaluate strengths and weaknesses of health care, public health and regulatory systems across national and international settings.
- HAP 3 Apply principles of quality improvement including differentiating the relative advantages/disadvantages of measuring structure, process and outcomes.
- HAP 4 Apply economic concepts to predict stakeholder and market responses to economic incentives and government policies.
- HAP 5 Evaluate characteristics of effective health organization policies.

## **Master of Health Administration (MHA)**

The mission statement of the MHA Program:

The University of Oklahoma Master of Health Administration program's mission is to prepare aspiring healthcare executives, primarily from the South Central region of the United States, to achieve leadership and management positions within the healthcare industry. Graduates will be recognized by their peers and superiors as competent and able to demonstrate excellent knowledge, skills, and abilities that drive transformation through rigorous academic study and real-world application. Our competency model is the successful understanding and evaluation of the US healthcare system, communication, executive leadership and ethical decision-making, critical thinking, quantitative analysis, patient outcome improvement, and professionalism.

The vision statement of the MHA Program:

We will be evaluated and recognized by healthcare leaders as a premier masters-level health administration program in the South Central region of the United States. Seeking the most competitive students, we will prepare them for successful careers in administrative leadership, quantitative analysis, and quality outcomes within the national healthcare industry.

The values of the MHA Program:

Excellence, Professionalism, Innovation, Leadership, Integrity, Stewardship, and Quality.

### Admission Requirements of the MHA Program

1. Successful applicants for admission must hold a bachelor's degree awarded from an accredited institution with a minimum grade-point average of 3.00 calculated using upper division coursework of undergraduate credit. All undergraduate majors are considered. Since class sizes are limited, early application is encouraged. The department reserves the right to rescind the letter of acceptance if the candidate does not respond timely to the offer of admission.
2. All applicants must submit an aptitude test score from either the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT).
3. All applicants must submit three (3) letters of recommendation.
4. All applicants must submit transcripts from all the schools they have attended.
5. If invited for an interview, applicants are expected to participate in either an on-campus interview or a technology-assisted interview.
6. For international applicants, the minimum acceptable score for the internet based TOEFL is 100.
7. Applicants are encouraged to complete three-credit hour undergraduate course work in each of the following: Accounting, Economics and Statistics. It is also recommended that applicants have a background in or have completed a course in college algebra prior to enrollment.
8. Students previously admitted to the Hudson College of Public Health seeking a change of major must satisfy all of the foregoing admission requirements for the MHA Program.

The MHA degree and all related course requirements are completed in no more than six calendar years. Historically approximately 95% of the students admitted into the MHA Program at OUHSC complete the Program and receive the MHA degree.

Course Requirements:

Required Courses:

HAP 5183	Organizational Theory and Behavior
HAP 5203	Health Economics
HAP 5303	Health Policy and Politics
HAP 5453	U. S. Health Care System
HAP 5483	Health Care Law and Ethics
HAP 5543	Marketing of Health Services
HAP 5563	Human Resource Management
HAP 5613	Financial Management of Health Service Organizations
HAP 5623	Forecasting and Budgeting
HAP 5643	Quantitative Methods in Health Administration
HAP 5733	Managed Care and Integrated Delivery Systems
HAP 5863	Strategic Management in Health Service Organizations
HAP 5873	Health Information Systems
HAP 5883	Health Care Quality Management
HAP 5950	Field Work in Health Administration
HAP 5973	MHA Capstone: Seminar in Health Services Management
HAP 7103	Managerial Epidemiology
HAP 7913	Professional Communication Skills in Healthcare Settings

A minimum of 52 credit hours is required for the MHA degree.

MHA Program: Completion of Degree in Two Years

First Year:

Fall:

HAP 5453	U. S. Health Care System
HAP 5643	Quantitative Methods in Health Administration
HAP 5623	Forecasting and Budgeting
HAP 5483	Health Care Law and Ethics
HAP 5203	Health Economics

Spring:

HAP 5613	Financial Management of Health Service Organizations
HAP 5733	Managed Care and Integrated Delivery Systems
HAP 5863	Strategic Management in Health Service Organizations
HAP 5883	Health Care Quality Management
HAP 7913	Professional Communication Skills in Healthcare Settings



The internship is usually scheduled during the summer between the first and second years after the successful completion of the first thirty hours of the curriculum. If a student does not have a 3.0 GPA, has received lower than a “B” letter grade in any course, or is on academic probation, the internship may be scheduled at a later date which may delay graduation.

Second Year:

Fall:

HAP 5183 Organizational Theory and Behavior  
HAP 5873 Health Information Systems  
HAP 7103 Managerial Epidemiology  
HAP 5543 Marketing of Health Services

Spring:

HAP 5303 Health Policy and Politics  
HAP 5973 Seminar in Health Administration  
HAP 5563 Human Resource Management  
HAP 5950 Field Work in Health Administration

MHA Program: Completion of Degree in Three Years

First Year:

Fall:

HAP 5453 U. S. Health Care System  
HAP 5643 Quantitative Methods in Health Administration  
HAP 5203 Health Economics

Spring:

HAP 5733 Managed Care and Integrated Delivery Systems  
HAP 5883 Health Care Quality Management  
HAP 7913 Professional Communication Skills in Healthcare Settings

Second Year:

Fall:

HAP 5183 Organizational Theory and Behavior  
HAP 5623 Forecasting and Budgeting  
HAP 5483 Health Care Law and Ethics

Spring:

HAP 5303 Health Policy and Politics  
HAP 5863 Strategic Management in Health Service Organizations  
HAP 5613 Financial Management

Third Year:

Fall:

HAP 5873 Health Information Systems  
HAP 7103 Managerial Epidemiology  
HAP 5543 Marketing of Health Services

Spring:

HAP 5973 Seminar in Health Administration  
HAP 5563 Human Resource Management  
HAP 5950 Field Work in Health Administration

The availability of course offerings is subject to change and should be monitored by the student and faculty advisor as the student progresses through the curriculum. The Program is continuously reassessing the courses and the curriculum, which are subject to change. Students must satisfy the requirements published when admitted to the program. If the Program modifies the requirements during the student's matriculation in the program, the student will have the option to complete the original or modified requirements.

Students must meet with their advisor at least once every semester. The faculty advisor is responsible for updating the student's permanent record which is filed in Student Services. These meetings should track and monitor the student's attainment of the Program's competencies. The Program is accredited by the Commission on Accreditation of Healthcare Management Education (CAHME).

All MPH and MHA students are required to participate in the campus-wide Interprofessional Education All Professions Days. Please see the *Interprofessional Education* section of this Bulletin for detailed information.

Guidelines for transferring credit from other CAHME-accredited institutions can be found in the *Transfer of Credit for MPH and MHA* section of this Bulletin.

**Master of Health Administration – Juris Doctor Dual Degree (MHA-JD)**

The MHA-JD dual degree program offers the opportunity for a student to receive dual credit for coursework. The traditional MHA is 52 credit hours and completed within the Hudson College of Public Health. The traditional JD is 90 credit hours and completed within the College of Law. Through the MHA-JD dual degree program, the Hudson College of Public Health awards 3 credit hours towards the MHA for courses taken at the College of Law, and the College of Law awards 9 credit hours towards the JD for courses taken at the Hudson College of Public Health.

**Admission Requirements for MHA-JD:**

A candidate must be admitted to both schools independently. For the MHA criteria, please see the *Admission Requirements of the MHA Program* section of this Student Bulletin.

Course Requirements:

Required Courses:

HAP 5183	Organizational Theory and Behavior
HAP 5203	Health Economics
HAP 5303	Health Policy and Politics
HAP 5453	U. S. Health Care System
HAP 5543	Marketing of Health Services
HAP 5563	Human Resource Management
HAP 5613	Financial Management of Health Service Organizations
HAP 5623	Forecasting and Budgeting
HAP 5643	Quantitative Methods in Health Administration
HAP 5733	Managed Care and Integrated Delivery Systems
HAP 5863	Strategic Management in Health Service Organizations
HAP 5873	Health Information Systems
HAP 5883	Health Care Quality Management
HAP 5950	Field Work in Health Administration
HAP 5973	MHA Capstone: Seminar in Health Services Management
HAP 7103	Managerial Epidemiology
HAP 7913	Professional Communication Skills in Healthcare Settings

A minimum of 52 credit hours towards MHA curriculum is required for the MHA-JD degree.

Students are required to be familiar with and meet all current College of Law graduation requirements for the MHA. Those requirements are available at the College of Law website <https://www.law.ou.edu/>.

Additional Degree Requirements for the MHA and MHA-JD

Students must meet with their advisor at least once every semester, and they will plan courses in both the Hudson College of Public Health and the College of Law. Students are responsible for informing their advisors about academic performance at both colleges. The faculty advisor is responsible for updating the student's permanent record which is filed in Student Services.

All MHA candidates are required to complete an administrative internship and to meet the Interprofessional Education requirement. Please see the *Internship Requirements for MHA and MHA-JD Students* Section for MHA and MHA-JD students of this Bulletin and the *Interprofessional Education* section of this Bulletin. If a student does not have a 3.0 GPA, has received lower than a "B" letter grade in any course, or is on academic probation, the internship may be scheduled at a later date which may delay graduation.

Internship Requirements for MHA and MHA-JD Students:

All MHA students must complete an internship in Health Administration. Completion of the internship is a required component of HAP 5950 Field Work in Health Administration. Students will usually schedule the internship upon successful completion of 30 credit hours. If a student does not have a 3.0 GPA, has received lower than a "B" letter grade in any course, or is on academic probation, the internship may be scheduled at a later date which may delay graduation.

It is recommended that the internship include 10 to 12 weeks of field experience. The student is required to spend a minimum of 400 hours in the field and submit bi-weekly activity and internship logs detailing tasks, projects, meetings, and self-reflections to the faculty advisor. Forms are available on D2L.

The student's faculty advisor will serve as the student's internship advisor and will discuss site selection and assist with the preparation of the work plan by the student. The written and oral internship report will be reviewed by the faculty advisor prior to the presentation by the student to the committee; the advisor must rate the content, organization, rigor and written clarity of the report as satisfactory. In addition, the student's performance must be rated by the preceptor as good or excellent in a written evaluation that will be included in the student's file. Failure to receive these performance results will require remedial action to be determined by the faculty advisor. Forms are available on D2L.

The student must present a scholarly poster in the fall semester after the internship. The poster should explain the internship and make a persuasive argument of competency mastery. The poster will be judged, and the student must receive a satisfactory score in order to be permitted to proceed to writing the written report and completing the oral defense.

To complete the defense, students must submit a Request to Present Internship form to schedule the internship presentation. The student must successfully present a written and oral substantive summary of the internship. The presentation of the internship should exhibit the student's development of the program competencies, the application of the classroom didactic learning to the internship assignments and experiences, and clear presentation of the projects, assignments and learning opportunities that occurred during the internship. Once the presentation has been approved and scheduled, the Office of Student Services will issue an MHA Authority Form. The internship defense presentation will usually be administered by a panel of three faculty members, including the Program Director, and chaired by the student's faculty advisor. The student is required to submit the completed written report, slides and any exhibits, attachments or related documents to the faculty members at least fourteen calendar days prior to the scheduled date of the presentation. If this is not done, the student's faculty advisor will cancel the presentation, and the student must reschedule it at a later date. The deadline for presentation of the MHA internship report is before the Spring Break prior to graduation in May.

Within 72 hours after the internship presentation is complete, the MHA Authority Form must be returned to the Office of Student Services with the results and signatures of all committee members. If the student does not pass the internship presentation, a report must be submitted by the chair of the student's committee to the Office of Student Services indicating what remedial steps the student may take to successfully complete the internship presentation. This report must also outline the student's deficiencies. A student who fails a second time will no longer be eligible for a master's degree in the academic program.

Additional detailed information about the internship and required forms are available in D2L and the Office of Student Services.

### Performance Expectations for MHA and MHA-JD Students

The successful student must demonstrate achievement of competencies in the following subject areas. These competencies are in accordance with requirements of the Commission on Accreditation of Healthcare Management Education (CAHME) and are available on the department's web site at:

<https://publichealth.ouhsc.edu/Portals/1055/Assets/documents/About%20Us/Departments/HAP/MA%20in%20HAP%20Competencies.pdf>. Each course syllabus also includes the specific competencies addressed in that course.

The CAHME-accredited MHA Program has been developed around the mastery of competencies necessary to be successful in health care administrative positions. The competencies of the Program are based on and aligned with the Program's mission, vision and values. After completion of the MHA Program, a student will have the ability to demonstrate:

**A. Synthesis and evaluation of the healthcare system, healthcare management, and issues related to:**

1. Healthcare organizations,
2. access to care,
3. financing healthcare,
4. human resources,
5. financial management,
6. strategic planning and thinking,
7. quality improvement, and
8. legal and regulatory matters.

**B. Communication Skills including:**

1. Characterizing and utilizing appropriate forms and standards of communication methods applicable in professional healthcare settings;
2. Establishing best practices of communication skills; and
3. Effectively identifying and responding to the audience and its wants, needs, interests, and beliefs.

**C. Critical thinking, analytical skills, and problem-solving abilities including:**

1. Using quantitative, statistical and financial analyses to solve problems;
2. Creating and using strategic planning and strategic thinking to discern among alternatives and make recommendations; and
3. Applying quality improvement techniques to analyze and change organizational outcomes.

**D. Leadership, Professionalism, and Ethics including:**

1. Engaging people, organizations, and key stakeholders when developing goals and executing plans;
2. Mobilizing teams, using negotiating skills, and accounting for individual and organizational pressures and needs;
3. Demonstrating integrity in personal and organizational practices, respecting diverse opinions, and holding themselves and others accountable for their actions; and

4. Using a corporate ethical decision-making process in a healthcare setting and apply ethical principles and policy statements to resolve ethical issues.

#### Competency Assessment Progress

Student assessment of competency development is centered around connected themes: (1) student ownership, (2) a multi-faceted perspective, (3) multiple, frequent touchpoints, and (4) continuous quality improvement. Through the structure of multiple quantitative and qualitative measures of didactic and experiential learning opportunities, and multiple angles of perspective over multiple points in time, our students form a well-triangulated measure of their personal and professional development. Students may use this self-reflective process to identify stories and examples for personal portfolio, useful for interviewing, career planning, and continuous lifelong personal and professional development. To aid in the effective collection, analysis, and utilization of student assessments, students will complete the following:

- **During the first semester of the program**, students will take an objective pre-assessment covering the MHA competencies, e.g., Peregrine Healthcare Administration Academic Programmatic Assessment
- **During faculty advising sessions each semester**, students will:
  - Before the advising session:
    - Complete the OU MHA Competency Assessment Dashboard (“Dashboard”)
    - Draft the Student Self-Reflection narrative (“Self-Reflection”)
  - During the advising session:
    - Review the Dashboard with their faculty advisors
    - Review the Self-Reflection with their faculty advisors
  - After the advising session:
    - Provide the Program Director an updated copy of the Dashboard, reflecting any changes made as a result of the faculty advising session
    - Provide the Program Director an updated copy of the Self-Reflection, reflecting any changes made as a result of the faculty advising session
- **After completing the required MHA Internship**, students will:
  - Provide their faculty advisors and Program Director an updated copy of the Dashboard
  - Provide their faculty advisors and Program Director an updated copy of the Self-Reflection
- **During the required course, HAP 7913 Professional Communication**, students will take diagnostic assessments:
  - Emotional and Social Competency, e.g., Emotional and Social Competency Inventory-University
  - Behavioral assessment, e.g., Social Style and Versatility multi-rater assessment
- **As part of the required MHA Internship and the associated required course, HAP 5950 Field Work in Health Administration**, students will complete a variety of competency assessment activities, including:
  - Internship Poster Presentation
  - Internship Written Summary
  - Internship Oral Defense before a panel committee

- **As part of the required Capstone course, HAP 5973 Seminar in Health Administration,** students will receive assessment of their overall competency development by the instructor as they work through their capstone projects
- **During the final semester of the program,** students will:
  - Provide the Program Director a final version of the Dashboard (this can be as part of the normal faculty advising process described above, i.e., during the student's final semester)
  - Provide the Program Director a final Self-Reflection (this can be as part of the normal faculty advising process described above, i.e., during the student's final semester)
  - Take an objective post-assessment covering the MHA competencies, e.g., Peregrine Healthcare Administration Academic Programmatic Assessment.

### MHA Graduation Requirements

#### Admission to Candidacy

Students who are doing satisfactory work may normally be admitted to candidacy for a degree as soon as they have enrolled in sufficient hours for the degree. The Admission to Candidacy form (<https://publichealth.ouhsc.edu/Portals/1055/Assets/documents/Current%20Students/Student%20Forms/AdmissToCandidacyForm.pdf>) should be filed with the Office of Student Services at the beginning of the semester in which the student expects to graduate. The Academic Calendar located at <https://admissions.ouhsc.edu/AcademicCalendar.aspx> lists the specific deadline for each semester. Also, at the time the Admission to Candidacy is filed with the Office of Student Services, students should obtain instructions governing the completion of coursework and graduation from the Office of Student Services.

#### Methods of Evaluation

The Program relies on written examinations, participation in class, participation in team activities, simulation exercises, role-playing, oral presentations, analysis of manuscripts in the peer reviewed literature, the preparation and presentation of assigned papers and written assignments, case studies, off campus team assignments, and sensitivity analysis to evaluate the performance of students.

#### Graduates of the MHA Program

Historically, the Program has placed 100% of its students in a post-graduate fellowship or in an employment position in the healthcare industry within three months of graduation.

### Department of Health Administration and Policy Faculty

**Dale W. Bratzler, D.O., M.P.H., Professor and Chair**

Education: D.O., Kansas City University of Medicine and Biosciences-College of Osteopathic Medicine 1981; M.P.H., University of Oklahoma Health Sciences Center, College of Public Health, Department of Health Administration and Policy 1996; B.S. University of Central Missouri, Warrensburg, Missouri 1973.

