

Background Information

Provide a detailed description of the proposed modification, including its nature and purpose and centrality to institutional mission. (1500 characters)

This program modification seeks to:

1. Add a non-thesis 30 credit hour option to the existing MS in Applied Health Research & Evaluation (AHRE) degree; and
2. Add the University Center at Greenville (UCG) as a delivery site for both the MS and PhD AHRE degrees.

UCG is the current delivery site for the department's Graduate Certificate in Clinical and Translational Research; a program designed primarily for the health care professionals in the Greenville Health System (GHS). Adding UCG as a delivery site for both the MS and PhD, coupled with our graduate certificate classes, allows the department to expand the enrollment of existing graduate courses. The larger classes also will improve teaching effectiveness as there will be sufficient numbers of students to support team-based learning and small group interactions.

The department will be able to assist students enrolled in the current graduate certificate to move into the non-thesis master's program by building on the credit hours earned in the certificate, creating an expanded educational pathway for existing students (e.g. GHS physicians, nurses, and research staff) into the master's programs.

Overall, these changes will reduce initial implementation costs in not having to add new classes or sections until the non-thesis option of the MS program has grown beyond current capacity. Finally, this request will allow the department to expand its Greenville presence to other healthcare related partners.

List the objectives of the modified program. (1500 characters)

The proposed non-thesis option to the MS degree program aligns with the Clemson University Clemson Forward strategic plan and serves the students in the following ways:

- Prepares students to conduct health innovation research; one of the six primary research focus themes of the plan.
- Enhances the research skills of employed physicians, nurses, and research support staff to develop rigorous protocols and obtain extramural research funding.
- Advances graduate education goals by reducing barriers to cross-disciplinary graduate degrees; the AHRE degree is cross-disciplinary by design.

The program is committed to scientific inquiry and focuses on developing applied health research and evaluation knowledge and skills. The learning framework combines rigorous instruction in the collection, analysis, and interpretation of health data, and practical experience in applying these tools and methods to improve health systems performance and population health. The curriculum includes a core of conceptual courses that foster a

thorough understanding of health issues and contemporary technical issues in healthcare delivery and population health. The combination of a strong conceptual framework, advanced research skills, and application to a cognate area (outside the department) is designed to provide graduates with a depth and breadth of knowledge in applied health research and evaluation that makes them highly competitive for employment in both academia and the applied health research community.

Assessment of Need

Provide an assessment of the need for the program modification for the institution, the state, the region, and beyond, if applicable. (1500 characters)

There is a nationally recognized need for researchers skilled in rigorously evaluating clinical and population health data, capable of working across traditional disciplinary boundaries. Our MS program is designed to prepare graduates with the core competencies of applied health research, balancing instruction in the determinants and disparities of population health with rigorous methodological training in several key disciplines supporting the practical application of research. Graduates will provide leadership in research that is essential to health-related programs in private and public sectors. Occupations with comparable skills predict growth between years 2010-2020: Statisticians 14%, Actuaries 27%, Market research analyst 41%, Operations research analysts 15%, Survey research 24%, Epidemiologist 24%, and Medical scientists 36%. Knowledge and skill in the areas of applied statistics, mathematics, social and behavioral sciences, epidemiology, health systems and services, research and evaluation design, and survey methodology are all emphasized in the MS program. Professionals with such training are in high demand in state and federal agencies, private research and evaluation firms, academia, and in health systems. The MS program embraces Clemson University goals to serve the public good by focusing on one of the great challenges of the 21st century—the maintenance and improvement of population health.

Will the proposed modification impact any existing programs and services at the institution?

Yes

No

If yes, explain. (1000 characters)

List of Similar Programs in South Carolina

Program Name	Institution	Similarities	Differences
Master of Public Health	University of South Carolina	1-2 courses may overlap (e.g., health systems, epidemiology)	The USC MPH mandates 45 credit hours as compared to our proposed MS (30 credit hours). Further, our MS in AHRE provides targeted graduate courses appropriate to applied health research.
Master of Public Health	Medical University of South Carolina	1-2 courses may overlap (e.g., health systems, epidemiology)	MUSC's master's degree has a different program focus, it has 3 distinct tracks: Biostatistics, Epidemiology, or Health Behavior and Promotion. MPH has 45 credit hours (as compared to our proposed MS (30 credit hours) and requires a practicum and/or thesis. Further, our MS in AHRE provides targeted graduate courses appropriate to applied health research.

