New Program Proposal
Master of Science in Nursing, Nursing Informatics
University of South Carolina

Executive Summary

The University of South Carolina requests approval to offer a program leading to the Master of Science in Nursing in Nursing Informatics, to be implemented in Fall 2018. The proposed program is to be offered through online instruction. The chart below outlines the stages of approval for the proposed program. The Advisory Committee on Academic Programs (ACAP) voted to recommend approval of the proposal. The full program proposal and support documents are attached.

<table>
<thead>
<tr>
<th>Stages of Consideration</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Proposal Received</td>
<td>12/21/17</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>ACAP Consideration</td>
<td>3/29/18</td>
<td>The University of South Carolina representative discussed the need for the program and explained that informatics is now considered an essential skill for nursing. ACAP members discussed the differences between nursing informatics and health informatics, stating that most systems currently used in healthcare settings were designed by informaticists with no clinical experience and therefore are not designed for caring for patients nor accounting for patient flow. The University’s representative then noted how the proposed program includes the clinical perspective. When asked about plans to embed this type of instruction in the bachelor’s degree program in nursing, the USC representative stated faculty are looking at ways to integrate nursing informatics components in that program. The representative also commended the College of Nursing for offering high quality online programs while specifically commenting about instructional design and student support services. Members also commented on the great need for health informatics in the state. Following the discussion, ACAP members voted to recommend the program proposal.</td>
</tr>
</tbody>
</table>
| Comments, questions, and suggestions from CHE staff sent to the institution | 4/2/18 | Staff requested revisions to address the following questions as discussed at ACAP or transmitted afterward:
- Identify a CIP Code (510706, 512706, or 513899 are among possible options);
- Provide the Board of Trustees approval date;
- Clarify the difference between nursing informatics and health informatics;
- Provide program objectives in addition to student learning objectives;
- Identify the health care partners that requested the program; |
Stages of Consideration | Date | Comments
--- | --- | ---
• Include SC-specific data in the employment opportunities table, if available;  
• Identify all faculty who will teach in the program and describe any changes in faculty assignment or teaching responsibilities as a result of the proposed program;  
• Describe facilities that will support the proposed program; and  
• List all program-specific fees in the Budget Justification and state what they are used for as well as explain how the net loss in the first year will be covered.

Revised Program Proposal Received | The revised proposal addressed the questions and request for revisions; however, while more information about nursing informatics was included, additional information is needed to clarify the differences between nursing informatics and health informatics. In addition, a CIP Code has not yet been identified for the program.

Recommendation
The staff recommends the Committee on Academic Affairs and Licensing approve the program leading to Master of Science in Nursing in Nursing Informatics, pending the requested CIP code and remaining informatics clarification, to be implemented in Fall 2018.

Additional Information

University of South Carolina Student and Program Data

| Graduate In-/Out-of-State Enrollment, Fall 2017 | 4,694 (56.09%) / 3,675 (43.91%) |
| Number of Approved Programs in 10 Yrs. (FY 2007-2017) | 40 |
| Number of Terminated Programs in 10 Yrs. (FY 2007-2017) | 46 |

Industry related Occupational Wages and Projections in South Carolina, 2014 – 2024*

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Healthcare Practitioners and Technical</td>
<td>$56,870</td>
<td>119,610</td>
<td>135,862</td>
<td>16,252</td>
<td>1.28%</td>
<td>13.59%</td>
</tr>
</tbody>
</table>

¹ "Occupational Field" represents the closest related occupation category that includes the occupations aligned with the program proposal.

* Data downloaded April 27, 2018
Name of Institution
The University of South Carolina
College of Nursing

Name of Program (include concentrations, options, and tracks)
Masters of Science in Nursing; Nursing Informatics

Program Designation
☑ Associate’s Degree
☐ Bachelor’s Degree: 4 Year
☐ Bachelor’s Degree: 5 Year
☐ Doctoral Degree: Research/Scholarship (e.g., Ph.D. and DMA)
☐ Doctoral Degree: Professional Practice (e.g., Ed.D., D.N.P., J.D., Pharm.D., and M.D.)

