

**New Program Proposal  
Doctor of Nurse Anesthesia Practice, Post-Master's Completion  
Medical University of South Carolina**

**Summary**

The Medical University of South Carolina requests approval to offer a program leading to the Doctor of Nurse Anesthesia Practice, Post-Master's Completion to be implemented in Summer 2015. The proposed program is to be offered through traditional, distance, and blended instruction. The following chart outlines the stages for approval of the proposal; the Committee on Academic Affairs and Licensing (CAAL) voted to recommend approval to the Commission. The full program proposal **is attached**.

<b>Stages of Consideration</b>	<b>Date</b>	<b>Comments</b>
Program Planning Summary received and posted for comment	5/14/2013	
Program Planning Summary considered by ACAP through electronic review	7/30/2013	ACAP members expressed support for the proposed program. USC Columbia stated that it will submit a proposal for a DNAP for the same reasons MUSC did so. USC also discussed the critical need in South Carolina for highly trained CRNAs. Commission staff encouraged MUSC to consult with staff when preparing the proposal in order to limit the amount of information duplicated in the two DNAP proposals submitted by MUSC.
Draft Program Proposal Received	8/16/2013	Staff reviewed a draft proposal and suggested edits for clarity and consistency. Staff also asked that new courses be identified, questioned when the existing program (the MSNA) would be terminated, and requested that estimated costs reflect total costs. Staff also pointed out that the costs provided in the cost chart were not consistent with the information presented in the narrative.
Program Proposal Received	9/11/2013	
ACAP Consideration	10/17/2013	ACAP voted to recommend approval of the program.
Comments and suggestions from CHE staff to the institution	10/22/2013	Staff suggested additional edits for clarity and consistency and requested additional information about the figures presented in the estimated enrollment chart and for the information in the cost chart to better reflect total costs.
Revised Proposal Received	11/4/2013	Minor revisions made to the proposal.

<b>Stages of Consideration</b>	<b>Date</b>	<b>Comments</b>
Comments received from CAAL members	1/2/2014	Commissioner Munns asked about the various barriers and boundaries between the MUSC departments and for an explanation of how asynchronous distance education could produce good learning outcomes for the crisis management course.
Responses provided to CAAL	1/8/2014	Staff distributed the requested information to CAAL (attached).
CAAL Consideration	1/9/2014	Commissioners recommended that MUSC try to remove barriers and encourage more collaboration between departments. CAAL voted to recommend approval to CHE.

### **Recommendation**

The Committee on Academic Affairs and Licensing recommends that the Commission approve the program leading to the Doctor of Nurse Anesthesia Practice, Post-Master's Completion, at the Medical University of South Carolina to be implemented in Summer 2015.

**Commissioner Munns's Questions and Institutional Responses  
Regarding New Academic Degree Program Proposals  
Committee on Academic Affairs and Licensing, January 9, 2014**

**Medical University of South Carolina, DNAP, Post-Master's**

QUESTION: Pg. 7. The last paragraph describes a number of barriers and boundaries between the various MUSC departments. Are these logical restrictions which enhance the quality of the degrees, or are they needless bureaucratic barriers which limit access and drive up cost?

INSTITUTIONAL RESPONSE: The barriers exist due to the historical nature in South Carolina of providing nurse anesthesia within a college of health professions or a college of medicine. This results in graduates who do not have degrees in nursing which prevents them from either applying to a clinical doctorate program in a college of nursing or would require them to take additional and costly prerequisite courses to be application eligible.

The MUSC College of Nursing does not have nurse anesthesia credentialed faculty which prevents them from accepting CRNAs into their clinical doctorate program. (This information was obtained from the DNP staff at the College of Nursing when I sought clarification on the barring of CRNAs from the DNP program).

QUESTION: Pg. 11. Please explain how asynchronous distance education can produce good learning outcomes for the crisis management course with its use of the high fidelity simulator, and for the seminar courses which rely on complex conversation.