**Professional Affiliations:** American Osteopathic Association, American Medical Association, Infectious Diseases Society of America, Society for Healthcare Epidemiology of America, Oklahoma Osteopathic Association, Oklahoma State Medical Association, Oklahoma County Medical Society, Tulsa Osteopathic Medical Society, Tulsa County Medical Society, American College of Osteopathic Internists, University of Health Sciences - College of Osteopathic Medicine Alumni Association, Alumni Association - Central Missouri State University, Alumni Association - University of Oklahoma Health Sciences Center, College of Public Health, American Health Quality Association

**Gerry Ibay, J.D., M.H.A.,** Assistant Professor and Vice-Chair

**Education:** J.D., University of Richmond School of Law, Richmond, VA; M.H.A., Virginia Commonwealth University, Richmond, VA; B.A. University of Richmond, VA

**Professional Affiliations:** American College of Health Care Executives, Licensed Nursing Home Administrator, New York, 2009-2012

**Gary Cox, J.D.,** Professor and Associate Dean

**Education:** J.D., University of Tulsa 1973; B.A., Northeastern State University

**Professional Affiliations:** Visiting Associate Professor, Hudson College of Public Health, 17 years; Former Commissioner of the Oklahoma State Department of Health; Former Executive Director of two independent city-county health departments in Oklahoma: OKC-County Health Department and the Tulsa Health Department; OKC Chamber Joint Board of Directors; MyHealth Governance Board; Chairman, NACCHO Awards Committee; RWJF National Advisory Committee; RWJF/RESOLVE Transforming Public Health Thoughts Leaders Project; Past President, National Association of County and City Health Officials; Past President, Oklahoma Public Health Association

**Bruce D. Dart, Ph.D., M.S., R.E.H.S.,** Visiting Associate Professor

**Education:** Ph.D., Walden University 2005; M.S., Central Michigan University 1989; B.A., Drury University 1977

**Professional Affiliations:** Registered Environmental Health Specialist, 1983, Former President, Board of Directors, National Association of County and City Health Officials, (NACCHO), Past-President, Public Health Association of Nebraska Member, American Public Health Association, Administration Section Board Chair, Metropolitan Human Services Council – Tulsa, Public Health Accreditation Review Committee

**Nasim Baghban Ferdows, Ph.D.,** Assistant Professor

**Education:** Ph.D., Wayne State University 2016; M.S., Yazd University 2009; B.S. Iran University of Science & Technology 2006

**Current Research Interests:** Intersection of economics, gerontology and health services; intersection of methodology and policy

**Professional Affiliations:** American Economic Association, International Health Economics Association, American Society of Health Economists, Midwest Economics Association, Gerontological Society of America, Academy Health

**Davlyatov K. Garnisher, Ph.D., M.S.,** Assistant Professor

**Education:** Ph.D., University of Alabama at Birmingham; M.S., Minnesota State University; M.S., Tashkent Medical Academy; B.S., Tashkent Medical Academy

**Current Research Interests:** Health disparities; impact on access to and delivery of healthcare services; organizational performance in the long-term care industry; healthcare organizational behaviors; strategies of quality improvement and process of care; health information technology and telehealth use; data mining and predictive modeling in healthcare



**Junying (June) Zhao**, Ph.D, Assistant Professor

Education: Ph.D. University of California, Irvine 2019; Ph.D., McMaster University 2015; B.Sc., McMaster University 2015; M.P.H., Harvard University 2009; M.Sc., Chinese National Academy of Medicine 2008; M.B.B.S., Hebei Medical University 2005

Current Research Interests: Applying economics, mathematics, and informatics to ethical, legal, financial, and policy issues in the health sector

Professional Affiliations: Society for Industrial and Applied Mathematics; American Health Lawyers Association; American Public Health Association; Harvard Business School Healthcare Alumni Association

**Joseph C. Geresi**, J.D., M.H.A., Lecturer

Education: J.D., University of Oklahoma 2018; M.H.A., University of Oklahoma 2018; B.S., University of Oklahoma 2014

Professional Affiliations: Licensed to practice law in the State of Oklahoma, Bar Association; Administrative Fellow, Stillwater Medical 2019

**D. Brooke Cink**, M.H.R., Adjunct Lecturer

Education: M.H.R., University of Oklahoma 2006; B.S. Psychology, Southwestern Oklahoma State University 2004

**Ed Hamilton**, M.H.A., F.A.C.H.E., Adjunct Lecturer

Education: M.H.A., University of Oklahoma Health Sciences Center 1997; B.B.A., University of Central Oklahoma 1989

Current Research Interests: Health system strategy, policy and market development

Professional Affiliations: Fellow, American College of Health Care Executives

**Susan M. Henderson**, J.D., Adjunct Lecturer

Education: J.D., University of Oklahoma College of Law 1986; B.A., University of Oklahoma 1983

Professional Affiliations: Licensed to practice law in the State of Oklahoma, Oklahoma Bar Association

**E. Scott Henley**, Ph.D., J.D., D.Ph., R.Ph., Adjunct Professor

Education: J.D., Oklahoma City University; Ph.D., University of Oklahoma; M.A., University of Iowa; B.A., University of Oklahoma

Professional Affiliations: Fellow, American College of Health Care Executives

**Mary Lucille Jones**, CPA, Adjunct Lecturer

Education: B.S. Accounting, Southwestern Oklahoma State University 1979

**Shari K. Kinney**, Dr.PH, R.N., CPH, Adjunct Professor

Education: Dr.PH, University of Oklahoma; M.P.H., University of Oklahoma; M.S.N., University of Oklahoma; B.S.N., University of Oklahoma; B.A., University of Kansas

Current Research Interests: Maternal and Child Health; Public Health, Health Policy, Public Health Services and Systems

Professional Affiliations: Registered Nurse, Oklahoma License; American Nurses Association; Oklahoma Nurses Association; American Public Health Association; Oklahoma Public Health Association; National Association of City and County Health Officers; Association of University Programs for Health Administration

**Jennifer Lepard**, Dr.PH, Adjunct Lecturer

Education: Dr.PH, University of Oklahoma; M.P.A., University of Oklahoma; B.A., University of Oklahoma

Current Research Interests: Public Health and Healthcare Policy Issues

Professional Affiliations: Oklahoma Health Improvement Plan Committee

**Ann Paul**, Dr.PH, Adjunct Lecturer

Education: Dr.PH, University of Oklahoma; M.P.H., University of Oklahoma; B.A., Oral Roberts University

Professional Affiliations: Director, Tulsa City County Board of Health; Director, Greater Tulsa Health Access Network; Appointee to Governor Mary Fallin's Joint Commission on Public Health; past Chair, Pathways to Health Community Foundation; past President, Healthcare Financial Management Association; past President, OUHSC HCOPH Student Association.

## Department of Health Promotion Sciences

### Mission

The Department of Health Promotion Sciences prepares public health professionals to function in leadership roles in the development, promotion, and application of social and behavioral science theory and methods for solving community health problems.

### Role of the Health Promotion Professional

Health promotion is the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behavior towards a wide range of social and environmental interventions. –WHO 2017

Organizational Settings: Public health agencies at the national, regional, state, and local levels, including health maintenance organizations, health departments, tribal nations, clinics, industry, community agencies, schools, colleges, and universities.

Professional Roles: Graduates provide planning, implementation, and evaluation skills to local, state, national, and tribal organizations.

Learning Objectives: Skills acquired include community assessment and development; health promotion program planning, implementation, and evaluation; data management; application of health behavior theories; priority population expertise; and other specifics from electives.

### Curricular Areas for this program:

- Knowledge and skills related to program stages, including community assessment, program planning, program implementation, and program evaluation.
- Knowledge and skills related to levels of intervention, including working with individuals, small groups and populations, network strategies, organizational development and change, community development, public policy, and mass media.
- Content areas, such as health workforce development, nutrition, food security, youth health, gerontology, social marketing, chronic diseases, communicable diseases, stress, exercise, substance use, intentional and unintentional injuries, and health promotion/disease prevention strategies for relevant screening.
- Knowledge of social and behavioral science theories, research methods, epidemiology, and biostatistics.
- Familiarity with various populations, such as racial, ethnic, and gender groups, age spectrum groups, poor and disenfranchised, and rural and urban residents.
- Familiarity with health promotion settings, including schools, work sites, hospitals and health care providers, government agencies, American Indian Tribes, and other community organizations.
- Professional issues, including philosophy, principles and ethical issues in health promotion, the history of public health, and knowledge of the various professional organizations.

Professional Degrees Offered

- Master of Public Health (MPH) degree in Health Promotion Sciences
- Master of Public Health/Master of Social Work (MPH/MSW) dual degree

Graduate Degrees Offered

- Master of Sciences (MS) degree in Health Promotion Sciences
- Doctor of Philosophy (PhD) degree in Health Promotion Sciences

**Master of Public Health in Health Promotion Sciences**

Admission Requirements: A Bachelor degree; 3.00 GPA or better; and a statement of purpose. Admission on probationary status may be conferred for students who do not meet the minimum GPA requirement.

A minimum of 45 hours is required for the MPH degree in Health Promotion Sciences.

Course Requirements:

- The College’s six Core Courses..... 16 credit hours
- HPS Required Courses..... 12 credit hours
- Selective Course (Diversity Requirement) ..... 3 credit hours
- Elective Courses ..... 9 credit hours
- Integrated Public Health Practice..... 3 credit hours
- Public Health Practicum Courses..... 2 credit hours

MPH Core Courses (16 credit hours):

BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Methods I
HAP 5453	U. S. Health Care System
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health
HPS 5211	Qualitative Methods in Public Health

HPS Required Courses: (12 credit hours)

HPS 5453	Theoretical Concepts in Health Promotion
HPS 5463	Community Assessment, Organization, and Interventions
HPS 5563	Program Planning for Health Promotion
HPS 5543	Program Evaluation

HPS Diversity Requirement (3 credit hours): (One of the following)

HPS 5383	Health and Illness in Old Age
HPS 5853	Health and the American Indian

Electives: 9 credit hours from a variety of courses available

Additional Degree Requirements:

- Complete the Interprofessional Education requirement. Please see the *Interprofessional Education* section of this Bulletin for detailed information.
- Take the CPH Examination. Please see the *CPH Exam* section of this Bulletin for detailed information.
- Complete the Culminating Experience. Please see the *Culminating Experience* section of this Bulletin for detailed information.
  - CPH 7003 Integrated Public Health Practice 3 credit hours
  - CPH 7941 Practicum Preparation Seminar 1 credit hour
  - CPH 7950 Public Health Practicum 1 credit hour (240 contact hrs)

**Master of Public Health/Master of Social Work (MPH/MSW) Dual Degree Program**

This program awards both degrees upon completion of the dual 85-hour curriculum.

- Public Health..... 37 credit hours
- Social Work..... 48 credit hours

Hudson College of Public Health Core Courses (19 credit hours):

BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Method I
HAP 5453	U. S. Health Care System
HPS 5211	Qualitative Methods in Public Health
HPS 5213	Social & Behavioral Sciences in Public Health
OEH 5013	Environmental Health
CPH 7003	Integrated Public Health Practice

Health Promotion Required Courses (12 credit hours):

HPS 5453	Theoretical Concepts in Health Promotion
HPS 5463	Community Assessment, Organization and Intervention
HPS 5563	Program Planning for Health Promotion
HPS 5543	Health Program Evaluation

Health Promotion Electives (6 credit hours): With approval of advisor.

Additional Public Health Degree Requirements:

- Complete the Interprofessional Education requirement. Please see the *Interprofessional Education* section of this Bulletin for detailed information.
- Take the CPH Examination. Please see the *CPH Exam* section of this Bulletin for detailed information.

Social Work Required Courses (30 credit hours):

SWK 5403 Professional Social Work

SWK 5333 Human Diversity & Societal Oppression  
 SWK 5433 Human Lifespan Development  
 SWK 5373 Theory, Practice & Evaluation with Individuals  
 SWK 5313 Policy Practice in Social Work: Analysis & Advocacy  
 SWK 5513 Client-Centered Direct Practice  
 SWK 5523 Macro-Centered Practice  
 SWK 5973 Advanced Integrative Seminar: Case Analysis  
 SWK 5403 Professional Social Work  
 SWK 5333 Human Diversity & Societal Oppression (as HPS Diversity choice)

Social Work Practicum (12 credits):

SWK 5413 Foundation Practicum I  
 SWK 5423 Foundation Practicum II  
 SWK 5816 Practicum III EXTENDED (SW placement in PH setting)  
 SWK 5826 Practicum IV EXTENDED (continuation of SW practicum in a PH setting)

Social Work Electives (6 credit hours): With approve of advisor.

**Master of Science in Health Promotion Sciences**

A minimum of 38 hours is required for the MS degree in Health Promotion Sciences. The MS degree is appropriate for baccalaureate degree graduates seeking a pathway to a PhD in public health. Evidence of PhD potential is required of MS applicants.

Course Requirements:

- Four of the College's Core Courses ..... 12 credit hours
- Required Courses ..... 9 credit hours
- Selective Course (Diversity Requirement) ..... 3 credit hours
- Elective Courses and Research for Master's Thesis ..... 14 credit hours

Hudson College of Public Health Core Courses (12 credit hours):

BSE 5163 Biostatistics Methods I  
 BSE 5113 Principles of Epidemiology  
 HPS 5213 Social and Behavioral Sciences in Public Health  
 BSE 5033 Foundations and Overview of Public Health

Health Promotion Required Courses (9 credit hours):

HPS 5453 Theoretical Concepts in Health Promotion  
 HPS 5543 Program Evaluation  
 HPS 5563 Program Planning for Health Promotion

Health Promotion Diversity Requirement (3 credit hours): (One of the following)

HPS 5383 Health and the American Indian

### Health Promotion Electives and Thesis Research:

2-3 courses from a variety of courses offered including a Research Skill Elective  
HPS 5980 Research for Master's Thesis (3-6 credit hours)

### Additional Degree Requirements for MS in Health Promotion Sciences:

- Oral Thesis Defense
- Master's Thesis

Comprehensive Examination/Culminating Experience for Master of Science degree: The examination is an oral exam that covers all fields of public health. The Dean of the Graduate College will authorize the examination for MS students.

### **Doctor of Philosophy (PhD) in Health Promotion Sciences**

Admissions Requirements: Master's degree in Public Health (or relevant Master's degree) and completion of the six core Master's level public health courses (or similar); 3.50 GPA or better; evidence of writing and research ability (a writing sample); and a statement of purpose. Admission on probationary status may be conferred for students who do not meet all of the admission requirements.

A professional and supportive faculty/student relationship is an important component of successful doctoral programs. Faculty members are most likely to accept a doctoral student when the prospect of productive academic and professional advancement is high. Prospective students are encouraged to contact HPS faculty members to determine who could be an optimal mentor. The absence of a good fit can reduce enthusiasm for accepting a particular applicant regardless of application content.

Curriculum: (completion of a minimum of 60 credit hours post-Master's)

Any PhD student who has not previously completed the core MPH courses or earned an MPH degree will also be required to complete either an overview course in public health (BSE 5033 Overview of Public Health) or selected College core courses at the first opportunity, based on faculty assessment of applicant familiarity with public health and health promotion fundamentals.

### Core Courses (9 credit hours)

HPS 6633	Health Promotion Theory I: Individuals and Small Groups
HPS 6643	Health Promotion Theory II: Communities, Organizations and Government
HPS 6943	Advanced Program Evaluation

### Methods (15 credit hours, not including any required pre-requisites)

Required Specific Courses:

HPS 6933	Qualitative Research Methods in Public Health
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HPS 6953      Advanced Research Methods in Social and Behavioral Sciences  
BSE 5173      Biostatistics Methods II or BSE 5663 Analysis of Frequency Data

Two additional courses in either Qualitative or Quantitative Methods, such as from the following options:

- Qualitative Methods Electives (Prerequisite: HPS 6933):
  - HPS 6453      Focus Group Research
  - HPS 6833      Social Marketing
  - SOC 5313      Mixed Methods
  
- Quantitative Methods Electives (Prerequisite: BSE 5173 or BSE 5663)
  - BSE 5643      Regression Analysis
  - BSE 5653      Nonparametric Methods
  - BSE 6643      Survival Data Analysis
  - BSE 6663      Analysis of Multivariate Data

Substantive Area (Major): 15 credit hours

A minimum of fifteen credit hours in a substantive area of public health / health promotion will comprise the primary area of concentration specific to the student's interests. Examples of concentration areas relevant to this department include social determinants of health, minority health, health disparities, nutritional health/food security, workforce development, health and aging, and social justice. Students and advisors must identify sufficient courses to satisfy the declared major.

Related Area (Minor): 9 credit hours

A minimum of nine credit hours from relevant areas of public health or an established discipline in the social and behavioral sciences will comprise a secondary area of concentration specific to the student's interests.

Dissertation: (Minimum of 12 credit hours)

Dissertation work occurs in steps. Close collaboration with the faculty advisor and dissertation committee members is required throughout the process.

- The required coursework noted above (Core, Methods, Major, and Minor) is completed first.
- Written comprehensive exams are then taken that cover three content areas: Theory, Methods, and the student's substantive and related concentrations. The Theory and Methods content comprises a departmental exam. It will have no fewer than three evaluators and any faculty member in the department can submit questions and serve as an evaluator. The Substantive Area exam will be prepared by the student's dissertation committee. In the event that a student fails part or all of a comprehensive exam, she/he will be required to retake the exam.



- Dissertation Proposal Oral Defense – Once the student has successfully passed the written comprehensive exams, the student will complete and orally defend a dissertation proposal under the direction of the five-member Dissertation Committee.
- Dissertation Oral Defense – Once the student has successfully completed the dissertation work, the five-member Dissertation Committee will conduct the oral defense of the dissertation.

**Other Opportunities and University Requirements (1 credit):**

- Doctoral students will have a range of teaching experience opportunities and may be invited to facilitate educational activities. Such opportunities should be discussed by the student and their advisor and/or advisory committee to determine suitability.
- Doctoral students are required, prior to initiation of Doctoral research, to complete a one credit course in RCR approved by the Department, complete CITI training in Responsible Conduct of Research (RCR) and Protection of Human Research Subjects, and attend the OUHSC IRB In-House Education Program.

**Course Sequencing**

Not all courses are offered on an annual basis and certain courses are important prerequisites for other courses. In order to assure that students are following the proper course sequence, all students must meet with their advisor each semester in order to complete enrollment for the next semester. In addition, all students are requested to enroll for at least six credit hours per semester to facilitate students progressing through the curricula as a cohort.

Courses outside the College of Public Health can support a concentration and are acceptable curricular elements with advisor approval. Students will work with faculty advisors to determine the optimal selection of coursework.

**Department of Health Promotion Sciences Faculty Members**

**Karla J. Finnell**, PhD, JD; Assistant Professor of Research

Education: PhD - University of Oklahoma Health Sciences Center, 2015; MPH - University of Oklahoma Health Sciences Center, 1998; JD - University of Oklahoma, 1987.