Does the program qualify for supplemental Palmetto Fellows and LIFE Scholarship awards?
☐ Yes
☒ No

Proposed Date of Implementation
Fall 2018

CIP Code: TBD

Delivery Site(s)
USC Columbia

Delivery Mode
☐ Traditional/face-to-face*
☐ 100% online
☐ Blended (more than 50% online)
☐ Other distance education

Program Contact Information (name, title, telephone number, and email address)
Kristen Starnes-Ott, PhD, CRNA
Associate Dean for Academics
starnes2@mailbox.sc.edu
803-777-9505

Submitted with track changes per CHE request 4/16/2018 to Dr. Tena Crews

Institutional Approvals and Dates of Approval
USC College of Nursing Approval: May 26, 2017
USC Graduate Council Science Committee: September 22, 2017
USC Graduate Council: September 26, 2017
University of South Carolina Board of Trustees: December 20, 2017
Background Information

State the nature and purpose of the proposed program, including target audience and centrality to institutional mission. (1500 characters)

The primary mission of the University of South Carolina – Columbia is the education of the state’s citizens through teaching, research, creative activity, and community engagement. The Masters of Science in Nursing Informatics (NI) helps achieve that mission. The MS in NI serves the needs of both patient and nursing populations within the state of South Carolina. Nursing informatics is no longer an emerging specialty, but rather is one of the most needed skill sets within the nursing and health professions. Informatics in health care is the management of information and technology to improve health care quality, patient safety, efficiency, and patient outcomes. Nursing informatics (NI) is the specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. NI supports nurses, consumers, patients, the interprofessional healthcare team, and other stakeholders in their decision-making in all roles and settings to achieve desired outcomes. This support is accomplished through the use of information structures, information processes, and information technology- Nursing Informatics: Scope and Standards of Practice, 2nd Edition, ANA 2015. Nursing informatics integrates nursing science, computer science, and informatics science to manage and communicate data, information, knowledge and wisdom in nursing practice. This program will integrate the American Nurses Credentialing Center’s (ANCC) informatics nursing specialty certification content to include the following domains of practice: foundations of practice, system design life cycle, and data management and health care technology. Nurses graduating from this program will be employed in positions such as clinical analyst, informatics nurse specialist, director of clinical informatics, clinical informatics coordinator, clinical transformation specialist, clinical informatics educator, Chief Nursing Informatics Officer, etc.

List the program objectives. (2000 characters)

Program objectives for the nursing informatics program include:
1. Evaluate measures to support and integrate nursing informatics into inter-professional teams to include team leadership, building effective teams, and nurturing teams.
2. Examine outcome data using current communication technologies, information systems, and statistical principles to develop strategies to reduce risk and improve health outcomes.
3. Discuss human-computer interaction, usability, ergonomics, change management, project management, and concepts related to the life cycle of information systems.
4. Assumes an informatics practice role via the completion of an informatics project during an immersion informatics experience in a practice setting with an informatics mentor.
5. Analyze information-communication technology strategies to improve care delivery, change policy, and provide oversight and guidance in the integration of information and technology in practice.

Students learning objectives in the master’s in nursing informatics program acquire
A. knowledge and skills required for advanced nursing practice.
B. the ability to apply theory and research in informatics practice.
C. informatics competencies for advanced nursing practice.
Assessment of Need

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

The state of South Carolina’s public university system does not currently offer a master’s degree with the nursing informatics specialty. The USC College of Nursing’s health care partners including Palmetto Health and Dorn Veteran’s Administration Healthcare within the state of South Carolina have requested and supported the program proposal. Although our intentions are to serve the needs within the state of South Carolina, the program will be offered online and can serve the needs of the southeast, as well as the nation. According to the 2017 Nursing Informatics Workforce Survey, only 23% of informatics nurses in the United States have reported having a master’s degree in nursing informatics (http://www.himss.org/sites/himssorg/files/2017-nursing-informatics-workforce-full-report.pdf ). The American Association of Colleges of Nursing published a Graduate-Level Quality and Safety Education in Nursing (QSEN) Competencies report on September 24, 2012 with informatics identified as one of the key competencies in nursing education (http://www.aacnnursing.org/Portals/42/AcademicNursing/CurriculumGuidelines/Graduate-QSEN-Competencies.pdf ). Informatics is a newer specialty to the nursing profession. Offering this specialty area will advance the University of South Carolina as well as provide services to the state of South Carolina that have been identified as a nursing specialty gap in academia and practice.

Employment Opportunities

Is specific employment/workforce data available to support the proposed program?

☑ Yes
☐ No

If yes, complete the table and the component that follows the table on page 4. If no, complete the single narrative response component on page 5 beginning with “Provide supporting evidence.” The evidence below is supported, in part, by the national informatics association workforce survey completed in 2017. The reference to the workforce survey data is http://www.himss.org/library/2017-nursing-informatics-workforce-survey-data-slides. A copy of the data in also attached for quick reference.

