

**COURSE APPROVAL FORM, Graduate School  
University of Arkansas for Medical Sciences**

This form and attached materials are due in the Graduate School Office on the first Monday of the month. All forms will be submitted to the UAMS Graduate Council Curriculum Committee for review and approval prior to consideration by the Graduate Council.

This form is not required for minor stylistic or editorial corrections to the title or course descriptions. These may be made when revising the catalog copy.

1. **Program:** Department of Biomedical Informatics 

	D	B	M	I				
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*Department* *Alpha (Department) Code*

2. **Action proposed** (indicate one or more items): Effective term: Spring 2019

- Add course
- Eliminate course (No outline needed)
- Change title
- Change credit hours from: \_\_\_\_\_ to \_\_\_\_\_
- Change course number from: \_\_\_\_\_ to \_\_\_\_\_
- \_\_\_\_\_ Change description

3. **Course ID, title and description:**

B	M	I	G	5	1	0	3	<u>Population Information</u>
prefix				number				title (20 characters)

Foundations of BMI: Population Health Info

catalog name (40 characters)

Scheduled offering:  Fall  Spring  Summer  On demand

To cross list a course, use the Course Cross Listing Form.

Describe the course in sentence form using 50 words or less as it is to appear in the catalog. List prerequisites, co-requisites and possible off-site instructional opportunities or requirements.

As an introduction to the discipline of biomedical informatics, this course introduces Public and Population Health Informatics. The course will explore common information sources and uses in the domain, information-related challenges in the domain and application of Biomedical Informatics theories, methods and tools to overcome them.

4. **Justification:**

Justify this change in terms of course needs or curriculum improvement. State the effect of this change on any degree programs. Identify the courses to be eliminated, if any, if this course is approved. (Course Approval Forms must also be submitted for these courses) Identify any existing course or courses that would extensively overlap or be duplicated if the proposed curricular change occurs. Provide statements of concurrence with the change from the chairperson(s) and dean(s) of the programs/areas offering the affected courses.

Topics covered include the role of informatics in disease prevention, surveillance and epidemiology, toxicology and environmental health, health promotion and behavior change at local, state, national and global levels. Public health communication and dissemination, and public health policy are also covered which provide a foundation for the higher level courses in our curriculum.

# **INSTRUCTIONS FOR COMPLETION OF THE UAMS GRADUATE SCHOOL COURSE APPROVAL FORM**

1. Please save this PDF to your computer for editing.
2. The form has been designed with fields for your responses, and these are indicated in blue and gray shading. Please complete all fields. Use the “tab” key to move between fields. A ‘beep’ will sound if you attempt to enter a response that contains more characters than is permitted. **IF YOU NEED HELP IN ANY OF THE FIELDS, PRESS THE F1 KEY AND A HELP WINDOW WILL OPEN.**
3. Print the document, and then obtain the appropriate signatures before submitting the form to the Graduate Office.

**SYLLABUS**

**COURSE NUMBER:** BMIG 5103

**COURSE TITLE:** Foundations of BMI: Population Health Information

**COURSE DESCRIPTION:**

As an introduction to the discipline of biomedical informatics, this graduate course introduces Public and Population Health Informatics. The course will explore common information sources and uses in the domain, information-related challenges in the domain and application of Biomedical Informatics theories, methods and tools to overcome them. Topics covered include the role of informatics in disease prevention, surveillance and epidemiology, toxicology and environmental health, health promotion and behavior change at local, state, national and global levels. Public health communication and dissemination, and public health policy are also covered.

**PRE-REQUISITES:** None

**GENERAL INFORMATION:**

**CREDITS:** 2 credit hours

**SEMESTER:** Spring

**LOCATION:** Campus and Online (hybrid)

**FACULTY:** Meredith Zozus, PhD

**SPECIAL ASSISTANCE:** Students who believe they may need accommodations in this class based on mental or physical impairments must contact the Associate Dean for Academic Affairs at (501) 686-5730 to schedule an appointment to discuss your needs. Please make arrangements as soon as possible so accommodations can be made in a timely manner.