Current Research Interests: Social determinants of health, Social justice, Health disparities, Obesity, Maternal health, Chronic disease prevention, Integration of public health into a primary care medical setting.

**Mary J. Gowin**, PhD, MPH; Assistant Professor

Education: PhD - University of Oklahoma, 2017; MPH - University of Oklahoma Health Sciences Center, 2012.

Professional Affiliations: American Public Health Association, Oklahoma Public Health Association.

Current Research Interests: Health promotion and primary care, Health disparities, Maternal health, Social determinants of health, Technology in health promotion.

**Neil Hann, MPH;** Instructor

Education/Service: MPH - University of Oklahoma, 1982. Assistant Deputy Commissioner, Community and Family Health Services, Oklahoma State Department of Health.

Professional Affiliations: American Public Health Association, Society for Public Health Education.

Current Research Interests: Health education, Health disparities, Health program implementation and management.

**Robert John, PhD;** Professor

Education: PhD – University of Kansas, 1985; M. Phil – University of Kansas, 1982; MAT – University of Florida, 1975; BA – Vanderbilt University, 1972.

Professional Affiliations: American Public Health Association, American Sociological Association, Association for Gerontology in Higher Education, Gerontological Society of America (Fellow), International Social Marketing Association.

Current Research Interests: Gerontological health; health disparities/minority health; social determinants of health; social marketing; and social theory.

**Kerstin M. Reinschmidt, PhD, MPH;** Assistant Professor

Education: Post-doctoral Research Associate, University of Arizona, 2007; MPH, University of Arizona, 2004; PhD, University of Arizona, 2001; MA, University of Tulsa, 1991.

Professional Affiliations: American Public Health Association; Society for Applied Anthropology.

Current Research Interests: Latino Health, American Indian Health, Chronic disease prevention and health promotion, Mental/emotional health promotion, Community-based participatory intervention research, Community Health Workers, Social determinants of health, Reducing health disparities.

**Lancer Stephens, PhD;** Assistant Professor of Research

Education: PhD – University of Oklahoma Health Sciences Center, 2009; MS – Northeastern State University, 1998; BS – University of Central Oklahoma, 1995

Professional Affiliations: Association of American Indian Physicians, Native Community Research Exchange

Current Research Interests: Health Literacy in Native Renal Disease; Diabetes Prevention in Native Youth; Tobacco Cessation in Tribal Populations.

**Thomas A. Teasdale, DrPH, FGSA, FAGHE;** Professor and Chair

Education: DrPH –University of Texas Health Science Center at Houston, 1994; MPH – University of Texas Health Science Center at Houston, 1983; BA –University of Texas, 1979

Professional Affiliations: American Public Health Association, Oklahoma Public Health Association, Gerontological Society of America, Association for Gerontology in Higher Education

Current Research Interests: Implementation and evaluation of workforce development/community education programs; aging and public health; gerontology; health disparities; chronic disease prevention and health promotion.

**Marianna S. Wetherill**, PhD; Associate Professor

Education: PhD – University of Oklahoma Health Sciences Center, 2013; MPH – University of Oklahoma Health Sciences Center, 2009; BS – University of Oklahoma Health Sciences Center, 2004. Registered Dietician Nutritionist and Licensed Dietitian.

Professional Affiliations: American Public Health Association, Oklahoma Public Health Association, American Academy of Nutrition and Dietetics, Institute for Functional Medicine, Dietitians in Integrative and Functional Medicine (DIFM) Dietetic Practice Group.

Current Research Interests: Food insecurity; community-based food relief efforts; health impact and use of farmers' markets by low-income populations; HIV/AIDS treatment and care.

Professor Emeritus: **Willie V. Bryan**, EdD; **Mitchell V. Owens**, EdD; **Vicki Tall Chief**, EdD

The Department of Health Promotion Sciences engages several adjunct faculty members from the community and other academic centers. These colleagues support instruction, student advising, research, community outreach, and departmental planning. Please visit the departmental web page for a current listing.

## Interdisciplinary Public Health

### Mission

The Masters of Public Health (MPH) degree in Interdisciplinary Public Health is designed to provide broad based knowledge and skills in public health practice to those individuals working in the public health arena wishing additional education for career enhancement and/or advancement. The interdisciplinary degree also provides an opportunity for those individuals with a professional degree in health care or health service to complement their professional knowledge and skills with a public health perspective.

### Course Requirements

- Core courses: 16 credit hours
- Required courses: 15 credit hours
- Elective courses: 9 credit hours
- Integrated Public Health Practice (CPH 7003) 3 credit hours
- Practicum Preparation Seminar (CPH 7941) 1 credit hour
- Public Health Practicum (CPH 7950, 240 contact hours) 1 credit hour

### Core Courses:

BSE 5163	Biostatistics Methods 1
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
OEH 5013	Environmental Health
HAP 5453	U. S. Health Care System
HPS 5211	Qualitative Methods in Public Health

### Additional Required Courses:

HAP 5303	Health Care Policy and Politics
BSE 5023	Computer Applications in Public Health
BSE 5303	Epidemiology of Infectious Diseases
BSE 5363	Epidemiology and Prevention of Chronic Disease
HPS 5563	Program Planning for Health Promotion

Elective Courses – 9 credit hours of elective courses based on interest and desired emphasis.

The total number of credit hours required for the Interdisciplinary MPH degree is 45.

### Other Required Courses:

CPH 7003	Integrated Public Health Practice
CPH 7941	Practicum Preparation Seminar
CPH 7950	Public Health Practicum

### Additional Degree Requirements

- NBPHE Certified in Public Health (CPH) Examination
- Interprofessional Education Requirement
- Culminating Experience

## **Department of Occupational and Environmental Health**

### Mission

The objective of the Department of Occupational and Environmental Health is to unite in an interdisciplinary training and research program persons grounded in natural, physical, and health sciences in order to develop an understanding of human response to the environment, as well as the response of the environment to the activities of humans.

### Professional Degrees Offered:

- Master of Public Health (MPH) degree in Environmental Health

### Graduate Degrees Offered:

- Master of Science (MS) degree in Industrial Hygiene & Environmental Health Sciences
- Doctor of Philosophy (PhD) degree in Occupational and Environmental Health

## **Programs of Study**

### **Master of Science (MS) Degree in Industrial Hygiene & Environmental Health Science**

#### Program Educational Objectives:

Graduates of the Master of Science program in Industrial Hygiene and Environmental Health Sciences at the University of Oklahoma Health Sciences Center will be professional practitioners who apply scientific knowledge to the anticipation, recognition, evaluation, and control of environmental hazards or stresses affecting human health. Competencies demonstrated by graduates will include the ability:

- To identify overt and potential health hazards in the workplace and to apply analytical skills in the evaluation of those health risks
- To effect control of workplace hazards through application of engineering, administrative, or personal protective procedures
- To educate workers and management concerning occupational hazards and the prevention of occupational health problems
- To apply knowledge of the regulations of various agencies having occupational health and safety functions
- To function on multidisciplinary teams to protect and enhance worker health.

Additionally, graduates will work effectively in positions with responsibility for elements of environmental management, such as compliance with environmental regulations or planning and budgeting of environmental projects.

Graduates will aspire to and achieve professional certification, such as the Certified Industrial Hygienist (CIH) credential, appropriate to their employment history and circumstances.

Graduates will communicate technical and business information accurately and effectively.

Accreditation: The Master of Science program in Industrial Hygiene and Environmental Health Sciences is accredited by the Applied and Natural Science Accreditation Commission of ABET, <https://www.abet.org>.

Required Courses (49 credit hours):

OEH 5013	Environmental Health
OEH 5103	Occupational and Environmental Health Sampling Strategies
OEH 5213	Principles of Environmental Health and Safety Management
OEH 5262	Occupational and Environmental Laws and Regulations
OEH 5702	Principles of Safety
OEH 5723	Fundamentals of Occupational and Environmental Health Science
OEH 5734	Noise and Radiation Hazards
OEH 5742	Industrial Hygiene and Environmental Measurements
OEH 5973	Communication and Ethics in Occupational and Environmental Health
OEH 5980	Research for Master's Thesis (4 credit hours)
OEH 5553	Occupational and Environmental Toxicology
OEH 5752	Occupational Hazards Control
OEH 5801	Basic Ergonomics
BSE 5113	Principles of Epidemiology
BSE 5163	Biostatistics Methods I
HPS 5213	Social and Behavioral Science in Public Health
HAP 5453	U. S. Health Care Systems
OEH 5940	Field Practice (160 contact hours, 1 credit hour)
HPS 5211	Qualitative Methods in Public Health

Additional Degree Requirements:

- Quantitative Skills Examination
- Industrial Hygiene Knowledge Survey
- Oral Thesis Defense
- Master's Thesis

**Master of Public Health (MPH) in Environmental Health**

Course Requirements:

• The 6 Core Courses	16 credit hours
• Required OEH Courses	19 credit hours
• Elective Courses	5 credit hours
• Integrated Public Health Practice	3 credit hours
• Public Health Practicum Courses	2 credit hours

Core Courses:

OEH 5013	Environmental Health
BSE 5163	Biostatistics Methods I
BSE 5113	Principles of Epidemiology
HPS 5213	Social and Behavioral Sciences in Public Health
HAP 5453	U. S. Health Care System
HPS 5211	Qualitative Methods in Public Health

OEH Required Courses:

OEH 5023	Public Health Biology and Sanitation
OEH 5213	Principles of Environmental Health and Safety Management
OEH 5262	Occupational and Environmental Law
OEH 5723	Fundamentals of Occupational and Environmental Health Science
OEH 5973	Communication and Ethics in Occupational and Environmental Health
OEH 5553	Occupational and Environmental Toxicology
OEH 5742	Industrial Hygiene and Environmental Measurements

Other Required Courses:

CPH 7003	Integrated Public Health Practice
CPH 7941	Practicum Preparation Seminar
CPH 7950	Public Health Practicum (1 credit hour)
HPS 5211	Qualitative Methods in Public Health

Electives: 5 credit hours

Additional Degree Requirements:

- Computer Competency
- Quantitative Skills Examination
- CPH Examination  
MPH candidates in Environmental Health are required to take the CPH Examination. Please see the *CPH Exam* section of this Bulletin for detailed information.
- Culminating Experience MPH candidates in Environmental Health are required to complete the Culminating Experience. Please see the *Culminating Experience* section of this Bulletin for detailed information.
- Interprofessional Education  
MPH candidates in Environmental Health are required to complete the Interprofessional Education Experience. Please see the *Interprofessional Education* section of this Bulletin for detailed information.

A minimum of 45 credit hours is required for the MPH degree in Environmental Health.



## **Admission Requirements**

### Master of Public Health Degree

In addition to other entry requirements of the College of Public Health, applicants to the MPH program in OEH must have completed the following: a College Algebra or higher course, 30 hours in basic sciences, mathematics, engineering and technology, with at least 9 hours in chemistry to include organic chemistry and a course in physiology, biochemistry, or other appropriate life science course.

Those who matriculate with deficiencies up to 8-semester hours credit of these requirements will be required to meet the full entrance requirements within the first 20 semester credit hours of graduate course work. No course taken as part of degree program requirements can be used to satisfy the admission criteria.

### Master of Science Degree

In addition to other entry requirements of the Hudson College of Public Health, applicants to the MS program in OEH must have completed the following: College Algebra or higher course, 36 hours in basic sciences, mathematics, engineering and technology, with at least 12 hours in chemistry to include organic chemistry, a course in biology, physiology, biochemistry, or other appropriate life science course, and a course in physics. At least 9 hours of the basic sciences, mathematics, engineering and technology courses must be at the upper division (junior, senior, or graduate) level. Also required is a minimum of 21 hours in communications, humanities, and social sciences.

Those who matriculate with deficiencies up to 8-semester hours credit of these requirements will be required to meet the full entrance requirements within the first 20 semester credit hours of graduate course work. No course taken as part of a degree program requirements can be used to satisfy the admission criteria.

### Doctor of Philosophy (PhD) Degree

The Doctor of Philosophy (PhD) degree is an advanced, research-oriented degree program requiring in-depth study of and research in a specialty area within the broad field of occupational and environmental health. General requirements for admission and completion of the degree are consistent with those applicable to all PhD programs as described in the Graduate Bulletin. Minimum requirements are 90 semester hours, including approved transfer work but excluding any credit for research tools.

To be admitted to the Ph.D. program in the Department, the candidate must hold a Master's degree from an accredited institution in a related field and display a clear research orientation and firm knowledge of research techniques. The Master's degree must be from an institution which has English as its primary language of instruction or the candidate must have scored a

minimum of 90 (120 scale) on the TOEFL. The applicant must be accepted by the Department and be admitted into the doctoral program by the Graduate Dean. Applicants are also required to take the Graduate Record Exam (GRE).

Acceptance to the program will be determined based upon the following criteria:

1. Admission to the OEH PhD program is based on the student's GPA, GRE scores, quality of reference letters, strength of background (coursework, work experience), available space in the program, ability of OEH faculty members to provide mentorship in the planned research area, and the capacity to provide needed resources for research. The applicant must have a minimum overall GPA of 3.25 (4.0 scale) based on all graduate work attempted.
2. The applicant's statement of career goals must be compatible with Occupational and Environmental Health and must demonstrate an understanding of the central role of the dissertation research experience in the Doctor of Philosophy degree. Furthermore, the statement of career goals must include a description of the applicant's intended research topic, including a rationale for the proposed work and a self-assessment of how the applicant's prior educational and/or work background has prepared the applicant to approach the proposed research.
3. The applicant must provide a minimum of three letters of recommendation, all of which must be from respondents who can offer first-hand evaluations of the applicant's background and professional interests. At least one of the references must address the applicant's academic capabilities in accomplishing a doctoral program.
4. The applicant's acceptance is contingent upon personal interviews by the Departmental Faculty, and the availability of an academic advisor in the applicant's area of research interest.
5. The applicant must have demonstrated potential for performing individual research. This requirement normally can be satisfied by the Master's thesis or by first authorship on a peer-reviewed scientific publication.
6. In addition to the course work prerequisites required for MS applicants, PhD applicants must also have completed course work in differential and integral calculus before being admitted to the program.

Upon acceptance into the Department of Occupational and Environmental Health, the student will be assigned an advisor who has Graduate Faculty authority to chair doctoral committees. During the first semester of enrollment in the doctoral program, the student should meet with the OEH Doctoral Advisory Committee for the Doctoral Advisory Conference to establish a program of study for their degree. The OEH Doctoral Advisory Committee is a standing committee consisting of 5 members from the OEH faculty appointed by the department and approved by the Graduate Dean. The function of the Doctoral Advisory Committee is described in the Graduate College Bulletin, Section 4.7. The student's advisor will serve as ad-hoc chair of the Doctoral Advisory Committee for the Doctoral Advisory Conference and other advisement and planning meetings concerning that student.

The program of study specifies required courses that the student must complete before taking the OEH General Examination as well as the number of research hours and any other

educational requirements that the committee deems is necessary for the student to complete their doctoral program. The course requirements for the OEH doctoral program are listed in detail at the end of this section. It is expected that the student will present their ideas concerning the coursework needed to complete their degree at this meeting. The program of study can be amended as needed; however, any changes must be approved by the Doctoral Advisory Committee. The rationale for any changes must be placed in the student's file along with the amended and approved program of study.

Upon completion of all coursework as detailed in the program of study, the student will be eligible to sit for the General Examination. Policies and procedures for the general examination are detailed in the sections below. The Doctoral Advisory Committee also serves as the General Examination Committee. If the General Examination Committee determines that the student has successfully completed the General Examination, the student then becomes a doctoral candidate and may move towards development of a research prospectus for their doctoral dissertation, under the direction of a Doctoral Committee established by the OEH Doctoral Advisory Committee in coordination with the student and his/her dissertation advisor. This committee will consist of 5 faculty members with appropriate standing with the OUHSC Graduate College to serve on PhD committees. At least 3 of the committee members must come from the OEH faculty and at least one must come from an academic department outside of OEH. The Chair of this committee must have approval from the OUHSC Graduate College to chair a PhD committee.

The student must complete an accepted research prospectus within one year of the completion of their General Exam. The research prospectus is a lengthy and detailed description of the student's planned research including: a literature review, rationale for the research, hypothesis(es) to be tested, materials and methods, a proposed timeline, and any other information requested by their advisory committee. The research prospectus should be approved (and signed) by the student's Doctoral Committee before their research can begin. Policies and guidelines for completion of the doctoral research project are described in the OUHSC Graduate College guidelines.

The course of study for the PhD is as follows:

Required courses (20 credit hours):

OEH 6103	Research Methods in Occupational and Environmental Health
OEH 6793	Aerosol Science
OEH 6473	Risk Assessment
OEH 6683	Modeling Technology in OEH
BSE 6192	Grant Writing Skills in Epidemiology
BSE 5013	Applications of Microcomputers to Data Analysis (SAS)
BSE 5173	Biostatistics Methods II

Selective BSE courses (9 credit hours):

BSE 5193	Intermediate Epidemiologic Methods
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BSE 5283 GIS in Health  
BSE 5363 Non-Parametric Methods  
BSE 5663 Analysis of Frequency Data

No-credit requirements:

HAP 7913 Professional Communication *or* OEH 5973 Communication and Ethics in OEH  
BSE 5111 Scientific Integrity in Research *or* BMSC 5001 Integrity in Scientific Research (if not taken at the master's level)  
BMSC 6011 Scientific Integrity II (taken in the 5<sup>th</sup> year of PhD enrollment)

Electives: Variable as deemed necessary by the Advisory Committee

Dissertation: Minimum of 20 hours but no more than 25 hours to be applied to the degree.

OEH 6980 Research for Doctoral Dissertation

Any PhD student who has not previously completed the core MPH courses or earned an MPH degree will be required to complete an overview course in public health (BSE 5033 Foundations and Overview of Public Health) at the first opportunity.

Additional OEH Department Requirements

Quantitative Skills and Comprehensive Examinations for Some Master's Degrees:

All MS and MPH students are required to successfully complete both a written quantitative skills examination and an oral comprehensive examination as a condition of graduation. In addition, MS students must complete an Industrial Hygiene Knowledge Survey at the end of their program. The written Quantitative Skills Examination (QSE) is administered by the Department of Occupational and Environmental Health and tests the student's command of basic quantitative skills relevant to the degree program. It is graded pass/fail and must be satisfactorily completed prior to being admitted to candidacy and administration of the oral comprehensive examination. The QSE is offered only once each semester (including the summer session if necessary). The QSE is designed to evaluate the candidate's skills and abilities in using first principles and effective quantitative synthesis techniques to solve problems. In its current form, students are presented with 50 problems, from which the student selects 30. For the 30 problems worked, a score of 70% is passing. Department faculty members have prepared the Math and Chemistry Manual as a background and practice reference for students to refresh their fundamental mathematical and chemistry skills of the nature encountered in coursework. Exercises provided are meant to be illustrative of the type of problems one would be likely to encounter in the general Occupational and Environmental Health and Safety (OEHS) field. It is important to note that these exercises are not meant to be an exhaustive compilation of every type of problem a person may encounter in the OEHS field, nor they are a definitive study guide for the QSE. However, a student who can comfortably work the problems presented in the manual should have little or no problem passing the QSE.