<table>
<thead>
<tr>
<th>Employment Opportunities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupation</strong></td>
<td><strong>Expected Number of Jobs</strong></td>
</tr>
<tr>
<td>Nurse Informatics Specialist/Analysts</td>
<td>70,000 in 5 years</td>
</tr>
<tr>
<td>Vender/Consultants</td>
<td>61% reported openings</td>
</tr>
</tbody>
</table>
Healthcare Provider IT positions | 43% reported openings | 42% workforce increase | *2017 HIMSS Leadership and Workforce Survey
---|---|---|---
Hospital IT positions | 61% reported openings | 53% workforce increase | *2017 HIMSS Leadership and Workforce Survey
Ambulatory IT positions | 32% reported openings | 39% workforce increase | *2017 HIMSS Leadership and Workforce Survey
Long-term/Post-acute care IT positions | 14% reported openings | 24% workforce increase | *2017 HIMSS Leadership and Workforce Survey


Provide additional information regarding anticipated employment opportunities for graduates. (1000 characters)

The College of Nursing’s community clinical agency stakeholders employ informatics nurses. They also have a nurse informatics clinical employment ladder to include promotions for nurses holding a master’s degree in informatics.

Additionally, inpatient and outpatient settings in the southeast are employing greater numbers of informatics educated nurses each year to meet current legislatively mandated electronic health records data management, healthcare benchmark reporting and compliance measures.

Provide supporting evidence of anticipated employment opportunities for graduates, including a statement that clearly articulates what the program prepares graduates to do, any documented citations that suggests a correlation between this program and future employment, and other relevant information. Please cite specific resources, as appropriate. (3000 characters)

Note: Only complete this if the Employment Opportunities table and the section that follows the table on page 4 have not previously been completed.

Will the proposed program impact any existing degree programs and services at the institution (e.g., course offerings or enrollment)?
   xYes
   □No
If yes, explain. (500 characters)
The NI program students will take two (2) courses within the Integrated Information Technology Department ITEC course series. The College of Nursing and College of Engineering’s Information Technology leadership agreed to departmental support of this interdisciplinary collaboration. Please see the below letter of concurrence.
February 14, 2017

Dr. Carolyn S. Harmon, Director
MSN Nursing Administration Program
College of Nursing
University of South Carolina
Columbia, SC 29208

Dear Dr. Harmon,

The faculty of the Integrated Information Technology Department supports the development of the MSN Nursing Informatics program and agrees to provide ITEC 770 Health Database Systems and ITEC 764 Project Management for Health Information to students in this program.

We are also looking forward to the opportunity for MHIT students to be able to take one or more electives from the nursing program in the future.

Please let me know if there is anything else we can do to support your program.

Sincerely,

Elizabeth A. Regan, Ph.D.
Department Chair
<table>
<thead>
<tr>
<th>Program Name</th>
<th>Institution</th>
<th>Similarities</th>
<th>Differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters in Health Information Technology</td>
<td>University of South Carolina</td>
<td>General health care informatics program in which nurses may enroll.</td>
<td>Proposed NI program is the only nursing focused informatics program in the state. This program offering will embed the American Nurses Credentialing Center’s (ANCC) Nurse Informatics Specialty criteria for eligibility to take only nursing informatics certification exam. In addition, proposed program will include nursing science as well as nursing practice principles. The proposed program will be a collaborative effort with the current generic USC offering; proposed will be targeted for nurses which is an area of high demand in healthcare.</td>
</tr>
<tr>
<td>Masters in Health Informatics</td>
<td>Medical University of South Carolina</td>
<td>General health care informatics program in which nurses may enroll.</td>
<td>Proposed NI program is the only nursing focused informatics program in the state. The program offering will embed the American Nurses Credentialing Center’s (ANCC) Nurse Informatics Specialty criteria for eligibility to take the only nursing informatics certification exam. In addition, proposed program will include nursing science as well as nursing as nursing principles.</td>
</tr>
</tbody>
</table>
Description of the Program

The NI program is a 33 credit program; students may take 6 or 12 credit hours per semester. All NI students will complete 224 hours of informatics specific practicum.

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Headcount</th>
<th>Fall Credit Hours</th>
<th>Spring Headcount</th>
<th>Spring Credit Hours</th>
<th>Summer Headcount</th>
<th>Summer Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2019</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2019-2020</td>
<td>5</td>
<td>12</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2020-2021</td>
<td>7</td>
<td>12</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>2021-2022</td>
<td>9</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>2022-2023</td>
<td>11</td>
<td>12</td>
<td>11</td>
<td>9</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>

Part Time Projected Enrollment

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall Headcount</th>
<th>Fall Credit Hours</th>
<th>Spring Headcount</th>
<th>Spring Credit Hours</th>
<th>Summer Headcount</th>
<th>Summer Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-2019</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>2019-2020</td>
<td>15</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>2020-2021</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>2021-2022</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>2022-2023</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
<td>25</td>
<td>6</td>
</tr>
</tbody>
</table>

*Typically the adult learner students enroll in 6 hours of study due to other obligations such as family, employment, and/or financial commitments. Also, students must progress with a B or better in pre-requisite courses before enrolling in subsequent courses. Students must make a “B” or higher in foundation courses (nursing research or nursing conceptual/theory for example) and all major core courses. Full time study is available but less than five (5) percent of students choose this option.