**COURSE OBJECTIVES:**

Upon successful completion of this course, the student is able to:

1. Compare and contrast public health informatics with other domains of Biomedical Informatics
2. Describe the major Public Health challenges and explain the role of informatics in each.
3. Describe the information and workflows common in major areas of Public Health and the information system functionality needed to support them.
4. Describe the common institutional, state, national and international Public Health data sources and their uses in Public Health Practice.
5. Describe the data standards used in the public health domain
6. Discuss privacy, confidentiality and ethics challenges in the public health domain
7. Analyze intervention opportunities and specify data, workflow and data flow requirements to address informational needs in public health contexts
8. Design evaluative studies of information interventions in public health.

**MAJOR TOPICS:**

**Introduction to the Discipline**

Definition of Public and Population Health Informatics as a discipline  
 History of Public and Population Health Informatics  
 Careers and Professional organizations in Public and Population Health Informatics  
 Centers for Disease Control (CDC) PHI competencies

**Major Challenges and Approaches in Public and Population Health Informatics**

Disease surveillance and outbreak detection  
 Information system development, acquisition and maintenance in public health settings  
 Information exchange in public health settings  
 Secondary data use in population health and outcomes assessment  
 Health information provision and use in community settings  
 Health research in community settings  
 Information use in changing health behaviors  
 Workforce development

**Data, Concepts, Principles, Theories and Methods**

Public Health and Population National Datasets and sources  
 Workflow and data flow (information system functionality) in PHI  
 Data content and standards in PHI  
 Registry and measure standards in Population Health  
 Emerging role of HIE in PHI  
 Signal detection  
 Mining structured and narrative data  
 Record linkage

**Discussion forum posts:** Discussion forum posts require engagement with other students and responses to the posts of others. A successful discussion forum post shows your understanding of the relevant material as well as your ability to critically and constructively evaluate the posts of others toward a better overall treatment of the topic. If you agree with the post of another student; state why you agree. If you disagree; state why. If you can offer an additional perspective on the topic or contribute to improving the treatment of the topic, please do so – the point is to as a group, fully characterize the assigned topic. The following table is provide as a guide to successful participation in the discussion forums for the course.

	<b>Characteristics of Individual Discussion Forum Posts</b>	<b>Points</b>
No value	No entry, late entry after deadline, simple agreement	0
Simple Comment	Response(s) indicates no evidence of interaction with other participants' postings.	0
Static Comment	Response(s) shows evidence of a connection with other participants' postings but does not move the conversation forward in a meaningful way; does not enhance or expand the discussion.	0.5
Generative Comment	Response(s) builds on the ideas of other participants and digs deeper into assignment questions or issues. New material (beyond assigned readings) may be introduced. An example from a personal or professional experience provides a new perspective on, facet of, or avenue for exploration within the forum.	1
Collaborative and Synthesizing Comment	Response(s) integrates multiple views or shows value as a seed for reflection by other participants' responses in its thread. Alternatively, the response contributes content that serves to deepen the dialogue. Such threads moderate and synthesize the discussion for all.	1.5

Points are assigned by the week. You can earn additional points for exceptional (collaborative and synthesizing posts) up to a maximum of 5 extra credit points toward the course total of 100 total points.

**Weekly quizzes:** Weekly quizzes are a formative evaluation, i.e., they are meant to help you check and improve your learning. For this reason, points missed on weekly quizzes can be earned back through a second attempt.

**Course Project:** Present an overview in poster format of your assigned Biomedical Informatics History topic. Describe the theories and pioneering people and systems, application area or BMI challenge addressed, and how the advance reflected the Tower of Achievement and achieved the Fundamental Theorem.

**EVALUATION:**

This is a graded course. Grades will be assigned separately for the didactic and lab portion of the course based on the course average according to the following scale: A (93-100), B (85-92), C(75-84), D(65-74), Fail (lower than 64).

The course average for the didactic portion of the course will be comprised of course assignments, weekly quizzes, the course project, and the final exam. The didactic portion of the course represents three of the four credit hours.

Assignments.....	10%
Weekly quizzes.....	20%
Course project.....	20%
Final exam.....	25%
Lab .....	25%

The grades for the assignment, weekly quiz, and lab portions of the course will be averaged and evenly weighted. The lab portion of the course represents one of the four credit hours, thus, one fourth of the course grade.

**ACADEMIC HONESTY:**

Academic honesty is expected at all times. All graded work must be your own unless otherwise specified in the assignment. Fair credit must be given to others for their work on team assignments by including a statement of contributorship (see ICMJE guidelines for authorship).