Therefore, all students who are required to sit for the QSE are encouraged to use the manual as a study guide and to be comfortable with the calculation methods and technical concepts included.

The Industrial Hygiene Knowledge Survey (IHKS) is a tool that the Department uses to assess the basic IH knowledge of graduating MS students. It should be taken in conjunction with the QSE. The IHKS consists of questions concerning the non-quantitative aspects of IH. The exam is taken anonymously and no score is used in evaluating the performance of individual students.

The oral comprehensive examination is administered no earlier than the student's last semester of enrollment, and only after the student has been admitted to candidacy. In order to apply for candidacy, the student must have completed or be in the last semester of all coursework required for the degree, and must also have successfully completed the written quantitative skills examination. The oral examination is conducted by a committee of no fewer than three members of the faculty, with the committee chair having his/her primary appointment in the Department of Occupational and Environmental Health. The comprehensive oral examination tests the student's command of technical knowledge relevant to the degree program, as well as his/her ability to integrate and apply that knowledge in problem assessment and resolution situations. The oral comprehensive examination is graded pass/fail based on majority opinion of the examining committee.

The student is allowed no more than two attempts to pass either the written quantitative skills examination or the final oral comprehensive examination. Two failures of the written quantitative skills examination or two failures of the final oral comprehensive examination will result in termination of the examination process and recommendation that the degree not be awarded, regardless of previous academic performance.

#### Field Practice Requirement for the MS in IH/EHS

The purpose of the field practice requirement is for the student to gain practical experience in industrial hygiene and/or environmental health in an actual workplace setting. The field practice experience supports the student outcomes of understanding the impact of occupational/environmental health solutions within an organization, understanding business and managerial practices, and functioning on multi-disciplinary teams.

To meet the field practice requirements, the student must:

1. Work at least 160 hours in the field setting. This work should be primarily focused on specific professional goals agreed upon in advance (preferably in writing) between the student and the preceptor (supervisor). Note: OUHSC policy requires a memorandum of understanding with the field practice site.
2. Obtain a written performance evaluation from the field practice supervisor. Either the HCOPH evaluation form or the company's evaluation form may be used.
3. Submit at least two professional work products created by the student for the field practice site, together with a brief report explaining the context of the work products.

- Work products may include written programs, procedures, methods, reports, memos, PowerPoint presentations, surveys, data summaries, etc.
- Work products may be redacted at the field practice site as deemed necessary to protect privacy and confidentiality, before being released to the student's academic advisor.

Students who enter the program with two years or more of full-time professional experience in occupational or environmental health or safety will be deemed to have satisfied the field practice requirement if they provide the following documentation, which shall be placed in the student's official file:

- A narrative description of their professional work experience in the field.
- A written performance evaluation or letter of support from their employer, dated in the most recent year of employment, which shall be no more than 5 years before the student's planned date of graduation.

Additionally, students who enter the program with less than two years of full-time professional experience, but continue working full-time during the program and attain 2 years or more of full-time experience before completing the program will be deemed to have satisfied the field practice requirement if they provide the above documentation.

#### Master's Thesis Progress Policy

The thesis is intended to be completed in two semesters, with two hours of enrollment in Research for Master's Thesis per semester. In order to complete the thesis in a timely manner, an approved Prospectus must be completed by the end of the first semester of enrollment in thesis hours. Failure to have a Prospectus formally approved by the student's committee prior to the end of the first semester of thesis enrollment will require the award of a grade of Unsatisfactory ("U"). An acceptable draft thesis should be submitted by the end of the second semester of thesis enrollment. Failure to comply with this deadline will result in the award of a "U" grade if the thesis advisor judges the student's progress to be unsatisfactory. Failure to submit an acceptable draft thesis by the end of the third semester of thesis enrollment will require the award of a "U" grade. Upon the awarding of a second "U" grade in Research for Master's Thesis, whether consecutive or not, the thesis process will be terminated due to unsatisfactory progress, the student will be denied further enrollment, and the degree program will be terminated. Students are limited to a total of four semesters (eight credit hours) of enrollment in Research for Master's Thesis. Failure to complete all requirements for the thesis within this period will result in termination of the thesis process for lack of progress, denial of further admission, and termination of the degree program.

Additional information is available through the OEH web page at:

<https://publichealth.ouhsc.edu/AboutUs/Departments/OccupationalEnvironmentalHealth.aspx>.

## **Department of Occupational and Environmental Health Faculty**

**Kathleen A. N. Aithinne**, PhD, Assistant Professor of Research

Education: Ph.D. – University of Oklahoma Health Sciences Center, 2020. M.S. – University of Oklahoma Health Sciences Center, 2017, BS – University of Central Oklahoma, 2014, AA – Rose State College, 2010.

Professional Affiliations: American Industrial Hygiene Association (AIHA), American Conference of Governmental Industrial Hygienists (ACGIH), American Association of Safety Professionals (ASSP), American Biological Safety Association (ABSA), National Environmental Health Association (NEHS)

Certifications: Graduate Safety Practitioner (GSP), Certified in Public Health (CPH)

Current Research Interests: Process improvement of bioaerosol sampling for infectious bacteria and viruses (filters, impactors, impingers); Source reduction (air and environmental) of reservoirs for infectious bacteria and viruses; Occupational and environmental risk assessment

**Changjie Cai**, PhD, Assistant Professor

Education: Ph.D. – University of Iowa, 2018. M.S. – North Carolina State University, 2013. BS – Nanjing University of Information Science & Technology, 2009.

Professional Affiliations: American Industrial Hygiene Association (AIHA), American Association for Aerosol Research (AAAR).

Certifications: N/A

Current Research Interests: Development of devices for exposure assessment (e.g., aerosols, bioaerosols and physical agent hazards); nanoparticles (application and toxicity); machine learning methods to be applied in occupational and environmental health fields; air quality modeling (e.g., weather research and forecasting model coupled with chemistry) to solve public and environmental health issues

**Evan Floyd**, PhD, Assistant Professor

Education: PhD – University of Alabama at Birmingham, 2013. BS – University of Alabama at Birmingham, 2003.

Professional Affiliations: American Industrial Hygiene Association (AIHA), national and local section member; AIHA Indoor Air Quality special interest group – electronic cigarettes; AIHA Sampling and Laboratory Analysis Committee member; AIHA Real Time Detection Committee member; American Society of Safety Engineers, national and local section member; Society for Research of Nicotine and Tobacco; Oklahoma Tobacco Research Center.

Certifications: Certified Industrial Hygienist (CIH)

Current Research Interests: Physical and Chemical characterization of electronic cigarette aerosol and surface deposition. Use and adaptation of novel carbonaceous sorbent materials for improvement of Exposure Assessment. Development of novel desorption technique for in-field estimation of VOC exposures and for introduction to analytical instrumentation. Noise measurement with smartphone apps and type 2 external microphones.

**Jooyeon Hwang**, PhD, Assistant Professor

Education: PhD – University of Minnesota, 2013. MS – University of Minnesota, 2008, MS – Seoul National University, 2003, BS – Konkuk University, 2001.

Professional Affiliations: American Industrial Hygiene Association (member, Exposure Assessment Strategies Committee and Occupational and Environmental Epidemiology Committee), American Conference of Governmental Industrial Hygiene

Certifications: N/A

Current Research Interests: Exposure assessment, Biomarkers, Occupational and Environmental Epidemiology, Statistical model, Health effects, Cancer, Exposure sciences, Air contaminants, Bioaerosols, Industrial hygiene

**Margaret L. Phillips**, PhD, Professor and Chair

Education: MHS – Johns Hopkins University, 1989; PhD – University of Illinois (Urbana), 1987; MS – University of Illinois (Urbana), 1982;

AB – Mt. Holyoke College, 1980

Certifications: Certified Industrial Hygienist (CIH)

Professional Affiliations: American Industrial Hygiene Association; Delta Omega; Phi Beta Kappa; American Chemical Society.

Current Research Interests: Exposure assessment, broadband optical radiation, determinants of occupational and community exposure to air contaminants, respirable silica exposure assessment and silicosis screening and prevention in dusty occupations

Professors Emeritus: **Charles H. Lawrence**, PhD; **Robert Y. Nelson**, PhD; **Daniel T. Boatright**, PhD; **Robert A. Lynch**, PhD, **David L. Johnson**, PhD, PE, CIH,

Adjunct Assistant Professors: **Tommy Klepper**, JD, MPH; **Mehdi Azimi**, PhD; **Cheri Marcham**, PhD, CIH, CSP, **Gregory Day**, PhD.



## **COURSE CATALOGUE**

### **BIOSTATISTICS AND EPIDEMIOLOGY**

#### **BSE 5001 PROBLEMS IN BIOSTATISTICS AND EPIDEMIOLOGY**

Prerequisites: Concurrent or previous enrollment in BSE 5113 and 5163. Applied problem solving in biostatistics and epidemiology.

#### **BSE 5013 APPLICATION OF MICROCOMPUTERS TO DATA ANALYSIS**

Prerequisites: BSE 5163 or permission of the instructor. Introduction to the use of data management and processing equipment and 1 package (SAS) readily available on this campus. Storage, manipulation, and retrieval of data and statistical summaries are emphasized.

#### **BSE 5023 COMPUTER APPLICATIONS IN PUBLIC HEALTH**

Prerequisites: BSE 5163 or Permission of Instructor. Application of currently available hardware and software to common problems encountered in Public Health practice.

#### **BSE 5033 FOUNDATIONS AND OVERVIEW OF PUBLIC HEALTH**

Prerequisites: None. This course will provide an overview of public health for students in MS or doctoral programs, who have not completed the MPH core courses prior to enrollment in their graduate program.

#### **BSE 5111 SCIENTIFIC INTEGRITY IN RESEARCH**

Prerequisites: None. This course is designed to provide training to M.S. and Ph.D. students in Biostatistics and Epidemiology in the responsible conduct of research, scientific integrity, and the protection of human research subjects. The class will cover issues related to: 1) acquisition, management, sharing, and ownership of data; 2) conflict of interest and commitment; 3) human subjects' protection; 4) research misconduct; 5) publication practices and responsible authorship; 6) peer review; and 7) collaborative science. The course is to be completed prior to initiation of thesis or dissertation research.

#### **BSE 5113 PRINCIPLES OF EPIDEMIOLOGY**

Prerequisites: None. This course provides an introduction to epidemiology for students majoring in any aspects of public health. The principles and methods of epidemiology investigation, both of infectious and non-infectious diseases are discussed.

#### **BSE 5153 CLINICAL TRIALS**

Prerequisites: Basic Statistics and Epidemiology or permission of instructor. Principles for the design and conduct of clinical trials are discussed. Emphasis will be given to protocol preparation, randomization, sample size, trial monitoring, ethical issues and data analysis.

### BSE 5163 BIOSTATISTICS METHODS I

Prerequisites: College algebra and ability to use computer spreadsheet or instructor permission. Fundamental concepts and applications of statistics. This course and BSE 5173 serve as an introduction to all higher level courses in statistics. This course makes use of the JMP statistical package.

### BSE 5173 BIOSTATISTICS METHODS II

Prerequisites: BSE 5163 and BSE 5013. More complex forms of the analysis of variance are presented. The fundamental aspects of experimental design as well as covariance, multiple regression, curvilinear regression, and the binomial and poisson distribution are discussed.

### BSE 5193 INTERMEDIATE EPIDEMIOLOGIC METHODS

Prerequisites: BSE 5113 or equivalent. Methodological issues important to the design of epidemiologic studies of both infectious and non-infectious disease. Topics include formulation of a research question, types of studies, sample size, sampling methods, biases and confounding, data collection instruments and the presentation and interpretation of data.

### BSE 5253 INTRODUCTION TO OCCUPATIONAL & ENVIRONMENTAL EPIDEMIOLOGY

Prerequisites: BSE 5113 and BSE 5163 or equivalent. Methodologic issues and approaches used in occupational and environmental risk assessment studies will be presented. These include study design, assessment of exposures, ascertainment of outcomes, methods of analysis and sources of data. Examples of classic occupational and environmental studies will be presented and implications for health policy will be discussed.

### BSE 5283 GIS IN HEALTH

Prerequisites: BSE 5163, BSE 5113, and permission of instructor. The goal of this course is to familiarize students with applications of Geographic Information Systems (GIS) in Public Health. Topics include a basic understanding of using geodatabases, geocoding, producing effective disease maps, visualization, classification, and accuracy assessment. Students will be able to produce effective infectious disease and cancer cluster maps.

### BSE 5303 EPIDEMIOLOGY OF INFECTIOUS DISEASE

Prerequisites: BSE 5113. Intended for epidemiology majors. Lectures and laboratory sessions devoted to the study of factors common to all infectious diseases as well as studies of specific disease.

### BSE 5333 INTRODUCTION TO EMERGING INFECTIONS AND BIOTERRORISM

Prerequisites: BSE 5113 Principles of Epidemiology. The course will introduce students to a wide variety of topics relating to emerging infections and bioterrorism. The course will first provide an overview of emerging diseases and the factors associated with their appearance. Second, the course will examine bioterrorism, its agents, history, potential impact and discuss public health preparedness.

#### BSE 5343 METHODS IN INFECTIOUS DISEASE EPIDEMIOLOGY

Prerequisites: BSE 5113; BSE 5303; or authorization from the instructor. This course aims at covering methods applicable to the design and conduct of epidemiological studies specific to infectious diseases.

#### BSE 5363 EPIDEMIOLOGY AND PREVENTION OF CHRONIC DISEASES

Prerequisites: BSE 5113; BSE 5163; BSE 5193 or BSE 5001. This course is a survey of chronic diseases and the epidemiologic methods used to study them. Students are expected to read and report on the literature and to use descriptive statistics on survey data of chronic disease risk factors.

#### BSE 5403 SOCIAL EPIDEMIOLOGY

Prerequisites: BSE 5113 Principles of Epidemiology; BSE 5163 Biostatistics Methods I or permission of instructor. The purpose of this course is to provide students with both the information and experience to identify social determinants of health outcomes in populations. Students will develop an understanding of the general concepts of social epidemiology and develop their own critical assessment of how social factors impact health outcomes and the development of disease. Students will participate in class discussions, read relevant material, and conduct and report on a community assessment project.

#### BSE 5603 SAMPLING THEORY AND METHODS

Prerequisites: BSE 5163 and permission of Instructor. To introduce various commonly used sampling methods including when and how to apply them, advantages and disadvantages, how to determine sample size, and the design of forms and questionnaires for data collection.

#### BSE 5633 PUBLIC HEALTH STRATEGIES FOR TOBACCO CONTROL

Prerequisites: BSE 5113, 5163, HAP 5453, HPS 5213, OEH 5013 or permission of the instructor. Multi-Level course: BSE 5633. This course provides an overview of the history, health effects, politics and prevention of tobacco use, examining the issue from all perspectives: epidemiological, psychosocial, political, economic and environmental. Students will explore the multidimensional aspects of tobacco use and the research and methodology contributing to best practices in tobacco control.

#### BSE 5643 REGRESSION ANALYSIS

Prerequisites: BSE 5163 and 5013. Multiple linear regression analysis, including polynomial regression, indicator variables, and covariance analysis are covered. Also covered are: tests of hypotheses and interval estimates, model selection and validation, methods for measurement errors; diagnostic methods for outliers, influence, and multicollinearity; nonlinear regression, logistic regression with non-normal distributions; and time-series analysis and forecasting. Applications are drawn from public health.

#### BSE 5653 NONPARAMETRIC METHODS

Prerequisites: BSE 5013, BSE 5163 one of the following: BSE 5173 or BSE 5643 or BSE 5663. Modern techniques of nonparametric analysis applied to single and multiple samples, including

approaches based on signed- and ranked-transformed data and on permutation tests. Discussion of exact results and large sample approximations. Nonparametric analysis of categorical data summarized in contingency tables. Nonparametric bootstrapping. Introduction to robust regression. Analysis of qualitative data as it applies to experimental design in biology and medicine. Discussion of the binomial and chi square tests as well as rank based and distribution free methods to the k-sample case and nonparametric measures of correlation and association. Analysis of variance of ranked data is included.

#### BSE 5663 ANALYSIS OF FREQUENCY DATA

Prerequisites: BSE 5163 and 5013. Test and measures of association for contingency table analysis, partitioning chi-square, the odds ratio; comparative trials; analysis of categorical data with matched samples; combining evidence from contingency tables; effects and controls of misclassification errors; and multiway contingency tables are covered in this course.

#### BSE 5703 PRINCIPLES OF THE THEORY OF PROBABILITY

Prerequisites: Permission of Instructor. Introduction to the principles to the theory of probability. Primarily for the student who plans to major in the field of statistics.

#### BSE 5733 PRINCIPLES OF MATHEMATICAL STATISTICS I

Prerequisites: BSE 5703 and Differential and Integral Calculus. An introduction to mathematical statistics and the theory of statistical inference. The theory of distributions including sampling distributions, multivariate distributions and approximations to distributions.

#### BSE 5743 PRINCIPLES OF MATHEMATICAL STATISTICS II

Prerequisites: BSE 5733. Law of large numbers, estimation of parameters, central limit theorem, confidence intervals and tests of hypotheses. Regression, sampling from a normal population, experimental design, analysis of variance, and distribution free methods.

#### BSE 5763 APPLIED BAYESIAN STATISTICS

Prerequisites: BSE 5163 Biostatistics Methods I and at least one of the following: BSE 5173 Biostatistics Methods II or BSE 5643 Regression Analysis or BSE 5663 Analysis of Frequency Data or BSE 6563 Longitudinal Data Analysis.

#### BSE 5803 EPIDEMIOLOGY AND PREVENTION OF DIABETES

Prerequisites: BSE 5113, BSE 5163, and BSE 5363; or permission of instructor. Students gain knowledge of diabetes through application of epidemiologic principles and methods. Topics to be covered include types of diabetes and diagnostic and classification criteria, prevalence, incidence and costs of diabetes in the U.S. and other countries, risk factors, diabetic complications, and prevention strategies for diabetes and its complications.