Besides the general institutional admission requirements, are there any separate or additional admission requirements for the proposed program?

☑ Yes  
☐ No

If yes, explain. (1000 characters)

Additional requirements include:

- a. a written goal statement to reflect program outcomes;
- b. current CV;
- c. GPA ≥ 3.0;
- d. three letters of recommendation from professionals at the Masters or Doctoral level who can attest to the applicant’s ability to be successful in our program while aligning with program outcomes;
- e. current unencumbered RN licensure in the state of residence
The additional admission requirements are used to identify those students who are most likely to complete the program. The higher GPA and past performance in nursing, mathematics and/or business courses are strong indicators. A personal goal statement provides an assessment of motivation and alignment with program outcomes. A current CV/resume and unencumbered licensure are standard criteria for admission to nursing graduate study. Three letters of reference are required from master's or doctorally prepared professionals in the field who can speak to the applicant’s ability to successfully complete the Masters in Nursing Informatics program outcomes.

Are there any special articulation agreements for the proposed program?

☐ Yes
☒ No

If yes, identify. (1000 characters)
## Curriculum

Select one of the following charts to complete: **Curriculum by Year** or **Curriculum by Category**

### Curriculum by Year

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Credit Hours</th>
<th>Spring</th>
<th>Credit Hours</th>
<th>Summer</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*NURS 700 Theoretical &amp; Conceptual Foundations for Nursing</td>
<td>3</td>
<td>NURS775 Foundations in Nursing Informatics</td>
<td>3</td>
<td>*NURS738 Financing Health Care</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>*Nurs717 Applications of Basic Statistics for Nursing &amp; Nursing</td>
<td>3</td>
<td>ITEC764 Project Management for Health Information</td>
<td>3</td>
<td>*NURS734 Conceptual Basis of Health Systems</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Services Management</td>
<td></td>
<td>Systems</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Total Semester Hours</td>
<td>6</td>
<td>Total Semester Hours</td>
<td>6</td>
<td>Total Semester Hours</td>
<td>6</td>
</tr>
</tbody>
</table>

### Year 2

<table>
<thead>
<tr>
<th>Fall</th>
<th>ITEC770 Health Database Systems</th>
<th>3</th>
<th>*NURS790 Research Methods for Nursing</th>
<th>3</th>
<th>*NURS791 Seminar in Clinical Research</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*NURS708 Conceptual Basis for Family &amp; Community Health Nursing</td>
<td>3</td>
<td>NURS777 Nursing Informatics Practicum</td>
<td>3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Semester Hours</td>
<td>6</td>
<td>Total Semester Hours</td>
<td>6</td>
<td>Total Semester Hours</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours Required: 33**  
* denotes pre-existing CON courses with established faculty
### Course Descriptions for New Courses

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS775 Foundations in Nursing Informatics</td>
<td>This course is an asynchronous online course that provides an overview of nursing informatics with an emphasis on the scope and standards of practice. Various sciences and theories are explored in relation to the role of the informatics nurse. Current trends in health care technology are examined. Course activities will provide students with a foundation in ethical analysis of electronic data, integration of inter-professional teams, and an application of informatics to facilitate quality improvement.</td>
</tr>
<tr>
<td>NURS777 Nursing Informatics Practicum</td>
<td>Preparation of students for nursing informatics roles within health care systems or related organizations. The student will synthesize skills, knowledge, and wisdom from past and current academic and experiential learning to develop a nursing informatics project within a practice setting. Additional course competencies include examination of health care systems and current health care technology legislation and policy.</td>
</tr>
<tr>
<td>Rank</td>
<td>Full- or Part-time</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| Clinical Assistant Professor and Director | Full-time | • NURS775 Foundations in Nursing Informatics 3 credit hours—Fall or Spring terms  
• NURS777 Nursing Informatics Practicum 6 credit hours—Fall or Spring terms | University of Alabama at Birmingham, Doctor of Nursing Practice  
• DNP Project had a nurse informatics focus  
• DNP Nursing Informatics courses  
Queens University of Charlotte, Masters of Science in Nursing with a Health Systems Management focus  
• Nursing Informatics courses | 1. Board Certified Informatics Nurse  
2. Certified Six Sigma Green Belt  
3. Extensive Nurse Informatics and data analytics experience in large healthcare organizations  
4. Nurse Informatics Specialty Lead and faculty at Capella University  
5. RN-BSN Nurse Informatics faculty at Cabarrus College  
6. Co-teaching NURS781 Applied Technology in Health Care at the University of South Carolina |
| Associate Professor         | Full-time          | • NURS775 Foundations in Nursing Informatics 3 credit hours—Fall or Spring terms  
• NURS777 Nursing Informatics Practicum 6 credit hours—Fall or Spring terms | • University of Arizona College of Nursing: PhD Nursing Informatics/Health Systems  
• University of Massachusetts School of Nursing: MS Nursing Administration | 1. Principal Investigator on two National Institutes of Health/National Library of Medicine Informatics Grants:  
• Validating Triage for Chemical Mass Casualty Incidents – A First Step (R01LM011648-01A1)  
• Mass Casualty Triage Validation Study (R21NLM010822-01)  
2. Developed and teach N781: Applied Technology in Health Care  
3. Chair DNP Dissertations related to Informatics practice projects |
<table>
<thead>
<tr>
<th>Associate Professor</th>
<th>Full-time</th>
<th>University of Massachusetts School of Public Health: MPH Health Education</th>
<th>4. Member of the National Institutes of Health Bioinformatics Study Section that reviews bioinformatics proposals for funding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• ITEC764 Project Management for Health Information Systems- 3 credit Spring term</td>
<td></td>
</tr>
</tbody>
</table>
|                     |           | • Claremont Graduate University, Ph.D., Management of Information Systems and Technology; MBA, Peter F. Drucker School of Management, Claremont Graduate School | 1. Research funded by Centers for Medicare and Medicaid Services; U.S. Department of Labor; California Wellness Foundation  
2. Research on mobile and web technologies for emergency medical services funded by NSF and Federal Highway Administration |
| Associate Professor | Full-time | • ITEC770 Health Database Systems- 3 credit- Fall term | 1. NIH R01 Grant, A Cyber-Informatics Approach to Studying Migration and Environmental Cancer Risk  
2. US DOE Grant, Advanced Algorithms and User Interfaces for Personalized Data Mining of Biomedical Images and Literature  
3. NSF REU Site grant, Undergraduate Research in Computational Data Analytics for Advancing Human Services |
|                     |           | • Yale University, Ph.D., Computer Science; MBA, Rutgers University |                                                                                                                                  |