Description of the Program

Projected New Enrollment						
Year	Fall		Spring		Summer	
	Headcount	Credit Hours	Headcount	Credit Hours	Headcount	Credit Hours
2017/18	7	54	7	51	7	9
2018/19	18	135	18	126	18	27
2019/20	27	201	27	186	27	39
2020/21	31	225	31	204	31	45
2021/22	35	249	35	222	35	51

Enrollment estimates:

Growth is anticipated in both a full-time and part-time options for the non-thesis MS program. The full-time program will attract students regionally who desire to pursue careers in research or those students who are in a gap year between undergraduate education and professional school (e.g. medical, dental, allied health, advanced nursing). We also anticipate creating a BS-MS accelerated program for top Clemson students. (The combined BS/MS option allows undergraduate students meeting criteria for advanced work to take courses toward their MS degree before completing the undergraduate degree.) The part-time option will be pursued by students completing our graduate certificate program and those employed in a variety of health professions (e.g. physicians, nurses, insurance, non-profit foundations, data analysts, population health employees) in the greater Greenville and Spartanburg area. Early recruitment will come from the upstate region, however, the MS program will also attract interest globally.

Curriculum

Attached are the curriculum sheets identifying the courses required for both the MS and PhD programs.

Curriculum Changes

Courses Eliminated from Program	Courses Added to Program
None	None

Faculty

Provide a brief explanation of any additional institutional changes in faculty and/or administrative assignment that may result from implementing the proposed program modification. (1000 characters)

Existing faculty will teach the MS Applied Health Research and Evaluation program. No additional faculty will be hired for this program. The department has allocated 25% FTE time of a lecturer (John T. Long, PhD) to serve as the MS program coordinator. The coordinator's role is primarily administrative in nature.

Resources

Identify any new library/learning resources, new instructional equipment, and new facilities or modifications to existing facilities needed to support the modified program. (2000 characters)

No new learning resources are required for this modification.

Financial Support

Estimated New Costs by Year						
Category	1st	2nd	3rd	4th	5th	Total
Program Administration	19,526	20,024	20,537	21,064	21,607	102,758
Faculty & Staff Salaries	13,703	94,232	96,644	113,907	116,840	435,326
Graduate Assistants						-
Equipment						-
Facilities	9,580	29,189	44,119	53,414	62,519	198,820
Supplies & Materials	7,411	11,578	11,841	12,850	13,146	56,827
Library Resources						-
Other Admin Cost	23,733	49,742	68,052	78,252	87,422	307,201
Total	73,953	204,765	241,192	279,487	301,534	1,100,933
Sources of Financing						
Category	1st	2nd	3rd	4th	5th	Total
Tuition Funding	51,610	149,885	233,503	291,577	332,018	1,058,594
Program-Specific Fees Diff+Lab						-
State Funding (i.e., Special State Appropriation)						-
Reallocation of Existing Funds	19,526	20,024	20,537	21,064	21,607	102,758
Federal Funding						-
Other Funding						-
Total	71,137	169,909	254,040	312,642	353,625	1,161,352
Net Total (i.e., Estimated New Costs)	(2,817)	(34,856)	12,847	33,154	52,091	60,419

*Provide an explanation for these costs and sources of financing in the budget justification.

Budget Justification

Provide a brief explanation for the other new costs and any special sources of financing (state funding, reallocation of existing funds, federal funding, or other funding) identified in the Financial Support table. (1000 characters)

Note: Institutions need to complete this budget justification *only* if any other new costs, state funding, reallocation of existing funds, federal funding, or other funding are included in the Financial Support table.

An estimated \$10,000 in recruitment costs will be required in 2016/17, increasing to \$18,000 in 2017/18 to promote awareness and recruit students. The UCG has agreed to split (50/50) the cost of electronic marketing in the greater Greenville and Spartanburg areas.

The existing space at the UCG will be leveraged for this program delivery in Greenville.

Based on projected growth, we will need to begin adding new sections of core graduate courses by about 2018/2019. This date might shift due to the projected student demand for these courses by students from the proposed Joint PhD in Biomedical Data Science & Informatics degree with MUSC. An existing department administrative staff member is being assigned 50% FTE to serve as the Graduate Student Services Coordinator; funded through existing department resources. By 2018, we anticipate the need for this position to be full-time supporting all of our graduate programs. As a result, we will need to hire an additional staff support person for the department to backfill the administrative position (\$48,000).