#### BSE 5960 DIRECTED READINGS IN BIOSTATISTICS AND EPIDEMIOLOGY

Prerequisites: Permission. May be repeated; maximum credit six hours. Offers the student the opportunity to explore with faculty guidance, areas of interest in biostatistics or epidemiology not specifically incorporated in formal courses.

#### BSE 5980 RESEARCH FOR MASTER'S THESIS

Prerequisites: Permission. Credit hours vary.

#### BSE 5990 SPECIAL STUDIES

Prerequisites: Permission of Instructor. Topics of a special nature or of unusual interest to students. Deals with a specific topic, area or problem, which is not adequately covered in the current curriculum, as judged by the training needs of the students.

#### BSE 6151 APPLIED STATISTICAL METHODS FOR CLINICAL TRIALS

Prerequisites: BSE 5163 Biostatistical Methods I, BSE 5153 (or concurrent enrollment), BSE 5013 Applications of Microcomputers to Data Analysis. This course is designed to introduce the student to practical applications of statistical methods in clinical trials.

#### BSE 6192 GRANT WRITING SKILLS IN EPIDEMIOLOGY

Prerequisites: BSE 5303, BSE 5363, BSE 5193. Problems encountered in the design and execution of epidemiologic field studies in human populations. Students will be required to design a field study for a specific disease and prepare a scientific protocol and emphasis will be placed on grantsmanship.

#### BSE 6193 METHODS IN CLINICAL EPIDEMIOLOGY

Prerequisites: BSE 5013, BSE 5163, BSE 5113, BSE 5193 and at least one of the following: BSE 5663, BSE 5643, BSE 5173 or BSE 6643. This course focuses on quantitative methods used in the design and conduct of clinical epidemiologic studies. Emphasis will be placed on differentiating among diagnostic, prognostic and etiologic/intervention research, selecting analytical methods, identification and avoidance of common biases, and critical evaluation of existing literature.

#### BSE 6194 ADVANCED EPIDEMIOLOGIC METHODS

Prerequisites: Principles of Epidemiology and Introductory course in Biostatistics. This course will cover, in depth, the design of epidemiologic studies, practical and theoretical considerations, biases, confounding and misclassification, concept of cause and causal models. Examples from the literature will be evaluated and methods of analysis presented.

#### BSE 6233 REPRODUCTIVE AND PERINATAL EPIDEMIOLOGY

Prerequisites: BSE 5113 Principles of Epidemiology & BSE 5163 Biostatistics Methods I. This course provides an overview of the epidemiology of major reproductive and prenatal health endpoints including infertility, fetal loss, birth weight, congenital malformations and infant mortality. Current knowledge of the determinants of these outcomes is introduced with emphasis on methodologic considerations specific to the study of reproductive and prenatal health.

#### BSE 6323 MOLECULAR AND GENETIC EPIDEMIOLOGY

A description of the use of human genetics and molecular biology in studying host susceptibility to disease. Includes a background review of Mendelian genetics and single gene defects as well

as methodologies currently being used in the laboratory and their application to epidemiologic studies of multifactorial disease.

#### BSE 6353 EPIDEMIOLOGY OF CARDIOVASCULAR DISEASE

Prerequisites: BSE 5113, BSE 5363 or Permission. The course includes a detailed review of the epidemiology of the major cardiovascular diseases including natural history, prevention, and treatment. Major cardiovascular studies are reviewed.

#### BSE 6363 CANCER EPIDEMIOLOGY AND PREVENTION

Prerequisite: BSE 5363 and BSE 6323. A detailed review of epidemiologic aspects and prevention strategies for the major cancer sites is presented. Emphasis is placed on the causes, prevention, early detection, and control of cancer.

#### BSE 6553 LINEAR MODELS I

Prerequisites: BSE 5563, BSE 5743. The theoretical development of analytic methods for the analysis of data conforming to linear models with a review of basic mathematical statistics, an introduction to linear models and their classifications, the general linear model of full rank, curvilinear models and model of functional relationships.

#### BSE 6563 LONGITUDINAL DATA ANALYSIS

Prerequisites: BSE 5163 Biostat. Methods I; BSE 5013 Microcomputer Applic. Data Analysis; BSE 5173 Biostatistics Methods II. The course focuses on data that are correlated in time, space, or through an inherent hierarchical structure. Applications for continuous outcomes include repeated measures, mixed, random coefficient, and hierarchical models. Applications for categorical outcomes include general estimating equations and generalized linear mixed models.

#### BSE 6643 SURVIVAL DATA ANALYSIS

Prerequisites: BSE 5163 and BSE 5013 and either BSE 5663 or BSE 5653 or by permission of the instructor. Discussion of statistical methods for the analysis of clinical and laboratory data related to survival. Special attention is given to data from experimental animals and human patients with acute diseases, for example, cancer.

#### BSE 6663 ANALYSIS OF MULTIVARIATE DATA

Prerequisites: BSE 5173, BSE 5663 or Permission of Instructor. The development and application of the statistical techniques which are currently used for description, estimation, and hypothesis testing of multivariate data collected in medical or health related studies. Use of computer programs which perform these techniques and of programs which can be combined to perform these techniques will be emphasized.

#### BSE 6950 RESEARCH IN BIostatISTICS AND EPIDEMIOLOGY

Prerequisites: Permission. Open only to advanced students to engage in supervised research into Biostatistics or Epidemiology.

### BSE 6960 DIRECTED READINGS

Prerequisites: None. Intensive directed readings in a specific area of interest.

### BSE 6980 RESEARCH FOR DOCTORAL DISSERTATION

Prerequisites: Permission. Credit hours vary.

### BSE 7103 INTRODUCTION TO BIOSTATISTICS

Prerequisites: Ability to use a computer. Either earn a grade of B or better in college algebra or a more advanced mathematics course (course must have been taken no more than six years prior to admission, or score at or above the 50th percentile on the quantitative portion of either the GMAT or the GRE, or score 500 or better on the mathematics specialized exam of the GRE. A broad introduction to the concepts underlying biostatistical methods.

## COLLEGE OF PUBLIC HEALTH

### CPH 7003 INTEGRATED PUBLIC HEALTH PRACTICE AND PREPAREDNESS

Prerequisites: BSE 5113, BSE 5163, HPS 5213, OEH 5013, HAP 5453 (3 of 5). Integrated Public Health Practice and Preparedness (CPH-7003) is part of the Culminating Experience for all Master of Public Health students. The course requires the student to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply theory and principles in a situation that approximates aspects of professional practice. This course includes applied practice projects that allow the student to demonstrate discipline specific core competencies and the core interdisciplinary/cross-cutting competencies.

### CPH 7013 FUNDAMENTALS OF TERRORISM

Prerequisites: BSE 5163 Biostatistics Methods I recommended. This course provides a systematic overview of terrorism for students majoring in Public Health. Didactic elements and exercises will be used to examine: What is terrorism? What are the organizational attributes of terrorist groups? What factors motivate terrorist groups and individuals? What are the tactics and targets of terrorism? Emphasis will be placed on understanding the historical evolution, organization, motivation, and tactics of terrorists at the group and individual levels. Note: Although not a formal requirement, students are expected to have sufficient prior grounding and competency in statistics (minimum completed BSE 5163, Methods I) necessary to conduct quantitative analyses. This background is essential in order to complete the course's evaluative assignments which all involve data analysis and interpretation.

### CPH 7113 ADVANCED TOPICS IN ALL HAZARDS PREPAREDNESS

Prerequisites: Accepted to MPH program in Public Health Preparedness or permission of instructor. This course is an overview of the current issues facing public health professionals tasked with preparing for and responding to technological and natural disasters. The course will provide foundation information on all hazards preparedness.

### CPH 7223 POLICY AND LEGAL ASPECTS OF TERRORISM

A three credit-hour course that would teach Master's level students in bioterrorism about the law as a public health tool. This course will provide students with an understanding of current laws relevant to public health preparedness, an appreciation of emerging areas of law, as well as past, present, and future conditions that will raise legal issues, require legal solutions, and impede or facilitate the success of public health legal interventions.

### CPH 7323 CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR & EXPLOSIVES TERRORISM

Prerequisites: None. This course provides a systematic overview of chemical, biological, radiological nuclear, and explosives terrorism. Didactic elements and exercises used to examine weapons of mass destruction and weapons of mass effect. Emphasis is placed on understanding the basic principles of explosive devices, chemical warfare agents and toxic industrial chemicals, biological agents, radiological dispersion devices, nuclear devices.

### CPH 7433 PSYCHOLOGICAL ASPECTS OF PUBLIC HEALTH PREPAREDNESS

Prerequisites: None. This course addresses the public health role in preparedness for the psychological aspects of terrorism and disaster; no prior psychological study required.

### CPH 7633 PUBLIC HEALTH STRATEGIES FOR TOBACCO CONTROL

Prerequisites: BSE 5113, 5163, HAP 5453, HPS 5213, OEH 5013 or permission of the instructor. Multi-Level course: BSE 5633. This course provides an overview of the history, health effects, politics and prevention of tobacco use, examining the issue from all perspectives: epidemiological, psychosocial, political, economic and environmental. Students will explore the multidimensional aspects of tobacco use and the research and methodology contributing to best practices in tobacco control.

### CPH 7733 INTRODUCTION TO GLOBAL HEALTH

Prerequisites: Permission of instructor required for enrollment. This course provides a systematic introduction to global health, emphasizing an interdisciplinary approach to understanding current and emerging transnational health issues, major governmental and non-governmental actors that address key problem areas, and factors that influence the success and failure of interventions.

### CPH 7941 PRACTICUM PREPARATION SEMINAR

Prerequisites: good standing in the MPH program and a minimum of 36 hours to be completed by the end of enrollment in CPH 7941. This course is a prerequisite for enrollment in CPH 7950 Public Health Practicum. The student will identify and secure a practicum host site and preceptor; complete the necessary prerequisites specific to the student's practicum experience; complete the Application for Practicum; and complete the Practicum Agreement.

### CPH 7950 PUBLIC HEALTH PRACTICUM

Prerequisite: CPH 7941. This course provides a planned, supervised and evaluated public health practicum experience that approximates some aspects of professional practice that



applies classroom knowledge and skills to achieve practice goals and objectives. A maximum of 1 hour can be applied toward the MPH degree.

#### CPH 7990 SPECIAL STUDIES

Prerequisites: Permission of Instructor. The course offers the student the opportunity to explore topics of a special nature or areas of interest in public health.

### HEALTH ADMINISTRATION AND POLICY

#### HAP 5183 ORGANIZATIONAL THEORY AND BEHAVIOR

Organization design, theories of management, the social psychology of organizations.

#### HAP 5203 HEALTH ECONOMICS

Prerequisites: None This course applies economic principles, the evaluation of health care markets. Topics include the production of health care markets. Topics include the production of health, supply and demand of medical care, and market structures. How the healthcare system is influenced by technology, different sectors of the workforce, government, pharmaceutical and health insurance industries will also be discussed.

#### HAP 5213 ADVANCED HEALTH ECONOMICS

Open to advanced students for study of specialized areas in health economics. Student will conduct an in-depth study of a special area of economic analysis of health issues.

#### HAP 5303 HEALTH POLICY AND POLITICS

How health policy in the U. S. is initiated, formulated and implemented. A comparative, cross-national and cross-state perspective is employed to analyze political culture, interest group and party behavior, the legislative and executive processes, and the dynamics of federalism.

#### HAP 5323 OPERATIONS RESEARCH

A review of the queuing theory, linear and goal programming, networks, (pert, cpm, dynamic programming) simulation.

#### HAP 5353 PUBLIC HEALTH LAW

Introduction to the legal system and its potential for advancing public health policy implementation. Judicial decisions are analyzed to reveal the major legal issues confronting public health professionals. Topics include federal public health activity, state public health powers, patients' rights and other topics relevant to delivering health care to large populations.

#### HAP 5453 U. S. HEALTH CARE SYSTEMS

This course focuses on the history and structure of health organizations in the U. S. Also examined are the functional interrelations among institutional and financial arrangements in the health industry. The course concludes with a comparison of international health systems.

#### HAP 5483 HEALTH CARE LAW AND ETHICS

An overview course focusing on the impact of laws and regulations on the processes involved in delivering health care services and the ethical issues raised. Topics covered include civil liability in the provider-patient relationship; treating consent and refusal, licensing and medical staff, antitrust, and managed care issues.

#### HAP 5543 MARKETING OF HEALTH SERVICES

Specific topics include analysis of the market, the development and administration of a marketing program, and methods of evaluating marketing strategies.

#### HAP 5563 HUMAN RESOURCES MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS

Basic concepts and theories of human resources management and their application in the health care organization. Included are current human resources management theories and techniques and their impact on the health care organization's personnel management practices.

#### HAP 5613 FINANCIAL MANAGEMENT OF HEALTH SERVICE ORGANIZATION

The course focuses on indicators of fiscal performance that are common to all health service organizations. Emphasized are the fundamentals of managing working capital, sources of funding and capital rationing. The course concludes with discussion of advanced methods of improving profitability.

#### HAP 5623 HEALTH FORECASTING AND BUDGETING

This course examines methods of developing forecasts and the budgets for the programmatic activity of health organizations that function in the public or private section.

#### HAP 5633 FINANCING HEALTH CARE IN THE U.S.

Prerequisites: HAP 5453 or permission of the instructor. This course examines the history, development and current theories of financing health care in the United States. The course considers financial management issues and the related strategic questions facing healthcare organizations. The course also reviews the effect these financial issues have had on community health status and the sources of revenue derived from health services operations.

#### HAP 5643 QUANTITATIVE METHODS IN HEALTH ADMINISTRATION

Prerequisites: Permission of Instructor. The focus of the course is on the application of statistical analyses to administrative functions, issues or problems that are germane to health service organizations. Excel and other statistical packages are used to perform required calculations.

#### HAP 5673 ADVANCED HEALTH CARE FINANCIAL MANAGEMENT

This course emphasizes advanced methods and computer applications that improve financial decisions and fiscal performance. The focus is on liquidity, profitability, debt structure and capital decision.

#### HAP 5713 FORECASTING METHODS IN HEALTH ADMINISTRATION

The course examines the use of management information and various approaches to the development of forecasts. Based on projections. The course also focuses on methods of managing the risks imposed on health organizations.

#### HAP 5733 MANAGED CARE AND INTEGRATED SYSTEMS

Course focuses on the structures and processes that characterize managed care organizations and integrated health systems. Contractual obligations and relations among health professionals are also discussed.

#### HAP 5766 HEALTHCARE QUALITY PRACTICE

Prerequisites: BSE 5163 and HAP 5453. To provide the participants with enhanced skills to initiate, develop and sustain health care change. The program provides the participants with advanced skills in organizational development, team building, problem solving techniques and process improvement.

#### HAP 5843 PUBLIC HEALTH PRACTICE

The purpose of this course is to integrate the principles of Health Administration, Biostatistics, Epidemiology, Health Promotion Sciences and Environmental Health as components that contribute to public health practice.

#### HAP 5863 STRATEGIC MANAGEMENT IN HEALTH SERVICES ORGANIZATION

Emphasized elements of organizational strategy with a focus on leadership, application of general themes to health industry, components of strategic plan and the development, implementation and evaluation of plans in relation to organizational environments.

#### HAP 5873 HEALTH INFORMATION SYSTEMS

Covers the methods, techniques and technologies used to collect, analyze, and disseminate information needed to effectively manage health service organizations. Includes, but is not limited to, the use of computers in managing organizations.

#### HAP 5883 HEALTH CARE QUALITY MANAGEMENT

Prerequisites: HAP 5453, HAP 5183, BSE 5113 and BSE 5103. An introduction to the process of quality improvement in health care organizations. Different criteria and guidelines for implementing total quality improvement process will be discussed. Differentiation will be attempted between components of quality assurance and quality management.

#### HAP 5950 FIELD WORK IN HEALTH ADMINISTRATION

Supervised experience in field work appropriate to training and career goals.

#### HAP 5960 DIRECTED READING

Offers the student the opportunity to explore, with faculty guidance, areas of interest in health not specifically incorporated in formal courses.

#### HAP 5973 SEMINAR IN HEALTH ADMINISTRATION

Prerequisites: All required courses in the MHA program. This course serves as the capstone for the MHA program. The course ensures that students possess the knowledge, skills and ability required of all senior administrators. The course also ensures that students are able to comprehend, integrate, and apply previous training to problems or issues that occur in a health service organization.

#### HAP 5990 RESEARCH IN HEALTH ADMINISTRATION

Supervised research into the organization and administration of medical care and Public Health programs.

#### HAP 6123 SEMINAR ON INDUSTRY AND HEALTH

Reviews the strategies, methods, and techniques industry is using to control health care expenditures. Includes analysis of trends; interrelationships with industry and third party payors, managed care systems, and government; employee benefit packages, self insurance; employer health promotion, employee assistance programs and utilization control.

#### HAP 6453 COMPARATIVE INTERNATIONAL HEALTH SYSTEMS

A comparative analysis of the evolution, administrative structure, finance and provision of medical care in selected countries throughout the world.

#### HAP 6773 QUANTITATIVE ISSUES IN HEALTHCARE QUALITY

Prerequisites: BSE 5163 Biostatistics Methods I, HAP 5453 U. S. Healthcare Systems, HAP 5883 Health Care Quality Mgt. This course studies quantitative analysis and tools in Health Care Quality and Quality Improvement. Several display and analyses quality tools will be discussed. SPSS software will be used to apply statistical methods on the analyses and reporting of databases for health care quality studies and improvement projects in healthcare organizations.

#### HAP 6783 ADVANCED PUBLIC ORGANIZATIONS AND DECISION-MAKING

Prerequisites: HAP 5183 Organizational Theory and Behavior. The course is the study of current theories of public organizations, management, and decision-making. The readings include both seminal and more contemporary work on the theories as well as their application to health and public sector organizations.

#### HAP 6883 HEALTH INSURANCE AND FINANCE

Prerequisites: HAP 5203 Health Economics or instructor permission. The course covers the economics of health insurance, its role in healthcare markets and its effects on healthcare financing and costs. The course examines both the efficiency benefits insurance provides and the efficiency losses insurance creates in health care markets and market failures. The course discusses basic insurance terminology, public private, employment-based health insurance plans and options.