Note: Individuals should be listed with program supervisor positions listed first. Identify any new faculty with an asterisk next to their rank.
Total FTE needed to support the proposed program (i.e., the total FTE devoted just to the new program for all faculty, staff, and program administrators):

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Staff</th>
<th>Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 FTE</td>
<td>0.10 FTE</td>
<td>0.5 FTE</td>
</tr>
</tbody>
</table>

**Faculty /Administrative Personnel Changes**

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

The Director of the Masters in Nursing Administration program will assume the responsibilities of the program management and operations of the Masters in Nursing Informatics program. The College of Nursing (CON) has graduate staff that will provide support and advisement for the NI students. Additionally, the CON recently hired a fulltime faculty member to teach within the MSN Nursing Administration program in enable the Program Director to dedicate additional time to the Nursing Informatics program.

**Library and Learning Resources**

Identify current library/learning collections, resources, and services necessary to support the proposed program and any additional library resources needed. (1000 characters)

Students will utilize the online resources provided to all University of South Carolina (USC) students via Thomas Cooper library. Students will also have access to USC’s writing center.

USC library – A quick search of the Thomas Cooper library shows 300-400 holdings under “health informatics”.

Nursing has several key databases available through the library:

CINAHL Complete is coverage of the literature in nursing and allied health care areas. PubMed-Medli (with USC links) is the premier database of worldwide biomedical literature including research, clinical practice, administration, policy issues, and health care services.

Joanna Briggs Institute EBP (Evidence Based Practice) Database covers a wide range of medical, nursing, and health science specialties and includes a unique suite of information that has been analyzed, appraised, and prepared by expert reviewers at the JBI so you can integrate the world's best evidence into your research. It includes evidence summaries, evidence-based recommended practices, best practice information sheets, systematic reviews, consumer information sheets, systematic review protocols and technical reports.

The Cochrane Library provides reliable and up-to-date information on the effects of interventions in health care.

No new resources are needed.

**Student Support Services**

Identify academic support services needed for the proposed program and any additional estimated costs associated with these services. (500 characters)
The College of Nursing (CON) recently added an additional staff line in student services to support the growth in all the MSN programs for academic advising and contracts.

Student resources are listed in the graduate student handbook located at http://www.sc.edu/study/colleges_schools/nursing/internal/current_students/index.php

All nursing courses in the MSN Program are delivered online through Blackboard. The CON employs a full-time instructional designer who has 20+ years of experience with online educational best practices and pedagogy. This individual provides support to all faculty teaching online.

The Learning Management System (e.g. Blackboard) allows USC faculty to create a secure course website for class communications, posting assignments, posting readings, linking to complementary web sites, administering exams, and much more. In courses that use Blackboard, the course syllabus will provide basic information about accessing Blackboard (https://blackboard.sc.edu). Additional information about Blackboard is available at http://www.uts.sc.edu/academic/blackboard/.

