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| For Academic Affairs and Research Use Only | |
| Proposal Number | NHP61 |
| CIP Code: |  |
| Degree Code: |  |

**NEW OR MODIFIED COURSE PROPOSAL FORM**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

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| **[X]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Chair** | Amanda Carpenter 8/1/2022  **Head of Unit (if applicable)** |
| \_\_Amy Hyman\_\_\_\_\_\_ 08/19/2022  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Mary Elizabeth Spence 8/3/2022 **Office of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| \_\_\_\_\_\_\_\_\_Scott E. Gordon\_\_\_\_\_\_\_\_\_\_ 8-20-22 **College Dean** | \_\_\_\_Alan Utter \_\_\_\_\_\_\_\_ 9-12-22  **Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (if applicable)** |  |

1. **Contact Person (Name, Email Address, Phone Number)**

Amanda Carpenter

[acarpenter@AState.edu](mailto:acarpenter@AState.edu)

(870) 972-3894

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Academic Year 2023–2024

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

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|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)**  *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **PHLT** |
| **Number\*** |  | **3203** |
| **Title**  (include a short title that’s 30 characters or fewer) |  | **Biostatistics for Public Health**  **Biostats for Public Health** |
| **Description\*\*** |  | **Principles of biostatistics and application of statistical methods used in public health and medical research. Concepts include descriptive data, probability distributions, hypothesis testing, group comparisons, measures of association, and regression; focus is on interpretation, rather than calculation.**  **Fall, Spring**  **Prerequisites: PHLT 1013 and STAT 3233** |

***\**** Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*.

\*\*Forty words or fewer (excepting prerequisites and other restrictions) as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. **Yes** Are there any prerequisites?
   1. If yes, which ones?

PHLT 1013 and STAT 3233

* 1. Why or why not?

Basic understanding of statistics and public health knowledge is required for this course.

1. **Yes** Is this course restricted to a specific major?
   1. If yes, which major?

Public Health

1. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

Fall, Spring

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture only

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard letter

1. **No**  Is this course dual-listed (undergraduate/graduate)?
2. **No**  Is this course cross-listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

Enter text...

**b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

Enter text...

1. **Yes** Is this course in support of a new program?

a. If yes, what program?

Bachelor of Science in Public Health

1. **No** Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)?

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

(The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

|  |  |
| --- | --- |
| Week 1 | Measurement  Types of Studies  Frequency Distributions |
| Week 2 | Summary Statistics  Probability Concepts |
| Week 3 | Binomial Probability Distributions  Normal Probability Distributions |
| Week 4 | Introduction to Statistical Inference  Basics of Hypothesis Testing  Basics of Confidence Intervals |
| Week 5 | Inference about a Mean  Comparing Independent Means  Comparing Several Means |
| Week 6 | Correlation and Regression |
| Week 7 | Inference about a Proportion  Comparing Two Proportions  Cross-Tabulated Counts  Stratified Two-by-Two Tables |

1. **Proposed special features** **[Modification requested? Yes/No]**

(e.g. labs, exhibits, site visitations, etc.)

N/A

1. **Department staffing and classroom/lab resources**

This course will be taught online by faculty affiliated with the Bachelor of Science in Public Health.

1. Will this require additional faculty, supplies, etc.?

No

1. **No**  Does this course require course fees?

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

The course goals are:

* + - 1. Students will learn about organization of data, types of measurement scales, and data quality.
      2. Students will differentiate between types of public health studies.
      3. Students will understand and interpret frequency distributions.
      4. Students will learn about summary statistics, probability, and different types of probability distributions.
      5. Students will understand statistical inference, hypothesis testing, and confidence intervals.
      6. Students will differentiate between statistical tests for continuous and categorical outcomes including *t*-tests, analysis of variance (ANOVA), correlation, regression, proportion difference, proportion ratio, and chi-square test of association.
      7. Students will apply biostatistics knowledge to data interpretation.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

The course fits with the Bachelor of Public Health program by fitting into one of the five Public Health core disciplines: (1) Biostatistics, (2) Epidemiology, (3) Environmental Health Sciences, (4) Health Policy and Management, and (5) Social and Behavioral Sciences.