Academic dishonesty such as but not limited to cheating, plagiarism, using the work of others without permission and acknowledgement and forgery will result in an automatic zero for the assignment and may result in a failing grade in the course, loss of graduate funding and dismissal from your degree program.

**TEXTBOOKS:**

Magnuson JA, Fu PC eds. Public Health Informatics and Information Systems, 2<sup>nd</sup> Ed. Springer-verlag, London 2014.

Link to UAMS Online Bookstore: <http://uams.textbookx.com/institutional/index.php?action=browse#books/1552684/>

Course Approval Form

5. Program Approvals:

Fred Prior, PhD, Department of Biomedical Informatics  
(Print or type) Chairperson, Academic Department or Area

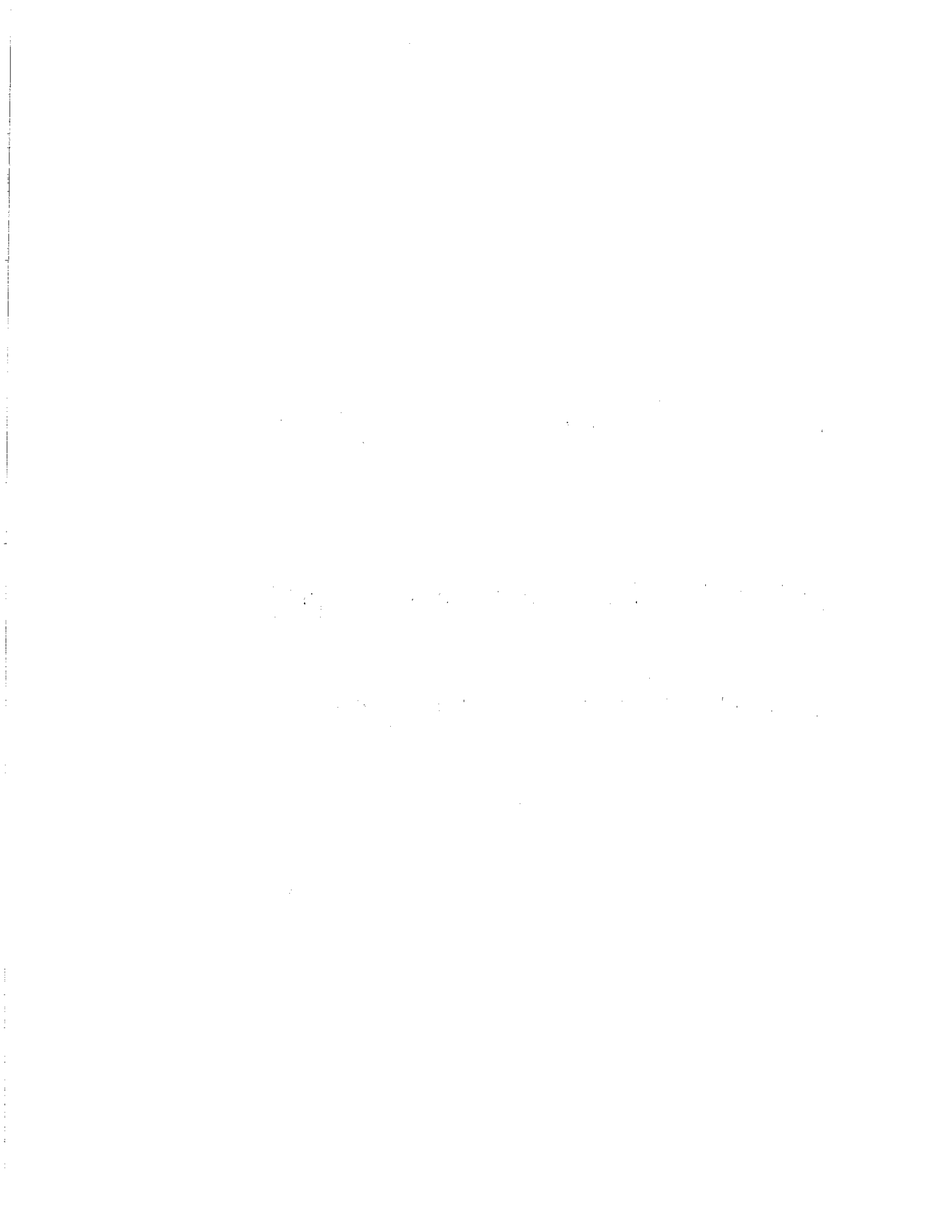
Fred Prior 04/30/2018  
(Signature) Chairperson, Academic Department or Area Date