Log in credentials entered at https://blackboard.sc.edu/webapps/portal/frameset.jsp

Courses offered in this format are constructed and conducted differently than traditional classroom courses. Below are some suggestions on how to be successful in online courses:

- Become familiar with Blackboard, the learning management system (LMS)
- Access Bb through your VIP account
- Read the “How to…” guides that are found in each course.
- Participate actively in the course

Nursing Informatics Courses have didactic component online but require indirect clinical practice and other activities such as clinical conferencing or case based informatics projects.

OTHER STUDENT SUPPORT SERVICES: The Executive Director of Student Affairs, Ms. Cheryl Nelson, is the student’s advocate in the College of Nursing and serves as the initial contact for concerns such as requesting exception to a college policy or a grievance. In addition, Mr. Dale Moore, The Graduate School Ombudsman, serves as a confidential, neutral, informal and independent resource for graduate student concerns and conflicts. More information about the role of the Graduate School Ombudsman is available on the Graduate School website at http://gradschool.sc.edu/students/ombs.asp

STUDENTS WITH DISABILITIES: The USC College of Nursing is committed to providing reasonable accommodations for students with disabilities. Students with disabilities must contact the Office of Student Disability Services (http://www.sa.sc.edu/sds/) prior to or early in their academic program to determine if they are eligible for reasonable accommodations.
Students with disabilities, like all other students in the nursing program, must be able to continually meet core performance standards and functional abilities established to ensure that they meet the objectives of the nursing program. (See http://www.sc.edu/study/colleges_schools/nursing/internal/current_students/index.php)

Physical Resources

Identify any new instructional equipment needed for the proposed program. (500 characters)

No new instructional equipment needed

Will any extraordinary physical facilities be needed to support the proposed program?
☐ Yes
☒ No

Identify the physical facilities needed to support the program and the institution’s plan for meeting the requirements, including new facilities or modifications to existing facilities. (1000 characters)

Faculty employed by USC that are supporting the nursing informatics program in both CON and ITEC have dedicated private faculty office space. These faculty are present on campus and have access to administrative support as well as technological support provided by the home units within the university structure.
Financial Support

<table>
<thead>
<tr>
<th>Revenue</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition Funding to UNIV - not direct source for</td>
<td>$78,388</td>
<td>$151,976</td>
<td>$238,363</td>
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<tr>
<td>Tuition Funding to CON for NI</td>
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<td>$245,997</td>
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<td>Program-Specific Fees*</td>
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<td>$74,220</td>
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<tr>
<td>Reallocation of Existing Funds*</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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</tr>
<tr>
<td>Federal Funding*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Funding*</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Total</td>
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<td>$541,489</td>
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Nursing Portion of Total

<table>
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<tr>
<th>Revenue</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>Total</th>
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<tbody>
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<td>Tuition Funding to UNIV - not direct source for</td>
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<table>
<thead>
<tr>
<th>Expenses - Nursing</th>
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<th>3</th>
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<tr>
<td>MSN Program Administration CORE</td>
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<td>$12,838</td>
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<td>$52,360</td>
<td>$52,360</td>
<td>$52,360</td>
<td>$261,800</td>
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<tr>
<td>Faculty Salaries + Fringe CORE</td>
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<td>$30,000</td>
<td>$40,000</td>
<td>$50,000</td>
<td>$60,000</td>
<td>$200,000</td>
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<td>NI Fac Salaries</td>
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<td>Clinical Faculty TFAC</td>
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<td>$20,000</td>
<td>$20,000</td>
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<td>$80,000</td>
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<td>Core Staff Salaries + Fringe</td>
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<tr>
<td>Equipment</td>
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<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<tr>
<td>Facilities</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<td>Supplies and Materials</td>
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<td>$5,000</td>
<td>$5,000</td>
<td>$25,000</td>
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<td>Library Resources</td>
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<td>Other*</td>
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<tr>
<td>Total</td>
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<td>$244,586</td>
<td>$254,586</td>
<td>$264,586</td>
<td>$1,227,930</td>
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Net Total

<table>
<thead>
<tr>
<th>Revenue</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition Funding to UNIV - not direct source for</td>
<td>$58,507</td>
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<td>$296,903</td>
<td>$343,310</td>
<td>$379,218</td>
<td>$1,067,494</td>
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</tbody>
</table>

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

University of South Carolina, MS in Nursing Informatics, CAAL, 05/15/2018 – Page 19
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)

The Health Professions Fee applies to Public Health, Nursing, Physician Assistant, Nurse Anesthesia, Social Work and Doctor of Physical Therapy program and to all Public Health, Nursing and Social Work students enrolled at USC. The rate is priced at $80 per credit hour for in-state part time students, $800 per semester for in-state full time students. Revenue from the Health Professions Fee was approved to support the various activities related to student affairs, advisement, and student services. In particular, we require our students to complete clinical and other practical learning experiences, as mandated by accrediting bodies. The college also provides statistical consultation to students.