INSTITUTIONAL RESPONSE: First, in regards to the crisis simulation course, the content will be delivered in a hybrid model that requires students to complete the initial course work in a distance format then perform simulated experiences when on campus. Students will be required to attend on-campus classes 2 or 3 weekends per semester. The distance content will include current research on the role of simulation in providing safe, quality patient care and the synthesis of simulation with education. The on-campus content will consist of the hands-on management of rare, but life-threatening anesthesia events in a safe simulated environment.

Second, the seminar courses will be offered in a similar manner, but the primary content will be delivered via distance technology with an online format that supports discussion by using conversation "threads." The seminar course will also be used to develop the students' final capstone project.

**Medical University of South Carolina  
College of Health Professions  
Department of Health Professions**

**Proposed New Program:**

**Doctor of Nurse Anesthesia Practice (DNAP)**

**Post-Master's, Completion**

**Submitted: September 15, 2013**



**Mark Sothmann Ph.D.  
Interim President  
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**November 4, 2013  
Date**

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## New Program Proposal: Doctor of Nurse Anesthesia Practice (DNAP)

Program title:	Doctor of Nurse Anesthesia Practice
Concentrations, options, and tracks:	Post-Master's
Academic Unit:	College of Health Professions
Designation, type, and level of degree:	Post-master's completion clinical doctoral degree
Proposed date of implementation:	Summer 2015
CIP code:	51.3804
Site:	Medical University of South Carolina
Qualifies for Palmetto Fellows or Life Scholarship awards:	No
Delivery mode:	Blended instruction, traditional and distance

### **INSTITUTIONAL APPROVAL**

This proposal has been reviewed and approved by the following internal review bodies at MUSC:  
College of Health Professions (CHP) Leadership Council – August 30<sup>th</sup>, 2013  
MUSC Dean's Council –September 16<sup>th</sup>, 2013  
MUSC Board of Trustees –October 10<sup>th</sup>, 2013

### **PURPOSE**

Institutions have been awarding the clinical practice doctorate to prepare Nurse Anesthetists for over 20 years, initially as the Nursing Doctorate (ND) and more recently as the Doctor in Nursing Practice (DNP) and the Doctor in Nurse Anesthesia Practice (DNAP). According to the American Association of Colleges of Nursing (AACN), the purpose of clinical doctoral programs is to “prepare experts in specialized nursing practice. The clinical doctorate graduates focus heavily on practice that is innovative and evidence-based”<sup>1</sup>. Furthermore, the AACN and its stakeholder organizations developed a framework for the clinical practice doctoral degree that includes essentials for evidence-based practice, quality improvement, informatics, healthcare policy, interprofessional collaboration, population-based health, and clinical practice. The implementation of a degree program that fulfills these requirements will require a transformational change in nurse anesthesia education.

Certified Registered Nurse Anesthetists (CRNA) are advanced practice nurses and CRNAs have been providing care for over 150 years. They administer all types of anesthesia in all clinical settings and to all types of patients. CRNAs provide anesthesia in collaboration with surgeons, anesthesiologists, dentists, podiatrists, and other qualified healthcare professionals. The current education and experience required to be admitted to a CRNA master's degree program include licensure as a registered nurse; education at the baccalaureate degree level or higher; clinical practice in an intensive care unit; competitive grade point averages, and academic record. According to the American Association of Nurse Anesthetists 2012 Practice Survey, 70% of the approximately 45, 000 practicing CRNAs are academically prepared at the master's degree level.

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<sup>1</sup> American Association of Colleges of Nursing (2006). The Essentials of Doctoral Education for Advanced Nursing Practice.