#### HAP 6893 HEALTHCARE RISK MANAGEMENT

Prerequisites: BSE 5163 Biostatistics Methods; HAP 5453 U. S. Health Care Systems; HAP 5883 Health Care Quality Mgt..Healthcare risks and how to implement strategies that can mitigate risks are discussed. It provides students with information on the functionality of risk management systems. It will reinforce the skills needed for risk assessment data management, configure facility management risks, perform risk analysis and create risk models in health care organizations.

#### HAP 6940 REPRESENTATIVE STUDIES IN HEALTH ADMINISTRATION

Topics vary.

#### HAP 6953 ADVANCED HEALTHCARE QUALITY

Prerequisites: HAP 5883 Healthcare Quality Management. This course identifies current topics in healthcare quality from the different perspective of the provider, consumer and regulator. Participants will critique activities and mechanisms related to understand quality issues. The course will focus on practical application of quality in healthcare facilities, including process of documentation, performance monitoring, and outcome improvements.

#### HAP 6960 DIRECTED READING

Participation in subject and field investigation under the supervision of the faculty.

#### HAP 6972 SEMINAR FOR DOCTORAL STUDENTS

A forum for depth exploration, articulation, and discussion of current health care issues and trends, as well as their administrative implications. Doctoral students will lead, respond, discuss, and summarize issues.

#### HAP 6980 RESEARCH FOR DOCTORAL DISSERTATION

Research for Doctoral dissertation.

#### HAP 6983 ADVANCED HEALTH CARE ORGANIZATIONS AND ENVIRONMENT

Prerequisites: HAP 5183 Organizational Theory and Behavior. This course is the study of current theories of complex organizations. Beginning with a comparison between closed and open systems of organizing, organizations are examined in the context of their environment. Special emphasis will be given to the internal and external environments as they relate to organizational innovation and change.

#### HAP 7103 MANAGERIAL EPIDEMIOLOGY

Prerequisites: None The focus of the course is on the role and use of epidemiologic tools in the field of health care administration. Epidemiologic techniques are applied to specific areas of health administration including management, planning, quality, assurance, marketing, directing, organizing, staffing, and community relations in the market of the healthcare organization.

### HAP 7403 EXPERIENCING PUBLIC HEALTH LAW

Prerequisites: HCOPH students: completion of HCOPH MPH Core Courses (BSE 5163, BSE 5113, HPS 5213, OEH 5013, HAP 5453) or permission of the instructor. Law students: Completion of all first-year courses This course will focus on providing law and public health students a real-life experience with public health law. Effective health officials, executives, and attorneys are familiar with the principles of public health law as well as the application of the law to the public health field as they protect, promote, and act to affect the health of the public. As future professionals, this course introduces the application of constitutional law, federal and state statutes, administrative and regulatory law, and case law to public health problems, issues and policy.

### HAP 7913 PROFESSIONAL COMMUNICATION SKILLS

The Professional Communication Skills course seeks to instruct public health and health administration students on appropriate writing and oral presentation skills. It teaches those skills through intensive feedback, discussion, and projects built to simulate health care delivery situations.

## HEALTH PROMOTION SCIENCES

### HPS 5211 QUALITATIVE METHODS IN PUBLIC HEALTH

In this course, students will be introduced to the logic of qualitative research methods; will analyze several qualitative case studies; and will practice conducting a qualitative project from design through data acquisition and analysis through dissemination.

### HPS 5213 SOCIAL AND BEHAVIORAL SCIENCES IN PUBLIC HEALTH

Introduction to basic concepts of social and behavioral sciences in public health theory and practice. Social factors influencing health outcomes, theories of health behavior and health promotion at the community level are emphasized.

### HPS 5383 HEALTH AND ILLNESS IN OLD AGE

This course reviews the relationship between aging and health status and the factors which affect health services utilization by older people.

### HPS 5453 THEORETICAL CONCEPTS OF HEALTH PROMOTION

Prerequisites: HPS 5503 or permission. Introduction of theories of health behavior and behavior change at individual, group and social levels. Emphasis is on the examination of major theoretical concepts, discussion of similarities and differences and their application.

### HPS 5463 COMMUNITY ASSESSMENT, ORGANIZATION AND INTERVENTIONS

Prerequisites: HPS 5503. The course addresses knowledge and skills for facilitating community organization and empowerment for health promotion. Topics addressed include defining community and an ecological approach to community development; assessing community

needs and assets; building upon community capacities; and gaining trust and entry into communities.

#### HPS 5493 HEALTH PROMOTION INTERVENTIONS FOR CHRONIC DISEASE

Course emphasizes individual, interpersonal, organizational, community, public policy, and cultural interventions to reduce the society burden from chronic diseases.

#### HPS 5503 INTRODUCTION TO HEALTH EDUCATION & HEALTH PROMOTION

An overview of the historical, behavioral sciences, epidemiological, and conceptual foundations of health education and health promotions. Stresses stages of program development, models of practice, and professional issues.

#### HPS 5543 PROGRAM EVALUATION

Prerequisites: HPS 5213; HPS 5563. The purpose of the course is to introduce key concepts used in program evaluation and to provide the student with the conceptual tools needed to participate meaningfully in program evaluation activities. The course integrates many previous courses, including biostatistics, research methods, and theory. The stress is on practical evaluations that can be conducted in applied settings.

#### HPS 5553 COMMUNITY-BASED PARTICIPATORY RESEARCH IN PUBLIC HEALTH

Prerequisites: HPS 5503, HPS 5213 and HPS 5463. Community-based Participatory Research (CBPR) is defined as systematic inquiry, with the collaboration of those affected by the issue being studied, for the purposes of education and action for social change. This course will examine CBPR theory, methodology and practice with diverse populations and health issues.

#### HPS 5563 PROGRAM PLANNING FOR HEALTH PROMOTION

Covers basic components of the program planning process in health education, including problem analysis, needs assessment, intervention design, implementation and process evaluation.

#### HPS 5633 THE FAMILY AND HEALTH

Study of the internal and external factors (social, cultural, physical, economic and psychological) affecting the family and the relationship of changing family form and function to other major institutions related to public health.

#### HPS 5673 LIFESTYLE MEDICINE IN PUBLIC HEALTH

Prerequisites: HPS 5213 or Instructor permission. This course provides graduate-level students with a foundational understanding of lifestyle medicine and its applications for individual, family, and population health, including health promotion, disease prevention and prescriptions for disease management.

#### HPS 5693 PHYSICAL ACTIVITY AND PUBLIC HEALTH

This course will draw from public health, medicine, behavioral sciences, exercise physiology, and epidemiology to examine physical inactivity as a public health problem. The course will

provide students with skills and knowledge to plan, implement, and evaluate physical activity programs.

#### HPS 5713 ADOLESCENT HEALTH

This course will focus on methods for the assessment of health issues and public health interventions for adolescents. Psychosocial, psychodynamic, sociocultural and ecological perspectives on adolescents will be examined. Influences of biological factors, cognition and creativity, peers, sexual development, and adolescent subculture will also be studied. A variety of early intervention and treatments will be explored.

#### HPS 5803 CROSS-CULTURAL PERSPECTIVES IN HEALTH

Emphasis is on the attitudes, customs, traditions, perceptions and beliefs held by some ethnic minority groups and the impact these attitudes have upon the abilities of public health workers to interact with these individuals.

#### HPS 5853 HEALTH AND THE AMERICAN INDIAN

Health needs, beliefs, and practices of American Indian groups will be explored as they relate culturally. Content areas include: American Indian health needs, problems and resources history; problems of reservation and urban Indians; Alaskan Natives; and the interrelationship of health, property ownership, and social organization.

#### HPS 5953 RESEARCH METHODS IN SOCIAL AND BEHAVIORAL SCIENCES

Research design, measurement, methods of data collection, analysis and interpretation of results and application in the behavioral sciences.

#### HPS 5960 DIRECTED READING

Intensive reading in special areas with staff.

#### HPS 5980 RESEARCH FOR MASTER'S THESIS

Research for Master's Thesis. Credit hours vary.

#### HPS 5990 SPECIAL STUDIES

Topics of a special nature or of unusual interest to the individual student which are not adequately covered in curriculum.

#### HPS 6230 DOCTORAL SEMINAR IN CONTEMPORARY SOCIAL & BEHAVIORAL ISSUES

Topics change with each offering, and include contemporary issues in public health, health education and health promotion.

#### HPS 6453 FOCUS GROUP RESEARCH

Prerequisites: HPS 6933. A valuable qualitative research methods used in health promotion. For those students who intend to conduct focus group research during their careers must possess a thorough understanding of the concepts involved. Includes discussion on appropriate use of



research, planning phase, implementation phase, data analysis, collaboration and budget, and reporting results.

#### HPS 6633 HEALTH PROMOTION THEORY I: INDIVIDUALS AND SMALL GROUPS

Prerequisites: Admission to doctoral program or completed HPS 5453 and departmental approval. Introduces students to advanced theory regarding strategies and concepts of health behavior, health behavior changes and health outcomes of individuals and small groups. A comprehensive understanding of the theoretical foundations of health promotion sciences and the capacity to evaluate and utilize theory in the development of health promotion strategies and interventions is stressed. Addresses history and the scientific foundations of health promotions.

#### HPS 6643 HEALTH PROMOTION THEORY II: GROUPS, ORGANIZATIONS, COMMUNITY, AND POLICY

Prerequisites: Admission to doctoral program or completed HPS 5453 and departmental approval. Introduce students to the major theories of health behavior and behavior change at group, organizational, community, and policy levels. Emphasis is on the examination of major theoretical concepts, discussion of similarities and differences, and their application.

#### HPS 6833 SOCIAL MARKETING

Prerequisites: HPS 5503 or HPS 5453. The purpose of this course is to introduce students to the technique of social marketing. Students will identify an issue they wish to address through a social marketing effort and work through the social marketing planning process.

#### HPS 6853 MEASUREMENT IN HEALTH EDUCATION

Explores the evaluation methodologies for specific application in health education programs. Uses health education and evaluation models in contrast to the biomedical models. Laboratory utilizes computers to solve simulation problems and perform measurement functions.

#### HPS 6923 SOCIAL DETERMINANTS OF HEALTH

Admission to doctoral program or instructor permission. The purpose of this course is to provide a thorough background to the ecological model of health that fully acknowledges the complexity of the social determinants of health and how interventions at each level of the ecological model can be designed and implemented to improve population health.

#### HPS 6933 QUALITATIVE RESEARCH METHODS IN PUBLIC HEALTH

Prerequisites: Admission to the doctoral program or permission of the instructor. This course will identify the intellectual foundations of qualitative research in the context of multiple research methods. Rationales for most appropriate use of qualitative techniques will be delineated. Qualitative research design construction will be specified. The use of a coding scheme as a simultaneous research technique and analytic device is emphasized.

#### HPS 6943 ADVANCED PROGRAM EVALUATION

Prerequisites: Admission to doctoral program or completed HPS 5543 and Departmental approval. This course provides the student with knowledge and skills necessary to conduct

program evaluations for a variety of programs in diverse public health settings. The course builds on the HPS master level program evaluation course by providing students with an in depth examination of the program evaluation process, methods, and goals. Current issues emerging with the area of program evaluation are also addressed.

**HPS 6953 ADVANCED RESEARCH METHODS IN SOCIAL & BEHAVIORAL SCIENCES**  
Emphasis is on development of research proposals and preparation of manuscripts for publication. Each student prepares a proposal for a social or behavioral research project in public health which will be critiqued by faculty and students. Required of M.S. and Doctoral students before submitting prospectus to Advisory Committee.

**HPS 6980 RESEARCH FOR DOCTORAL DISSERTATION**  
Research for Doctoral Dissertation. Credit hours vary.

### OCCUPATIONAL AND ENVIRONMENTAL HEALTH

#### **OEH 5013 ENVIRONMENTAL HEALTH**

The effects of the environment on health. Consideration is given to urban water supply and wastewater disposal, air quality control, solid and hazardous waste, and sanitation.

#### **OEH 5023 PUBLIC HEALTH BIOLOGY AND SANITATION**

Prerequisites: OEH 5013. This course will provide basic understanding of the biology of organisms (mostly microorganisms) that are important in public health, the sources of organisms in the environment, and the protective measures that can be used to control exposures from a technical and management standpoint.

#### **OEH 5103 OCCUPATIONAL AND ENVIRONMENTAL SAMPLING STRATEGIES**

Prerequisites: BSE 5163 or equivalent introductory statistics/biostatistics course. This course is designed to introduce the student to critical concepts in designing occupational and environmental health sampling strategies, and the associated statistical procedures for analyzing environmental and occupational data with an emphasis on interpretation.

#### **OEH 5213 PRINCIPLES OF ENVIRONMENTAL HEALTH & SAFETY MANAGEMENT**

Prerequisite: OEH 5013. Designed to introduce students to the principles and practices of environmental health and safety management. Emphasis is on the industrial, municipal, state and federal system.

#### **OEH 5262 OCCUPATIONAL AND ENVIRONMENTAL LAW**

An overview of occupational and environmental health law focusing on RCRA, SDWA, OSHA, TSCA, NEPA, and other critical legislation and regulations guiding occupational and environmental health efforts.

#### OEH 5553 OCCUPATIONAL AND ENVIRONMENTAL TOXICOLOGY

Prerequisite: OEH 5013 or permission. This course introduces the fundamentals of toxicology and applications in both general environments and workplaces. Health risk assessment, toxicokinetics, toxicodynamics, biotransformation, carcinogenesis, and systemic toxicity are covered. The course focuses on understanding health effects of exposure to common toxicants that students will encounter as industrial hygienists or environmental health professionals.

#### OEH 5702 PRINCIPLES OF SAFETY

Prerequisites: permission. Basic principles of safety management and injury prevention are presented, with emphasis on programs and practices applied to major issues in occupational safety. Essential elements of ergonomic performance and basic principles of safety science are introduced. The ergonomic and safety evaluation of the work place, risk reduction through management, engineering and behavior modification are discussed.

#### OEH 5723 FUNDAMENTALS OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH SCIENCES

Prerequisites: none. This course is an introduction to fundamental concepts of physical science applied to qualitative and quantitative examination of occupational/environmental problems impacting human health. This course will provide the students with an understanding of how to apply theoretical constructs to solve problems in the occupational/environmental health arena.

#### OEH 5734 NOISE AND RADIATION HAZARDS

Prerequisite: College-level physics and OEH 5723. Permission of instructor may be substituted for OEH 5723. Students will acquire a basic understanding of the nature and properties of noise, ionizing radiation, and nonionizing radiation; the interactions of these forms of energy with matter; the implications of these properties and interactions for health effects, dose assessment, and control; and guidelines for radiation protection and hearing conservation programs.

#### OEH 5742 MEASUREMENTS IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH

Prerequisite: Complete the laboratory safety training module through OUHSC web page, OEH 5723 and recommended completion or concurrent enrollment in OEH 5752. This course provides hands-on experience using tools most commonly encountered in OEH field practice or needed during M.S. research. Most sessions are conducted in-lab, but several occur in-field. Techniques covered include equipment calibration, sample collection, laboratory analysis, chain-of-custody, and use of direct reading instrumentation.

#### OEH 5752 OCCUPATIONAL HAZARDS CONTROL

Prerequisite: OEH 5723 or instructor permission. This course will introduce the fundamental principles of ventilation and other engineering controls for mostly gas/vapor and aerosols, but also heat stress and noise. The course will deliver in-depth knowledge of selecting, designing, operating, and diagnosing general, single-, and multi-branch ventilation systems from aspects of engineering economics and strategies.

#### OEH 5801 BASIC ERGONOMICS

Prerequisites: None. This course is designed to introduce students to the basic principles of ergonomics, vibration, and thermal stress. On completion of this course, students should be able to analyze jobs for ergonomic risk factors and communicate their findings to professional peers and lay people.

#### OEH 5940 FIELD PRACTICE

Prerequisites: Students should have completed approximately half of their degree and have completed OEH 5723 and OEH 5742. Field Practice is designed for the student to gain practical experience in industrial hygiene and/or environmental health through supervised OEH practice in approved professional workplaces. Through this work experience, students will integrate and apply concepts from the OEH curriculum.

#### OEH 5960 DIRECTED READINGS

May be repeated; maximum credit four hours. Designed for each student with an extensive directed reading in a specific area of the student's interest and/or background.

#### OEH 5973 COMMUNICATION AND ETHICS IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH

Prerequisites: OEH 5013, prior or concurrent enrollment in HPS 5213 or permission. Students will develop skills in written and oral technical communication and learn basic principles of risk communication as well as conventions of scientific and business writing. Ethical principles of communication, professional practice, and responsible conduct of research will be discussed.

#### OEH 5980 RESEARCH FOR MASTER'S THESIS

Credit hours vary.

#### OEH 5990 SPECIAL STUDIES

May be repeated with change of subject matter. Topics of a special nature or of unusual interest to the student. Deals with a specific topic, area or problem in depth which is not adequately covered in the current curriculum as judged by the training needs of the student.

#### OEH 6103 RESEARCH METHODS IN OCCUPATIONAL & ENVIRONMENTAL HEALTH

Prerequisites: Permission of the course director. This course includes instruction in scientific methods of investigating occupational and environmental health problems; evaluating research methodologies; and developing research designs. Special emphasis will be given to quantitative research tools and critical analysis of published literature.

#### OEH 6252 RISK COMMUNICATION

Prerequisites: OEH 5213, OEH 5723, & OEH 5013 or Permission. Designed to acquaint public health students with risk communication concepts, strategies and activities during non-emergency and emergency situations by investigating the structure, methodology, and application of theoretical principles of communication with a focus on the occupational and environmental health area.

#### OEH 6473 RISK ASSESSMENT

Prerequisites: OEH 5723, OEH 5553, or equivalent, or permission of the instructor. This course is designed to familiarize students with the different qualitative and quantitative approaches to assessing risks from occupational and environmental exposures to humans and ecosystems. The course will be based on established quantitative protocols for conducting risk assessments such as that used by the USEPA.

#### OEH 6883 APPLIED MODELING IN OCCUPATIONAL & ENVIRONMENTAL HEALTH

Prerequisites: OEH 5723, OEH 6793. The purpose of this course is to introduce critical modeling principles and applications used in occupational and environmental health (OEH) research. Upon completion of the class, students should be able to understand the principles of commonly used models. Students will select and apply models to assess the occupational exposure, environmental quality, and human health risk by using what they learned from the class. The student will also learn the methods to evaluate and validate the model data and outcome, as well as use models to support decision-making process.