Robert M. McGehee 5/23/2018  
College Dean (Dean McGehee for College of Medicine) Date

6. Graduate School Approvals

REM for Dr. Carl Peterson 5/23/2018  
Chairperson, Graduate Council Date

Robert M. McGehee 5/23/2018  
Dean of the Graduate School Date





**University of Arkansas for Medical Sciences  
Office of the University Registrar  
GUS Course Catalog Form**

This form should be used for courses offered at UAMS. If a course addition will change the curriculum for one or multiple degree plans, you will be asked to update a curriculum template for each degree program affected. Please remember to submit a copy of the syllabus with this form.

**Course Changes and Additions Submission Timeline**

Fall Semester            February 1<sup>st</sup> (same calendar year)  
Spring Semester        September 1<sup>st</sup> (preceding calendar year)  
Summer Semester      December 1<sup>st</sup> (preceding calendar year)

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This request is for a:    New Course             Course Change             Course Retirement  (skip to p. 4)

College: Graduate School

Department/Program: Biomedical Informatics

Course Title: Foundations of BMI: Population Health Information

Course Description: As an introduction to the discipline of biomedical informatics, this course introduces Public and Population Health Informatics. The course will explore common information sources and uses in the domain, information-related challenges in the domain and application of Biomedical Informatics theories, methods and tools to overcome them. Topics covered include the role of informatics in disease prevention, surveillance and epidemiology, toxicology and environmental health, health promotion and behavior change at local, state, national and global levels. Public health communication and dissemination, and public health policy are also covered.

Course Instructor: Meredith Zozus, PhD

Course Instructor Email: mzosus@uams.edu      Course Instructor Phone: (501) 603-1766

Additional Instructors: [Click here to enter additional instructor names and email addresses](#)

*[Click here to enter additional instructor names and email addresses](#)*

*[Click here to enter additional instructor names and email addresses](#)*

**GENERAL COURSE INFORMATION**

First term course will be offered/changed:    Fall             Spring             Summer

First year course will be offered/changed: Spring 2019

Meeting dates differ from standard semester? Yes  No

If yes, describe meeting pattern: (i.e. last 4 weeks of semester, 8 Wednesdays beginning 2<sup>nd</sup> week, etc.)

Grading Basis: Letter Grade                      Number of Units: 2

If Variable Credit, list the maximum number of units: *Choose an item.*

Component Type: *Lecture*

Repeat for credit? Yes     No

If yes, limit to number of enrollments allowed per student: *[Click here to enter max enrollments.](#)*

Preferred Catalog Number: BMIG 5103

\*Note: Preferred Catalog Numbers are not guaranteed to be used.

## ENROLLMENT CONTROLS

### PREREQUISITES

Subject Area	Catalog #	Course Title	Course ID (if known)
			<i>Course ID</i>
			<i>Course ID</i>
			<i>Course ID</i>
			<i>Course ID</i>

### CO-REQUISITES

Subject Area	Catalog #	Course Title	Course ID (if known)
<i>Subj. Area</i>	<i>Catalog #</i>	<i>Course Title</i>	<i>Course ID</i>
<i>Subj. Area</i>	<i>Catalog #</i>	<i>Course Title</i>	<i>Course ID</i>
<i>Subj. Area</i>	<i>Catalog #</i>	<i>Course Title</i>	<i>Course ID</i>
<i>Subj. Area</i>	<i>Catalog #</i>	<i>Course Title</i>	<i>Course ID</i>

Please list any other non-course prerequisites attached to this course (e.g. minimum GPA, exam, year in program)  
*Click here to enter text.*

Minimum Number of Students to Enroll: *Click to enter number*

Maximum Number of Students who may Enroll: *Click to enter number*

Is enrollment in this course limited to certain groups of students (i.e. PhD students only)? Yes  No

Please describe enrollment limits by groups: *Click here to enter max enrollments.*

Is advisor or instructor consent required for students to take this course? No consent required

## INSTRUCTION MODE

Please provide information about the first semester this course will be offered. You will have the opportunity to change this information if this form is provided prior to the last date for scheduling requests.