<sup>2</sup> American Association of Nurse Anesthetists 2012 Practice Survey.  
<http://www.aana.com/myaana/AANABusiness/professionalresources/Documents/aana-membership-statistics0213.pdf>

The purpose of this program is to educate current master's prepared CRNAs to meet the needs of a complex, changing health care system by assuming increased roles in healthcare leadership, policy, education, and clinical practice. The objectives of the program are to:

1. Produce CRNAs who have the educational tools to assume leadership roles in healthcare.  
The doctor in health administration coursework will provide additional formal education to allow CRNAs to become full partners with other healthcare providers in transforming health care delivery.
2. Expand the clinical experiences of CRNAs with the additional content in pain management and in crisis simulation.  
Additional coursework at the doctoral level will meet the additional demands placed on all practitioners to use the latest techniques and to increase patient safety by remaining prepared to respond to rare but life-threatening situations.
3. Develop current clinical practitioners' skills in creating an evidence-based practice founded on effective research, best practice, and evaluation of outcomes.  
Evidence-based practice is recognized as an effective approach in improving patient outcomes by incorporating best research into bedside clinical practice. Master's prepared CRNAs have already received foundational content in research but the DNAP degree will provide additional tools for successful application of clinical evidence.

### **JUSTIFICATION OF NEED FOR THE PROPOSED PROGRAM**

The accrediting organization for nurse anesthesia programs, the Council on Accreditation (COA) of Nurse Anesthesia Educational Programs, has mandated that "all students accepted into an accredited program on January 1<sup>st</sup>, 2022, thereafter will be required to graduate with doctoral degrees"<sup>3</sup> Precisely when each of the 113 nurse anesthesia programs will transition to a doctoral degree is unknown. As of July 2013, there are seventeen nurse anesthesia programs that have been accredited for the entry into practice at the doctoral level. The COA has accredited twelve nurse anesthesia programs to offer the post-master's completion doctoral degree. Additional post-master's completion doctoral degrees exist within colleges of nursing, however, these programs are not nurse anesthesia focused and are not required to be accredited by or reported on by the COA. The proposed DNAP program will not be housed in a college of nursing and will have a focus on nurse anesthesia and, therefore, accreditation by the COA will be required.

In preparation for establishing an entry-level post-baccalaureate DNAP at MUSC, a post-Master's DNAP degree completion program would be implemented first. To maintain compliance with the COA Standards, nurse anesthesia program directors and assistant program directors must have a doctoral degree by 2018. Currently, out of the eight primary faculty in the nurse anesthesia programs in South Carolina, only three have doctoral degrees and are therefore qualified to direct doctoral level courses. Currently, there are CRNAs in South Carolina who are pursuing doctoral degrees, but it is unknown whether they will all pursue careers in nurse anesthesia education. In addition to the primary goal of increasing clinical knowledge and healthcare leadership, the implementation of a post-Master's DNAP will address the critical need for doctoral faculty throughout the United States.

The primary reason for the transition of nurse anesthesia education to the doctoral level as dictated by COA is to elevate the quality of care delivered by nurse anesthetists in a variety of current and emerging healthcare delivery systems and to develop and strengthen the leadership skills necessary for innovative clinical practice. In 2011, the Institute of Medicine (IOM)

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<sup>3</sup> Council on Accreditation of Nurse Anesthesia Programs. (2012) Policies and Procedures Manual.

released its report on the Future of Nursing.<sup>4</sup> The report recognized the need to educate nurses and advanced practice registered nurses (APRN) to a higher level to meet today's healthcare challenges. Certified Registered Nurse Anesthetists (CRNAs) are one of the four categories of advanced practice registered nurses that also includes nurse practitioners, clinical nurse specialists, and certified nurse midwives. According to the report, as the clinical needs of our patient population and the clinical environment itself become more complex, CRNAs will need higher-level competencies to provide a foundation for care across all practice settings and for all populations. These competencies will include increased development of clinical care as well as in evidence-based practice, informatics, health policy and leadership. Furthermore, the report recommends "doubling the number of nurses with a doctorate by 2020."