The Lab Fee applies to all clinical courses at the College of Nursing at a rate of $1,000 per lab course. Informatics students are required to complete 224 hours of informatics specific practicum hours during the lab course. Costs associated with practicum hours include resources to identify, support and monitor placement sites and preceptors including background checks, drug tests, certain immunizations and compliance monitoring. The Lab Fee is also used to support the simulation lab, the CON stats lab, the CON Information Resource Center, state-of-the-art video conferencing rooms, and the incorporation of online teaching into the courses.

The Graduate Insurance Fee is $50 per lab course. This fee covers the student with an insurance policy through USC, as well as an additional required professional liability policy that is required to cover each student at a dollar limit above USC’s standard student limit.

The net loss in year 1 will be covered by Nursing’s reserve carry forward funding from prior fiscal years if necessary. The college was conservative in projecting anticipated admissions and revenue for the program in year 1. Conservatively, only in state tuition and fee rates were used in the calculations, as the actual mix is unknown at this time. During admissions, the actual headcount and residency mix may produce higher revenues minimizing or negating the need for subsidization in year 1 funding. Either way, the college projects a positive return on investment on the program over 5 years even if subsidization is required in year 1.

*Fees source: http://www.sc.edu/about/offices_and_divisions/bursar/ tuition_and_required_fees/index.php

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.

Evaluation and Assessment

Programmatic Assessment: Provide an outline of how the proposed program will be evaluated, including any plans to track employment. Identify assessment tools or software used in the evaluation. Explain how assessment data will be used. (3000 characters)

TEQ and CEQ: Teacher and Course Evaluations. Collected each semester from MSN students by class climate online. Data collected by the Office of Research College of Nursing, and
NEW PROGRAM PROPOSAL

disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used as a quality improvement process for course content, teaching strategies, and course materials as appropriate.

PAQ: Program Assessment Questionnaire of Graduating MSN students: Collected each semester from graduating NI students by class climate online. Data collected by the Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used as a quality improvement process for course content, program content deficits, and course materials as appropriate.

EAQ: Employer Assessment Questionnaire who employ NI graduates: Will be collected annually from employers of NI graduates by class climate online. Data collected by the Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used to amend the program to ensure the graduate is meeting the employer demands and expectations.

SEP: Student Evaluation of Preceptor. Collected each semester from the NI students in the practicum course by class climate online. Data collected by the Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used evaluate the effectiveness of a preceptor for the student learning environment.

FPES: Faculty/Preceptor Evaluation of the Student. Collected a minimum of two times per semester for each NI student in each practicum course. Direct observation. Hard Copy Tool FPES used by the Course Faculty Member and Preceptor to evaluate the student’s competency proficiencies in the specialty criterion. Evaluations shared with students to enhance or strengthen skills and competencies.
## Student Learning Assessment

<table>
<thead>
<tr>
<th>Expected Student Learning Outcomes</th>
<th>Methods of/Criteria for Assessment</th>
</tr>
</thead>
</table>
| Demonstrate knowledge and skills required for advanced informatics nursing practice. | Assessment Method:  
FPES: Faculty/Preceptor Evaluation of the Student. Collected a minimum of two times per semester for each NI student in each practicum course. Direct observation. Hard Copy Tool FPES used by the Course Faculty Member and Preceptor to evaluate the student’s competency proficiencies in the specialty criterion. Evaluations shared with students to enhance or strengthen skills and competencies.  

Criteria:  
Students make a “B” or better in each core/major course to pass and progress. If a student makes a “C”, the course is repeated. Only 2 courses can be repeated. A student is automatically dismissed from the program if they earn a “D” of “F” in any course required for the program of study.  

Examples of Methods:  
Online Quizzes  
Team Activity: Needs Assessment Assignment  
Team Activity: Gap and Workflow Analysis  
Team Activity: Quality Application assignment  
Team Activity: Interprofessional Leadership  
Roles and Theory Mini Paper  
Project Charter |

| Implement core and specialty content within the context of human-computer interaction, usability, ergonomics, and concepts related to the design and build of information systems. | Assessment Method:  
TEQ and CEQ: Teacher and Course Evaluations. Collected each semester from MSN students by class climate online. Data collected by Dr. Tavakoli, Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used as a quality improvement process for course content, teaching strategies, and course materials as appropriate. |
SEP: Student Evaluation of Preceptor. Collected each semester from the NI students in the practicum course by class climate online. Data collected by Dr. Tavakoli, Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used evaluate the effectiveness of a preceptor for the student learning environment.

Criteria:
Students make a “B” or better in each core/major course to pass and progress. If a student makes a “C”, the course is repeated. Only 2 courses can be repeated. A student is automatically dismissed from the program if they earn a “D” of “F” in any course required for the program of study.