Evaluation and Assessment

Will any the proposed modification impact the way the program is evaluated and assessed?

- Yes
 No

If yes, explain. (1000 characters)

Will the proposed modification affect or result in program-specific accreditation?

- Yes
 No

If yes, explain; if the modification will result in the program seeking program-specific accreditation, provide the institution's plans to seek accreditation, including the expected timeline for accreditation. (500 characters)

Will the proposed modification affect or lead to licensure or certification?

- Yes
 No

ACAP
11/17/16
Agenda Item 5a

If yes, explain how the program will prepare students for licensure or certification. (500 characters)

Teacher or School Professional Preparation Programs

Is the proposed modified program a teacher or school professional preparation program?

- Yes
- No

If yes, complete the following components.

Area of Certification

Attach a document addressing the South Carolina Department of Education Requirements and SPA or Other National Specialized and/or Professional Association Standards.

**Applied Health Research and Evaluation
Master of Science (non-thesis option)**

CORE courses (18 hours)

- HLTH 8110 – Health Care Delivery Systems (3)
- HLTH 8090 – Epidemiological Research (3)
- HLTH 8210 – Health Research Design and Measurement (3)
- HLTH 8030 – Theory & Determinants of Health (3)
- HLTH 8410 – Foundation of Evaluation in Health (3)
- HLTH 8310 – Quantitative Analysis in Health Research (3)

COGNATE (12 hours) – *cognate comprised of elective courses planned by student and academic advisor and approved by the Department's Director of Graduate Studies (e.g., HLTH 8120 Clinical & Translational Science, HLTH 8140 Health Systems Quality Improvement, HLTH 8130 Population Health & Research, HEHD 8080 Grantsmanship, STAT 8030 Regression & Least Squares Analysis)*

**Applied Health Research and Evaluation
Doctor of Philosophy**

CORE courses (36 hours)

- HLTH 8030 – Theory & Determinants of Health (3)
- HLTH 8110 – Health Care Delivery Systems (3)
- HLTH 8090 – Epidemiological Research (3)
- HLTH 8290 – Epidemiology II: Applied Epidemiology (3)
- HLTH 8210 – Health Research I: Design and Measurement (3)
- HLTH 8220 – Health Research II: Qualitative & Mixed Methods (3)
- HLTH 8410 – Foundation of Evaluation in Health (3)
- HLTH 8420 – Applied Evaluation Methods in Health (3)
- HLTH 8310 – Quantitative Analysis in Health Research I (3)
- HLTH 8320 – Quantitative Analysis in Health Research II (3)
- HLTH 8890 – Doctoral Seminar (1 credit course, repeated 6 times)

COGNATE (12 hours) – *cognate comprised of elective courses planned by student and academic advisor and approved by Director of Graduate Studies (e.g., HLTH 8120 Clinical & Translational Science, HLTH 8140 Health Systems Quality Improvement, HLTH 8130 Population Health & Research, HEHD 8080 Grantsmanship, STAT 8030 Regression & Least Squares Analysis)*

DISSERTATION (18 hours)

- HLTH 9910 – Dissertation Research (minimum of 18 hours)

Since we have discussed the certificate program in the proposal as “stackable”, we thought it might be helpful to see the requirements of the certificate. Two of the three core courses are core in the MS non-thesis. The third core course might be used as part of the MS cognate, as would the remaining hours selected. Thus a student completing the certificate would have made “progress” toward the 30 hour non-thesis degree.

Clinical and Translational Research Graduate Certificate (12 credit hours)

CORE courses (8 hours)

- HLTH 8120 – Clinical & Translational Science (2)
- HLTH 8210 – Health Research I: Design and Measurement (3)
- HLTH 8090 – Epidemiological Research (3)

COGNATE (4 hours) – *cognate comprised of elective courses planned by student and academic advisor and approved by Director of Graduate Studies (e.g., HLTH 8140 Health Systems Quality Improvement, HLTH 8130 Population Health & Research, MTHSC 8050 Data Analysis, MTHSC 8070 Applied Multivariate Analysis)*