This course is required by the Council on Education for Public Health (CEPH) accreditation domain requirements. The domain requirements are:

1. Concept and application of basic statistics
2. Foundations of biological and life sciences and concepts of health and disease
3. History/philosophy of public health as well as core values, concepts, and functions across the globe and in society
4. Basic concepts, methods, and tools of public health data collection, use, analysis, and why evidence-based approaches are an essential part of public health practice
5. Concepts of population health, basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations
6. Underlying science of human health and disease including opportunities for promoting and protecting health across the life course
7. Socioeconomic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities
8. Fundamental concepts and features of project implementation, including planning, assessment, and evaluation
9. Fundamental characteristics and organizational structures of the U.S. health system, as well as the differences in systems in other countries
10. Basic concepts of legal, ethical, economic, and regulatory dimensions of health care and public health policy and the roles, influences, and responsibilities of the different agencies and branches of government
11. Basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology

This course meets the following domain requirement: 1. Concept and application of basic statistics.

c. Student population served.

Undergraduate students enrolled in the Public Health program.

d. Rationale for the level of the course (lower, upper, or graduate).

This is an upper-level undergraduate course. Students are required to complete STAT 3233

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes / No** Do the proposed modifications result in a change to the assessment plan?

*If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

The program-level learning outcomes for students enrolled in this program are:

1. Students will understand how to assess and monitor population health.
2. Students will learn how to investigate, diagnose, and address health hazards and root causes.
3. Students will develop effective public health communication strategies to inform and educate.
4. Students will develop public health strategies to strengthen, support, and mobilize communities and partnerships.
5. Students will learn how to create, champion, and implement public health policies, plans, and laws.
6. Students will understand how to utilize public health legal and regulatory actions.
7. Students will identify avenues to enabling equitable health access.
8. Students will contribute to building a diverse and skilled public health workforce.
9. Students will develop strategies to improve and innovate through public health evaluation, research, and quality improvement.
10. Students will learn how to build and maintain a strong organizational infrastructure for public health.

The program-level learning outcomes associated with this course are #1 and #9.

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

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| --- | --- |
| **Program-Level Outcome 1 (from question #19)** | 1. Students will understand how to assess and monitor population health. |
| Assessment Measure | 1. Direct measure: Exam scores, homework assignment grades, written assignment grades 2. Indirect measure: Program exit surveys; Certified in Public Health exam pass rate (if data are available) |
| Assessment  Timetable | Annually |
| Who is responsible for assessing and reporting on the results? | Program director |

|  |  |
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| **Program-Level Outcome 2 (from question #19)** | 1. Students will develop strategies to improve and innovate through public health evaluation, research, and quality improvement. |
| Assessment Measure | 1. Direct measure: Exam scores, homework assignment grades, written assignment grades 2. Indirect measure: Program exit surveys; Certified in Public Health exam pass rate (if data are available) |
| Assessment  Timetable | Annually |
| Who is responsible for assessing and reporting on the results? | Program director |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

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| --- | --- |
| **Outcome 1** | 1. Students will learn about organization of data, types of measurement scales, and data quality. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

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| **Outcome 2** | 1. Students will differentiate between types of public health studies. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

|  |  |
| --- | --- |
| **Outcome 3** | 1. Students will understand and interpret frequency distributions. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

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| **Outcome 4** | 1. Students will learn about summary statistics, probability, and different types of probability distributions. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

|  |  |
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| **Outcome 5** | 1. Students will understand statistical inference, hypothesis testing, and confidence intervals. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

|  |  |
| --- | --- |
| **Outcome 6** | 1. Students will differentiate between statistical tests for continuous and categorical outcomes including *t*-tests, analysis of variance (ANOVA), correlation, regression, proportion difference, proportion ratio, and chi-square test of association. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

|  |  |
| --- | --- |
| **Outcome 7** | 1. Students will apply biostatistics knowledge to data interpretation. |
| Which learning activities are responsible for this outcome? | Students will complete homework assignments and exams to ensure they become competent in this outcome. |
| Assessment Measure | Exam scores, homework assignment grades |

*(Repeat if needed for additional outcomes)*

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

**From the 2022–2023 Online Undergraduate Bulletin**

# Course Descriptions

**Public Health**

PHLT 3203 - Biostatistics for Public Health **Sem. Hrs:** **3**

Principles of biostatistics and application of statistical methods used in public health and medical research. Concepts include descriptive data, probability distributions, hypothesis testing, group comparisons, measures of association, and regression; focus is on interpretation, rather than calculation.

Fall, Spring

Prerequisites: PHLT 1013 and STAT 3233