Examples of Methods:
- Comprehensive Informatics Project at Clinical Site
- Weekly Project Memos
- Project Executive Summary
- Project Scope
- Project Plan
- Clinical log tracking practicum immersion experience (224 hrs)
- Preceptor Evaluation
- Online Quizzes
- Team Activity

<table>
<thead>
<tr>
<th>Demonstrate the ability to use theory and research findings in informatics practice.</th>
<th>Assessment Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEQ and CEQ: Teacher and Course Evaluations. Collected each semester from MSN students by class climate online. Data collected by Dr. Tavakoli, Office of Research College of Nursing, and disseminated to course faculty and College of Nursing Administrators. Aggregate data presented to College of Nursing Graduate Faculty. SAS software and class climate used to collect and store data. Assessments used as a quality improvement process for course content, teaching strategies, and course materials as appropriate.</td>
<td></td>
</tr>
</tbody>
</table>

Criteria:
Students make a “B” or better in each core/major course to pass and progress. If a student makes a “C”, the course is repeated. Only 2 courses can be repeated. A student is automatically dismissed from the program if they earn a “D” of “F” in any course required for the program of study.

Examples of Methods:
Course papers to reflect the application of theoretical models to health and health information: individuals, families, communities/populations

<table>
<thead>
<tr>
<th>Demonstrate leadership skills for nursing informatics practice.</th>
<th>Assessment Method:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FPES: Faculty/Preceptor Evaluation of the Student. Collected a minimum of two times per semester for each NI student in each practicum course. Direct observation. Hard Copy Tool FPES used by the Course Faculty Member and Preceptor to evaluate the student’s competency proficiencies in the specialty criterion. Evaluations shared with students to enhance or strengthen skills and competencies.</td>
<td></td>
</tr>
</tbody>
</table>

Criteria:
Students make a “B” or better in each core/major course to pass and progress. If a student makes a “C”, the course is repeated. Only 2 courses can be repeated. A student is automatically dismissed from the program if they earn a “D” of “F” in any course required for the program of study.

Examples of Methods:
Course papers or practicum experience as appropriate such interdisciplinary teams, team leaders, healthcare informatics mastery, ethics, legal aspects of protected information, corporate compliance
Will the proposed program seek program-specific accreditation?
- Yes
- No

If yes, provide the institution’s plans to seek accreditation, including the expected timeline for accreditation. (500 characters)

This program will be included in the College of Nursing’s American Association of Colleges of Nursing Commission on Collegiate Nursing Education (CCNE) accreditation process for all graduate nursing programs. We are required to update CCNE with programmatic updates and/or changes within 90 days of program initiation. The CON has an accreditation timeline of 2021. We plan to seek re-accreditation at that time for all MSN programs.

Will the proposed program lead to licensure or certification?
- Yes
- No

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

The student will be eligible to apply and set for the American Nurses Credentialing Center (ANCC) certification for the Informatics Nursing specialty. One of the practice hour requirements consists of completing a graduate program in informatics nursing containing a minimum of 200 hours of faculty-supervised practicum in informatics nursing. This proposed program has 224 hours of faculty-supervised practicum in specific informatics nursing.

Teacher or School Professional Preparation Programs

Is the proposed program a teacher or school professional preparation program?
- Yes
- No

If yes, complete the following components.

Please attach a document addressing the South Carolina Department of Education Requirements and SPA or Other National Specialized and/or Professional Association Standards.
Date: April 20, 2018

To: South Carolina Commission on Higher Education

From: Carolyn Swinton, RN, MN, NEA-BC, FACHE

RE: University of South Carolina’s proposed Masters of Science in Nursing Informatics Program

I would like to express my support for the University of South Carolina’s College of Nursing’s proposal for a nursing informatics focused master’s degree. Nurses have the insightful knowledge of clinical skills, workflow, and processes. Therefore, nurses bring a unique and important lens when applying this knowledge to information management and the use of healthcare technology. Informatics nurses hold key influential positions within health care due to their ability to change manage, work on interprofessional teams, and guide information and technology integration in practice. Nurses with an informatics specialty analyze outcome data and promote information systems as well as technology to reduce risk and improve health outcomes.

Nursing specific informatics education is a need for the state of South Carolina. Nurses interested in a graduate degree with a nursing informatics specialty are currently obtaining this degree outside of the state of South Carolina. Thus, I support the University of South Carolina’s College of Nursing’s proposal for a nursing informatics focused master’s degree.

I look forward to collaborating with the University of South Carolina to serve the needs of the field of nursing informatics throughout our community and state.

Sincerely,

Carolyn Swinton, RN, MN, NEA-BC, FACHE
Chief Nursing Officer, Palmetto Health