#### OEH 6793 AEROSOL SCIENCE

Prerequisites: Graduate standing, mathematics through college algebra, college physics, and/or permission of the instructor. This course will familiarize students with the behavior of airborne particles (dusts, mists, fogs, etc.) of occupational and environmental health concern. Students will be able to recognize potential aerosol hazards, identify measurement methods appropriate to their characterization, and interpret measurement results in the light of current exposure standards.

#### OEH 6980 RESEARCH FOR DOCTOR'S DISSERTATION

Hours may vary.



# College of Public Health

## Competencies

## **Complete listing of foundational and concentration competencies**

### Professional Programs

- I. MPH Program Competencies
  - a. Foundational Competencies (all MPH students must meet)
  - b. Biostatistics
  - c. Epidemiology
  - d. Health Administration and Policy
  - e. Health Promotion Sciences
  - f. Health Promotion Sciences and Social Work
  - g. Interdisciplinary
  - h. Occupational and Environmental Health
  
- II. MHA Program Competencies

### Graduate Programs

- III. Master of Science Program Competencies
  - a. Biostatistics
  - b. BS/MS in Biostatistics
  - c. Epidemiology
  - d. Health Promotion Sciences
  - e. Industrial Hygiene/Environmental Health Sciences
  
- IV. Doctor of Philosophy Program Competencies
  - a. Biostatistics
  - b. Epidemiology
  - c. Health Promotion Sciences
  - d. Occupational and Environmental Health

# **I. MPH Program Competencies**

## **a. Foundational Competencies (all MPH students must meet)**

### **Evidence-based Approaches to Public Health**

- FC 1            Apply epidemiological methods to the breadth of settings and situations in public health practice
- FC 2            Select quantitative and qualitative data collection methods appropriate for a given public health context
- FC 3            Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
- FC 4            Interpret results of data analysis for public health research, policy or practice

### **Public Health & Health Care Systems**

- FC 5            Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings
- FC 6            Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels

### **Planning & Management to Promote Health**

- FC 7            Assess population needs, assets and capacities that affect communities' health
- FC 8            Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
- FC 9            Design a population-based policy, program, project or intervention
- FC 10           Explain basic principles and tools of budget and resource management
- FC 11           Select methods to evaluate public health programs Policy in Public Health
- FC 12           Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
- FC 13           Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
- FC 14           Advocate for political, social or economic policies and programs that will improve health in diverse populations
- FC 15           Evaluate policies for their impact on public health and health equity



## **Leadership**

- FC 16 Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
- FC 17 Apply negotiation and mediation skills to address organizational or community challenges

## **Communication**

- FC 18 Select communication strategies for different audiences and sectors
- FC 19 Communicate audience-appropriate public health content, both in writing and through oral presentation
- FC 20 Describe the importance of cultural competence in communicating public health content Interprofessional Practice
- FC 21 Perform effectively on Interprofessional teams

## **Systems Thinking**

- FC 22 Apply systems thinking tools to a public health issue

## **b. Biostatistics MPH**

### **BIOSTATISTICS**

- Biostat 1 Use computer software for data entry and database management
- Biostat 2 Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological alternatives to commonly used statistical methods when their assumptions are not met
- Biostat 3 Read the statistical methods reported in public health and medical literature and comment on their appropriateness to the study design and research questions
- Biostat 4 Compare and contrast advantages and disadvantages in the use of nonparametric or parametric statistical procedures, and in the use of univariate, bivariate and multivariable procedures

### **EPIDEMIOLOGY**

- Epi 1 Identify, access, and integrate sources of health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions

- Epi 3            Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies
- Epi 4            Assess and explain strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias on inference from epidemiologic studies

## PUBLIC HEALTH PROFESSIONAL PRACTICE

Prof Biostat:    Become an integral team member, as a junior analyst or research assistant, actively participating in Identifying and formulating public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods

### c. Epidemiology MPH

## BIOSTATISTICS

- Biostat 1        Use computer software for data entry and database management
- Biostat 2        Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological alternatives to commonly used statistical methods when their assumptions are not met
- Biostat 3        Read the statistical methods reported in public health and medical literature and comment on their appropriateness to the study design and research questions

## EPIDEMIOLOGY

- Epi 1            Identify, access, and integrate sources of health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions
- Epi 2            Describe the pathophysiology, natural history, and relative frequencies of health conditions that are major causes of morbidity and mortality
- Epi 3            Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies
- Epi 4            Assess and explain strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias on inference from epidemiologic studies

Prof Epi: Become an integral team member, as a junior epidemiologist or research assistant, actively participating in identifying public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods to address the questions of interest

#### **d. Health Administration and Policy MPH**

- HAP 1 Develop and analyze financial statements including key ratios and indicators.
- HAP 2 Evaluate strengths and weaknesses of health care, public health, and regulatory systems across national and international settings.
- HAP 3 Apply principles of quality improvement including differentiating the relative advantages/disadvantages of measuring structure, process and outcomes.
- HAP 4 Apply economic concepts to predict stakeholder and market responses to economic incentives and governmental policies.
- HAP 5 Evaluate characteristics of effective health organization policies.

#### **e. Health Promotion Sciences MPH**

- HPS 1 Apply theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice
- HPS 2 Analyze individual, organizational, and community concerns, assets, resources and deficits for social and behavioral science interventions
- HPS 3 Apply ethical principles to public health program planning, implementation and evaluation
- HPS 4 Evaluate multiple targets and develop multiple levels of intervention for social and behavioral science programs and/or policies
- HPS 5 Apply basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities
- HPS 6 Demonstrate principles of community-based participatory research to improve health in diverse populations
- HPS 7 Differentiate among goals, measureable objectives, related activities, and expected outcomes for a public health program
- HPS 8 Differentiate the purposes of formative, process, and outcome evaluation

## **f. Health Promotion Sciences MPH and Social Work MSW**

- HPS 1 Apply theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice
- HPS 2 Analyze individual, organizational, and community concerns, assets, resources and deficits for social and behavioral science interventions
- HPS 3 Apply ethical principles to public health program planning, implementation and evaluation
- HPS 4 Evaluate multiple targets and develop multiple levels of intervention for social and behavioral science programs and/or policies
- HPS 5 Apply basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities
- HPS 6 Demonstrate principles of community-based participatory research to improve health in diverse populations
- HPS 7 Differentiate among goals, measurable objectives, related activities, and expected outcomes for a public health program
- HPS 8 Differentiate the purposes of formative, process, and outcome evaluation

## **g. Interdisciplinary MPH**

- IPH 1 Describe how US health policy is initiated, formulated and implemented, and discuss the associated influences of political culture, interest group and party behavior, the legislative and executive processes, and the interactions of states and the federal government
- IPH 2 Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, and apply generally available computer hardware and software to the analysis
- IPH 3 Apply theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice
- IPH 4 Analyze individual, organizational, and community concerns, assets, resources and deficits for social and behavioral science interventions
- IPH 5 Apply ethical principals to public health program planning, implementation and evaluation
- IPH 6 Describe the pathophysiology, natural history and relative frequencies of health conditions that are major causes of morbidity and mortality

## **h. Occupational and Environmental Health MPH**

- OEH 1 Explain genetic, physiologic, and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards
- OEH 2 Interprets federal and state regulatory programs, guidelines, and authorities that control environmental health issues
- OEH 3 Utilizes and applies methods and tools for assessing environmental risks
- OEH 4 Applies methods for assessing, preventing and controlling environmental hazards that pose risks to human health and safety
- OEH 5 Explains the general mechanisms of toxicology in eliciting a toxic response to various environmental exposures
- OEH 6 Designs risk management and risk communication approaches in relation to issues of environmental justice and equity
- OEH 7 Applies theory and strategy-based communication principles across different settings and audiences
- OEH 8 Evaluates how biological, chemical and physical agents might affect human health
- OEH 9 Applies biological principles to development and implementation of disease prevention, control, or management programs

## **II. MHA Program Competencies**

- MHA A. Synthesis and evaluation of the healthcare system, healthcare management, and issues related to:
  - 1. healthcare organizations,
  - 2. access to care,
  - 3. financing healthcare,
  - 4. human resources,
  - 5. financial management,
  - 6. strategic planning and thinking,
  - 7. quality improvement, and
  - 8. legal and regulatory matters.
- MHA B. Communication skills including:
  - 1. Characterizing and utilizing appropriate forms and standards of communication methods applicable in professional healthcare settings;
  - 2. Establishing best practices of communication skills; and
  - 3. Effectively identifying and responding to the audience and its wants, needs, interests, and beliefs.

- MHA C. Critical thinking, analytical skills, and problem-solving abilities including:
1. Using quantitative, statistical and financial analyses to solve problems;
  2. Creating and using strategic planning and strategic thinking to discern among alternatives and make recommendations; and
  3. Applying quality improvement techniques to analyze and change organizational outcomes.
- MHA D. Leadership, Professionalism, and Ethics including:
1. Engaging people, organizations, and key stakeholders when developing goals and executing plans;
  2. Mobilizing teams, using negotiating skills, and accounting for individual and organizational pressures and needs;
  3. Demonstrating integrity in personal and organizational practices, respecting diverse opinions, and holding themselves and others accountable for their actions; and
  4. Using a corporate ethical decision-making process in a healthcare setting and apply ethical principles and policy statements to resolve ethical issues.

### III. Master of Science (MS) Program Competencies

#### a. Biostatistics MS

##### STATISTICAL THEORY

StatTheory 1: Explain the theoretical background of commonly used statistical procedures

##### STATISTICAL COMPUTING

- Comp 1: Use computer software programs such as Excel, Access and REDCap for data entry and database management
- Comp 2: Use computer programs such as SAS and JMP, computing software environments such as R, and/or computer programming languages for processing, summarizing, analyzing and displaying complex public health or biomedical data and research results

##### APPLIED BIOSTATISTICAL METHODS

- FC 2 Select quantitative and qualitative data collection methods appropriate for a given public health context
- FC 4 Interpret results of data analysis for public health research, policy or practice
- Biostat 2: Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological alternatives to commonly used statistical methods when their assumptions are not met

- Biostat 3: Read the statistical methods reported in public health and medical literature and comment on their appropriateness to the study design and research questions
- Biostat 4: Compare and contrast advantages and disadvantages in the use of nonparametric or parametric statistical procedures, and in the use of univariate, bivariate and multivariable procedures

## EPIDEMIOLOGY

- FC 1 Apply epidemiological methods to the breadth of settings and situations in public health practice
- Epi 1 Identify, access, and integrate sources of health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions.
- Epi 3: Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies
- Epi 4: Assess and explain strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias when drawing inference from epidemiologic studies

## DISSEMINATION OF RESEARCH RESULTS

- BComm 1: Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health or biomedical research activities
- BComm 2: Design and implement a critical review of applied public health, biomedical, and statistical research literature related to a specific topic or question of interest, critique the reported methods, and synthesize the findings

## RESEARCH PROFESSIONAL PRACTICE

- Prof Biostat: Become an integral team member, as a junior analyst or research assistant, actively participating in Identifying and formulating public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods
- Prof Ethics: Demonstrate responsible conduct of research practices related to data acquisition and sharing, collaborative research, ethical research with human subjects, disclosure and management of conflicts of interest, avoidance of research misconduct, and responsible publication and authorship practices

## **b. BS/MS in Biostatistics**

### **STATISTICAL THEORY**

StatTheory 1: Explain the theoretical background of commonly used statistical procedures

### **STATISTICAL COMPUTING**

Comp 1: Use computer software programs such as Excel, Access and REDCap for data entry and database management

Comp 2: Use computer programs such as SAS and JMP, computing software environments such as R, and/or computer programming languages for processing, summarizing, analyzing and displaying complex public health or biomedical data and research results

### **APPLIED BIOSTATISTICAL METHODS**

FC 2 Select quantitative and qualitative data collection methods appropriate for a given public health context

FC 4 Interpret results of data analysis for public health research, policy or practice

Biostat 2: Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological alternatives to commonly used statistical methods when their assumptions are not met

Biostat 3: Read the statistical methods reported in public health and medical literature and comment on their appropriateness to the study design and research questions

Biostat 4: Compare and contrast advantages and disadvantages in the use of nonparametric or parametric statistical procedures, and in the use of univariate, bivariate and multivariable procedures

### **EPIDEMIOLOGY**

FC 1 Apply epidemiological methods to the breadth of settings and situations in public health practice

Epi 1 Identify, access, and integrate sources of health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions.

Epi 3: Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies



Epi 4: Assess and explain strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias when drawing inference from epidemiologic studies

#### DISSEMINATION OF RESEARCH RESULTS

BComm 1: Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health or biomedical research activities

BComm 2: Design and implement a critical review of applied public health, biomedical, and statistical research literature related to a specific topic or question of interest, critique the reported methods, and synthesize the findings

#### RESEARCH PROFESSIONAL PRACTICE

Prof Biostat: Become an integral team member, as a junior analyst or research assistant, actively participating in Identifying and formulating public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods

Prof Ethics: Demonstrate responsible conduct of research practices related to data acquisition and sharing, collaborative research, ethical research with human subjects, disclosure and management of conflicts of interest, avoidance of research misconduct, and responsible publication and authorship practices

### c. Epidemiology MS

#### DESCRIPTIVE EPIDEMIOLOGIC METHODS

DesEpi 1: Identify, access, and integrate sources of health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions.

DesEpi 2: Explain the importance of epidemiology, and aspects of a public health problem in terms of magnitude, person, time and place, for informing scientific, ethical, economic and political discussion of health issues

DesEpi 3: Calculate and interpret basic descriptive epidemiology measures

#### ETIOLOGIC, PROGNOSTIC, AND DIAGNOSTIC RESEARCH METHODS

RschEpi 1: Communicates the pathophysiology, natural history, and relative frequencies of health conditions that are major causes of morbidity and mortality

RschEpi 2: Calculate epidemiology measures of association and accuracy in prediction or diagnosis and draw appropriate inference from epidemiologic data

- RschEpi 3: Compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies
- RschEpi 4: Assess and implement strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias when drawing inference from epidemiologic studies
- RschEpi 5: Discuss, from knowledge of the literature, the pathophysiology, natural history, and epidemiology in their chosen area of concentration (e.g., cardiovascular diseases, cancer, pediatric epidemiology, infectious diseases).

## APPLIED BIOSTATISTICS

- FC 2 Select quantitative and qualitative data collection methods appropriate for a given public health context
- FC 3 Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
- FC 4 Interpret results of data analysis for public health research, policy or practice
- Biostat 1: Use computer software for data entry and database management
- Biostat 2: Determine the most appropriate method of statistical analysis reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological alternatives to commonly used statistical methods when their assumptions are not met
- Biostat 3: Read the statistical methods reported in public health and medical literature and comment on their appropriateness to the study design and research questions

## DISSEMINATION OF RESEARCH RESULTS

- EComm 1: Demonstrate effective written and oral skills for communicating with different audiences in the context of professional public health or biomedical research activities
- EComm 2: Design and implement a critical review of applied public health, biomedical, and epidemiological research literature related to a specific topic or question, critique the reported methods, and synthesize the findings

## RESEARCH PROFESSIONAL PRACTICE

- Prof Epi: Become an integral team member, as a junior epidemiologist or research assistant, actively participating in identifying public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods to address the questions of interest

Prof Ethics: Demonstrate responsible conduct of research practices related to data acquisition and sharing, collaborative research, ethical research with human subjects, disclosure and management of conflicts of interest, avoidance of research misconduct, and responsible publication and authorship practices

#### **d. Health Promotion Sciences MS**

- HPS 1 Apply theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice
- HPS 2 Analyze individual, organizational, and community concerns, assets, resources and deficits for social and behavioral science interventions
- HPS 3 Apply ethical principles to public health program planning, implementation and evaluation
- HPS 4 Evaluate multiple targets and develop multiple levels of intervention for social and behavioral science programs and/or policies
- HPS 5 Apply basic concepts and skills involved in culturally appropriate community engagement and empowerment with diverse communities
- HPS 6 Demonstrate principles of community-based participatory research to improve health in diverse populations
- HPS 7 Differentiate among goals, measureable objectives, related activities, and expected outcomes for a public health program
- HPS 8 Differentiate the purposes of formative, process, and outcome evaluation
- HPS MS 1 Understand and implement qualitative or quantitative research techniques including methodological conceptualization, technique selection, analysis types, limits of techniques, computer assisted coding, and selected techniques such as focus group research, social marketing, complex participant-observation, rapid appraisal methods, use of computer assisted statistical packages, and selected statistical methods such as, regression analysis, non-parametric methods, linear models, and analysis of multivariate data.
- HPS MS 2 Apply knowledge of a significant public health problem in a substantive content area germane to research related to areas such as, minority, adolescent, aging, maternal and child, international, and gender health.

#### **e. Industrial Hygiene/Environmental Health Sciences MS**

- IH 1: Describe patterns and mechanisms of occupational/environmental diseases based upon interpretation of epidemiologic evidence and knowledge of toxicological/physiological interaction of hazardous agents with the human body.

- IH 2: Recognize and identify sources of chemical, physical, biological, and ergonomic stressors, and describe qualitative and quantitative aspects of the generation of these stressors.
- IH 3: Design programs to reduce or eliminate occupational and environmental hazards, including the recommendation and evaluation of engineering, administrative, and personal protective equipment controls.
- IH 4: Select and use appropriate strategies and methods for quantitative and qualitative exposure assessment, and apply statistical principles to the collection and interpretation of industrial hygiene, safety, and environmental data.
- IH 5: Communicate effectively with all levels of an organization, with the public, and with professional peers concerning health and safety.
- IH 6: Interpret and apply relevant occupational and environmental regulations and standards.
- IH 7: Understand ethical responsibilities and the impacts of professional practice in the organizational, societal, and global contexts of public health.
- IH 8: Understand and promote business, managerial, leadership, teamwork, and cultural practices and systems applicable to developing and sustaining occupational/environmental health and safety programs.
- IH 9: Demonstrate research and critical thinking skills necessary to maintain and enhance one's professional competence throughout one's career.
- IH 10: Identify vulnerable populations at disparate risk of adverse occupational and/or environmental health outcomes based upon structural inequalities.