### INSTRUCTION INFORMATION

Instruction Mode: *Online - 51-4% some face/face*

FOR ONLINE COURSES ONLY: Will this course be offered to students out of state? Yes  No

Please select all locations where this course will be taught:

Main Campus  Northwest Campus  UAMS Southwest  Other

If "Other" Location, please describe: *Click here to enter text.*

### EXAM AND PROGRESSION

Will the course have a final exam? Yes  No

Will the final exam occur during the normally scheduled course time? Yes  No

Is there a minimum grade required for the student to progress? Not Required

## ADDITIONAL INFORMATION

Are any degrees affected by this course addition? Yes  No

If "Yes," please list all degrees affected by this change: Certificate, MS, and PhD program in Biomedical Informatics

### Does this course address/include:

Service Learning <sup>1</sup> :	Partially <input type="checkbox"/>	100% <input type="checkbox"/>	Does not address <input type="checkbox"/>
Inter-professional Education <sup>2</sup> (IPE)	Partially <input type="checkbox"/>	100% <input type="checkbox"/>	Does not address <input type="checkbox"/>
Cultural competency <sup>3</sup>	Partially <input type="checkbox"/>	100% <input type="checkbox"/>	Does not address <input type="checkbox"/>
Patient-Family Centered Care <sup>4</sup>	Partially <input type="checkbox"/>	100% <input type="checkbox"/>	Does not address <input type="checkbox"/>
Interdisciplinary Education <sup>5</sup>	Partially <input type="checkbox"/>	100% <input checked="" type="checkbox"/>	Does not address <input type="checkbox"/>

### ADDITIONAL INFORMATION:

<sup>1</sup> A structured learning experience that combines community service with preparation and reflection. Students engaged in service-learning provide community service in response to community-identified concerns and learn: the context in which the service is provided, the connection between their service and their academic coursework, and their roles as citizens.

<sup>2</sup> Defined as students of two or more professions engaged in learning with, from and about each other.

<sup>3</sup> An ability to interact effectively with people of different cultures and ethnic backgrounds. Comprises four components: Awareness of one's own cultural worldview, attitude towards cultural differences, knowledge of different cultural practices and worldviews, and cross-cultural skills. Developing cultural competence results in an ability to understand, communicate with, and effectively interact with people across cultures.

<sup>4</sup> An approach to the planning, delivery, and evaluation of health care that is grounded in mutually beneficial partnerships among health care providers, patients, and families. It redefines the relationships in health care. The core concepts include: Dignity and respect, information sharing, participation, and collaboration.

<sup>5</sup> Defined as the degree to which individuals have the capacity to obtain, process and understand basic health information and services need to make appropriate health decisions.

*Click here to enter text.*

**COURSE RETIREMENT ONLY – Course Additions and Changes can skip to pg. 5**

College: *Choose an item.*

Department/Program: *Click here to enter text.*

Course Title: *Click here to enter the current title.*

Catalog Name and Number: *Click here to enter text.*

Course ID (if known): *Click here to enter text.*

What semester and year will this course be retired? *Click here to enter text.*

Are any degrees affected by this course retirement? Yes  No

If "Yes," please list all degrees affected by this change (updated Curriculum Templates for any degree that will change as a result of this retirement are required to be submitted to the Office of the University Registrar):

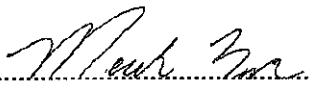
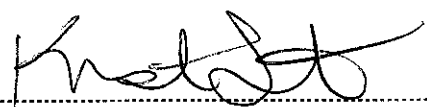
*Click here to enter text.*

**ADDITIONAL INFORMATION:**

*Click here to enter text.*

**APPROVALS**

Proposal will not be processed without all required signatures.

 ..... Course Instructor signature	Meredith Zozus, PhD
 ..... Associate Dean signature	Kristen Sterba, PhD
Today's Date: April 26, 2018 Preparer's Email: tbwilliams@uams.edu	Preparer's Name: Tremaine Williams

**Please submit this form and a copy of the syllabus to:**

Angela Wilson, Registrar  
**Email:** [awilson5@uams.edu](mailto:awilson5@uams.edu)  
**Mail Slot #767**  
Questions? 501-526-6612

<p><b>Office use only</b></p> Received: _____ Entered into GUS <input type="checkbox"/> Entered into Schedule of Courses <input type="checkbox"/> Curriculum Registrar Initials: ____ Schedule Registrar Initials: ____	<p><b>Notes/Follow-up:</b></p>
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