#### **IV. Doctor of Philosophy (PhD) Program Competencies**

##### **a. Biostatistics PhD**

###### **STATISTICAL METHODS DEVELOPMENT**

- StatDev 1: Independently develop statistical research questions of interest concerning the properties of tests or estimators and the application of existing statistical methods in novel ways
- StatDev 2: Develop new statistical methods
- StatDev 3: Explain and derive the theoretical background of a broad class of statistical procedures including theoretical knowledge of the student's doctoral research area of interest in biostatistical methods

## STATISTICAL COMPUTING AND SIMULATION STUDY PROGRAMMING

- Prog 1: Use computer software and/or programming languages for data simulation to evaluate the properties of statistical methods
- Prog 2: Develop computer programs to process, summarize, analyze and display data from complex public health or biomedical data and research results in a wide range of software applications and computing environments including SAS, R, JMP, GIS tools, and/or WinBugs

## TEACHING

- Teach Biostat 1: Assist a faculty member in teaching graduate level courses in biostatistics by developing course material, delivering lectures, leading review and discussion sections, or writing and grading homework assignments and exams
- Teach Biostat 2: Train others in the design of research studies and analysis of data, including students in the fields of biostatistics, epidemiology, public health, and biomedical sciences

## RESEARCH PROGRAM DEVELOPMENT

- RschPgm 1: Collaborate on interdisciplinary research teams by providing research design and data analysis support for research and evaluation projects
- RschPgm 2: Identify and formulate public health or biomedical research questions, selecting appropriate study designs, identifying appropriate data collection and management methods, and selecting appropriate statistical analysis methods
- RschPgm 3: Direct staff and student research team members who serve as research coordinators or data analysts
- Prof Ethics: Demonstrate responsible conduct of research practices related to data acquisition and sharing, collaborative research, ethical research with human subjects, disclosure and management of conflicts of interest, avoidance of research misconduct, and responsible publication and authorship practices

## APPLIED BIOSTATISTICAL METHODS

- BMethod 1: Apply and interpret results from descriptive analyses according to the type of study design, measurement scale, and available data for answering a particular research question
- BMethod 2: Utilize unbiased and efficient inferential methodologies, appropriate for the study design, measurement scale and available data, for estimation of parameters of interest
- BMethod 3: For a broad range of complex studies, determine the most appropriate method of statistical analysis, reflecting a given question of interest, the implemented study design and the available data, implementing preferred methodological

alternatives to commonly used statistical methods when their assumptions are not met

BMethod 4: Implement and interpret results from univariate, bivariate and multivariable procedures, acknowledging issues related to statistical power and overfitting available data, relative to the research study design and available data

BMethod 5: Critically evaluate the statistical methods reported in public health and medical literature, commenting on their appropriateness relative to the study design and research questions

## EPIDEMIOLOGIC METHODS

EMethod1: Identify aspects of a public health problem in terms of magnitude, person, time and place, for informing scientific, ethical, economic and political discussion of health issues

EMethod2: Accounting for complex sampling strategies, data measurement methods, and data completeness, analyze health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions

EMethod3: Calculate and interpret epidemiologic measures of disease burden, distribution, and association

EMethod4: Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies

EMethod5: Assess and implement strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias when drawing inference from epidemiologic studies

## DISSEMINATION OF RESEARCH RESULTS

Com BP1: Design and implement a critical review of applied public health, biomedical, and statistical research literature in a specialty area, critique the reported methods, and synthesize the findings

Com BP2: Demonstrate effective written and oral skills for communicating with different audiences in the context of statistical methodology development, professional public health practice, or biomedical research activities

## **b. Epidemiology PhD**

### **EPIDEMIOLOGIC RESEARCH PROGRAM DEVELOPMENT**

- EpiPgm1: Discuss, from knowledge of the literature, the pathophysiology, natural history, and epidemiology in their chosen area of concentration (e.g., cardiovascular diseases, cancer, pediatric epidemiology, infectious diseases).
- EpiPgm2: Generate relevant epidemiological research questions that contribute new knowledge to the field
- EpiPgm3: Independently design and implement epidemiologic studies to answer specific research questions using a variety of designs, interpret study results and relate findings to the relevant scientific literature
- EpiPgm4: Direct and manage research staff and student assistants who are conducting project management, data collection and processing, and data analysis tasks
- Prof Ethics: Demonstrate responsible conduct of research practices related to data acquisition and sharing, collaborative research, ethical research with human subjects, disclosure and management of conflicts of interest, avoidance of research misconduct, and responsible publication and authorship practices

### **COLLABORATIVE RESEARCH PROGRAM DEVELOPMENT**

- EpiCol1: Collaborate on interdisciplinary research teams and advocate for the importance of epidemiologic approaches to defining aspects of a public health problem in terms of magnitude, person, time and place, for informing scientific, ethical, economic and political discussion of health issues
- EpiCol2: Become an integral team member actively participating in identifying public health or biomedical questions, selecting appropriate study designs, identifying appropriate data collection and measurement methods, and selecting appropriate statistical analysis methods to address the questions of interest while minimizing bias and measurement error or misclassification

### **ADVANCED EPIDEMIOLOGIC METHODS**

- Epi Meth1: Critically appraise and synthesize information related to the pathophysiology, natural history, and relative frequencies of health conditions that are major causes of morbidity and mortality
- Epi Meth2: Calculate epidemiology measures and draw appropriate inference from epidemiologic data, utilizing advanced statistical methods that are appropriate for the given research design, measurement scale, population dynamics, and degree of measurement error or misclassification
- Epi Meth3: Assess and implement strategies to summarize and report the impact of effect modification and to control for or minimize bias, including selection, information, and confounding bias when drawing inference from epidemiologic studies

Epi Meth4: Given an epidemiological investigation, compare and contrast strengths, limitations, and inference that may be drawn from data collected through the use of epidemiological research designs including cohort, case-control, ecologic, and cross-sectional studies

Epi Meth5: Accounting for complex sampling strategies, data measurement methods, and data completeness, analyze health data such as vital statistics records, disease registries, national surveys, and medical records in order to address epidemiologic questions

#### TEACHING EPIDEMIOLOGY

Teach Epi 1: Assist a faculty member in teaching graduate level courses in epidemiology by developing course material, delivering lectures, leading review and discussion sections, or writing and grading homework assignments and exams

Teach Epi 2: Train others in the design of research studies and analysis of data, including students in the fields of biostatistics, epidemiology, public health, and biomedical sciences

#### APPLIED BIOSTATISTICS METHODS

BMethod 1: Apply and interpret results from descriptive analyses according to the type of study design, measurement scale, and available data for answering a particular research question

BMethod 2: Utilize unbiased and efficient inferential methodologies, appropriate for the study design, measurement scale and available data, for estimation of parameters of interest

BMethod 4: Implement and interpret results from univariate, bivariate and multivariable procedures, acknowledging issues related to statistical power and overfitting available data, relative to the research study design and available data

#### DISSEMINATION OF RESEARCH RESULTS

Comm Epi P1: Design and implement a critical review of applied public health, biomedical, and epidemiological research literature in a specialty area, critique the reported methods, and synthesize the findings

Comm Epi P2: Demonstrate effective written and oral skills for communicating the objectives, design, implementation and results of epidemiologic investigations with different audiences in the context of professional public health practice or biomedical research activities

### **c. Health Promotion Sciences PhD**

HPSDoc 1 Critique, apply, and advise upon the theoretical foundations of health promotion sciences from the perspective of all levels of the ecological model including



individuals, small groups, communities, organizations, government, and social policy.

- HPSDoc 2 Apply the array of health promotion intervention strategies from the most current research, theoretical, methodological, and practice models, and contribute new strategies to the field.
- HPSDoc 3 Understand, implement, and advise upon qualitative research techniques including methodological conceptualization, technique selection, analysis types, limits of techniques, computer assisted coding, and selected techniques such as focus group research, social marketing, complex participant-observation, and rapid appraisal methods.
- HPSDoc 4 Understand, implement, and advise upon quantitative research techniques including methodological conceptualization, technique selection, analysis types, limits of techniques, use of computer assisted statistical packages, and selected statistical methods such as, regression analysis, non-parametric methods, linear models, and analysis of multivariate data.
- HPSDoc 5 Understand, implement, and advise upon program evaluation types and strategies, selection criteria for use of specific evaluation types, advanced principles of program evaluation implementation, and methods associated with each program evaluation type.
- HPSDoc 6 Apply and advise upon implementation of the principles of social and behavioral science disciplines relevant to public health, such as anthropology, communication, political science, psychology, sociology, and social work.
- HPSDoc 7 Contribute original research to the field that addresses significant public health problems.

#### **d. Occupational and Environmental Health PhD**

- OEH D1 Exhaustively search and critically review the scientific literature in a chosen area of occupational and environmental health
- OEH D2 Formulate testable scientific hypotheses
- OEH D3 Design studies to test scientific hypotheses or otherwise produce meaningful findings
- OEH D4 Use, and if appropriate, develop valid tools to collect and interpret data
- OEH D5 Demonstrate understanding of the chosen area of specialization within occupational and environmental health
- OEH D6 Recognize the limits of one's own knowledge, and demonstrate the ability to seek and implement advice or collaboration as necessary

- OEH D7 Understand the responsible conduct of research, including data acquisition, management, sharing and ownership; mentor/student responsibilities; publication practices and responsible authorship; peer review; collaborative science; research misconduct; conflict of interest, and protection of human subjects and of animals in research
- OEH D8 Communicate research to scientific peers accurately and in a professional manner
- OEH D9 Convey broad knowledge of occupational and environmental health in an educational setting

## **OUHSC Policies, Procedures, and Requirements**

The OUHSC Hudson College of Public Health follows guidelines of the University of Oklahoma Health Sciences Center. Complete policies can be found in the OUHSC *Faculty Handbook* online at

<https://provost.ouhsc.edu/Portals/1037/assets/documents/FacultyHandbookOUHSC.pdf?ver=2019-09-30-135426-620>.

- **Academic Appeals Policy**  
See Faculty Handbook, Appendix C
- **Academic Integrity Policy**  
See Faculty Handbook, Section 4.17
- **Academic Misconduct Policy**  
See Faculty Handbook, Appendix C
- **Completion of Academic Work for Others**  
See Faculty Handbook, Section 4.19
- **Student Rights and Responsibilities Code and Procedures**  
See Faculty Handbook, Appendix C
- **Student Professional Behavior in an Academic Program Policy**  
See Faculty Handbook, Appendix C
- **Criminal Background Checks Policy**  
See Faculty Handbook, Appendix C
- **Sexual Misconduct, Discrimination and Harassment Policy**  
See Faculty Handbook, Appendix H
- **Consensual Sexual Relationship Policy**  
See Faculty Handbook, Appendix I
- **Nondiscrimination Policy**  
See Faculty Handbook, Appendix J
- **Equal Opportunity Policy**  
See Faculty Handbook, Section 5.1
- **Reasonable Accommodation Policy**  
See Faculty Handbook, Section 5.3
- **Ethics in Research Policy**  
See Faculty Handbook, Section 3.25
- **Prevention of Alcohol Abuse and Drug Use on Campus and in the Workplace**  
See Faculty Handbook, Section 5.11

- **Tobacco-Free Policy**  
See Faculty Handbook, Section 5.10

- **HIPAA Compliance**

The University of Oklahoma complies with all federal and state laws related to the confidentiality of patient and research participant medical information, including the Privacy and Security Regulations issued pursuant to the Health Insurance Portability and Accountability Act (HIPAA). Students are required to comply with these laws and related University policies and procedures, including the HIPAA Privacy and Security policies <https://ouhsc.edu/hipaa>. Students are required to complete the University's mandatory annual HIPAA training at <https://ouhsc.edu/hipaa/policies.asp>. Students must also comply with the related policies and procedures of their departments and any facilities in which they rotate.

- **Distance Learning Notification**

In a Distance Learning Classroom (DLC), a student's voice, physical presence, materials, and participation in classroom activities may be transmitted to distance learning sites and videotaped or digitally captured. DLC video/digital archives are used internally by the University for educational and informational purposes.

The Hudson College of Public Health also follows the policies of the OUHSC Student Handbook available online at <https://ouhsc.edu/hipaa/policies.asp>.

- **Pregnancy Policy**

Students needing modifications or adjustments to course requirements because of documented pregnancy-related or childbirth—related issues should contact the college's Assistant/Associate Dean for Student Affairs (or academic advisor) as soon as possible to discuss. Generally, modifications will be made where medically necessary and similar in scope to accommodations based on temporary disability, <https://studenthandbook.ouhsc.edu/hbSections.aspx?ID=342>.

- **Health Insurance Policy**

See Student Handbook, Section 2.12  
<https://studenthandbook.ouhsc.edu/hbSections.aspx?ID=431>

The OU Hudson College of Public Health also adheres to the policies below:

- **Email Transmission and Use Policy**  
[https://www.ou.edu/content/dam/IT/security/Docs/policies/OU%20IT%20Acceptable%20Use%20Policy\\_2020.pdf](https://www.ou.edu/content/dam/IT/security/Docs/policies/OU%20IT%20Acceptable%20Use%20Policy_2020.pdf)
- **Portable Computing Device Security Policy**  
<https://it.ouhsc.edu/services/infosecurity/PCDEncryption.asp>
- **Firearms Policy**  
See Regents' Policy 3.1.12, at:  
<https://www.ou.edu/regents/CurrentPolicyManual.pdf>

**Requirements for maintaining enrollment include:**

- Completing yearly online HIPAA (Health Insurance Portability and Accountability Act) training
- Completing yearly Title IX (Sexual Misconduct, Discrimination and Harassment) training
- Purchasing or uploading proof of health insurance coverage each semester
- Arranging for an initial criminal background check prior to the first enrollment and providing an attestation (form provided by the Office of Student Services) in lieu of the required background check yearly after the initial check
- Acknowledging yearly the OUHSC Financial Responsibility Agreement

# Laptop Computer Requirements

## For All Public Health Students

The privacy and the protected health information (PHI) governed by federal HIPAA law and monitored by the Office of Civil Rights (OCR) is of critical importance to the entire OU Health Sciences Center community. University policy requires students to have a university compliant computing device for University related activities including academic course work, testing, classroom notes, OUHSC email, accessing ePHI, creating, storing, or sharing, treatment notes, medical records or case notes from classroom, clinical or research activities prior to the start of you academic program.

See <http://it.ouhsc.edu/policies/> for a list of all applicable policies and standards.

The OU Health Sciences Center recommends that students purchase a new laptop computer for the start of their academic program with the University. Experience has shown that older, heavily used devices can be affected by the required security suite, potentially impacting the time required to complete assignments etc. which can have an impact on your overall student experience.

The Hudson College of Public Health requires each student to have access to a laptop that meets the requirements below to have the best possible experience with OUHSC’s required tools and your academic, clinical, and research activities.

Platform	Windows	MacOS	
Operating System	Minimum OS: Windows 10 Professional or Windows 10 Education	Minimum US: MacOS High Sierra or Mojave	
	<i>A Windows Upgrade license is available to enrolled students at no cost.</i>	A MacOS Upgrade license is available to enrolled students at no cost.	
Computer Specifications	<ul style="list-style-type: none"> <li>• i5 or i7 Intel Processor</li> <li>• 13-inch display or greater</li> <li>• Minimum 8GB RAM or greater</li> <li>• Minimum 256GB SSD Hard Drive</li> <li>• Minimum of 2 USB ports</li> <li>• Webcam</li> <li>• Microphone</li> <li>• Speakers</li> <li>• Wireless Internet Connectivity</li> </ul>	<ul style="list-style-type: none"> <li>• i5 or i7 Intel Processor</li> <li>• 13-inch display or greater</li> <li>• Minimum 8GB RAM or greater</li> <li>• Minimum 256GB SSD Hard Drive</li> <li>• Minimum of 2 USB ports</li> <li>• Webcam</li> <li>• Microphone</li> <li>• Speakers</li> <li>• Wireless Internet Connectivity</li> </ul>	
	Reliable Broadband Internet Connectivity of at least 15Mbps Download and 4Mbps Upload	Reliable Broadband Internet Connectivity of at least 15Mbps Download and 4Mbps Upload	
	Software Requirements	Mozilla Firefox ( <a href="https://www.mozilla.org/en-US/exp/firefox/new/">https://www.mozilla.org/en-US/exp/firefox/new/</a> )	Mozilla Firefox ( <a href="https://www.mozilla.org/en-US/exp/firefox/new/">https://www.mozilla.org/en-US/exp/firefox/new/</a> )
		Adobe Acrobat Reader ( <a href="https://get.adobe.com/reader/">https://get.adobe.com/reader/</a> )	Adobe Acrobat Reader ( <a href="https://get.adobe.com/reader/">https://get.adobe.com/reader/</a> )
		VLC Media Player ( <a href="http://videolan.org/vlc">videolan.org/vlc</a> )	VLC Media Player ( <a href="http://videolan.org/vlc">videolan.org/vlc</a> )
		Respondus LockDown Browser ( <a href="https://www.respondus.com/lockdown/information.pl?ID=933136577">https://www.respondus.com/lockdown/information.pl?ID=933136577</a> )	Respondus LockDown Browser ( <a href="https://www.respondus.com/lockdown/information.pl?ID=933136577">https://www.respondus.com/lockdown/information.pl?ID=933136577</a> )

**New and current students with new devices are required to fill out the VDI (Virtual Desktop infrastructure) access request form located at:**

**[HTTPS://WWW.OUHSC.EDU/SDE.](https://www.ouhsc.edu/sde)**

OU IT will grant student access within 24 hours of request submission.

Students can log in at <https://mydesk.ou.edu>. For log in details, check out the MyDesk article here: [https://ouitservices.service-now.com/kb\\_view.do?sysparm\\_article=KB0012079](https://ouitservices.service-now.com/kb_view.do?sysparm_article=KB0012079).

Work that does not require regulated data, such as attending Zoom lectures or accessing D2L coursework, can be completed on the student's computer without connecting to the Virtual Desktop.

### **Need Help?**

For support with the new Student Virtual Desktop contact the OU IT Service Desk through phone or email below.

#### **OUHSC IT Service Desk**

[servicedesk@ouhsc.edu](mailto:servicedesk@ouhsc.edu)

(405) 271-2203 or

Toll Free (888) 435-7486

#### **OU-Tulsa IT Service Desk**

[ou.edu/tulsa/it/help](http://ou.edu/tulsa/it/help)

(918) 660-3550

### **Additional Software Requirements for Specialty Degrees**

For Biostatistics and Epidemiology Degrees:

- **SAS statistical package** - The SAS software can be accessed via a Student VDI. See instructions listed above in order to access the Student VDI.

For Health Promotion Sciences Degrees:

- **SPSS** – The SPSS software can be accessed via a Student VDI. See instructions listed above in order to access the Student VDI.

All computer hardware and software requirements are subject to periodic revisions.

8/04/2020