CRNAs will be able to meet the ongoing and future challenges in healthcare in South Carolina by obtaining clinical doctorate degrees that focus on managing patients based on clinical evidence; by becoming partners in improving healthcare through leadership and financial management; and by improving the flow of patient information through education in healthcare informatics. The addition of a post-master's DNAP degree program will allow existing CRNAs to complete their doctorates and remain competitive for future practice opportunities and leadership positions.

Without a DNAP degree program in South Carolina, candidates for both the entry-level and post-Master's completion DNAP may choose to leave the state and apply to out-of-state doctoral programs. This would result in a potential loss of qualified nurse anesthesia practitioners. Furthermore, if the registered nurses wishing to obtain a degree in nurse anesthesia are required to leave South Carolina to obtain their education, many may not return upon graduation. This degree with blended instruction and a part-time curriculum will allow current CRNAs to continue to live and work in South Carolina while pursuing a doctoral degree.

Although statistics are not available on the need for doctoral prepared clinical CRNAs, vacancies continue to exist for CRNAs across the country as demonstrated by the 100% post-graduation employment rate of recent MUSC Anesthesia For Nurses graduates. The applicants for the post-master's DNAP program will already be employed in the field of nurse anesthesia either in clinical practice, education, or administration. There are currently 996 licensed CRNAs in South Carolina and over 44,000 nationally. It is expected that a significant number of those CRNAs will seek additional education as new graduates enter the workforce with doctoral education. At MUSC, the post-Masters DNAP will continue to be offered as long as the applicant pool remains strong. According to the Council on Accreditation 2012 Annual Report of nurse anesthesia programs, there were 739 applicants to 12 doctoral degree programs. Of the 739 applicants, 277 students were accepted.

The demand for the proposed post-masters DNAP degree will be strong initially as existing CRNAs complete their doctoral degrees and as nursing and nurse anesthesia programs seek doctoral prepared faculty. The American Association of Colleges of Nursing (AACN) Special Survey on Vacant Faculty Positions for Academic Year 2012-2013 found an 11.6% and a 9.5% vacancy rate for full time faculty in Master's and Doctoral programs, respectively. Also, the AACN found that of the 1129 vacant positions in Colleges of Nursing, 56.3% of the vacancies required an earned doctoral degree and the most critical issue related to the shortage was a limited pool of doctoral prepared faculty. In anticipation of implementation of the Affordable Care Act (ACA) and the expected rise of healthcare consumers, Title V of the Act<sup>5</sup> includes

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<sup>4</sup> Institute of Medicine. (2011) Report on the Future of Nursing: Leading Change, Advancing Health. Washington DC: The National Academies Press

<sup>5</sup>[http://www.aacd.org/docs/policy/health\\_care/Section%20by%20Section%20Summary%20of%20Health%20Care%20Workforce.pdf](http://www.aacd.org/docs/policy/health_care/Section%20by%20Section%20Summary%20of%20Health%20Care%20Workforce.pdf)

provisions for addressing the projected shortage of nurses by investing in increasing healthcare workforce supply, funding, and training.

### **Centrality of the Program to the Institutional Mission**

The proposed program is congruent with the mission of MUSC by (a) focusing on interprofessional education as a result of the programs location in a College of Health Professions; (b) by providing leadership; and (c) by developing practitioners who provide excellent, evidence-based care for the citizens of South Carolina and beyond. The DNAP program will also provide the opportunity for the College of Health Professions to support its strategic goal of attaining national recognition for innovative activities in education.

Recognized leaders in healthcare have promoted the concept of interprofessional collaboration and coordination as playing a critical role in improving the US healthcare system.<sup>6</sup> Housed in the College of Health Professions, the MUSC Nurse Anesthesia program enjoys opportunities for interprofessional collaboration with other healthcare practitioners, researchers and administrators. The MUSC Anesthesia for Nurses program has developed a strong reputation for producing excellent clinicians and leaders in its current location in College of Health Professions.

The implementation of a post-Master's degree is related to another component of MUSC's mission: offer educational opportunities to graduates and to other biomedical professionals. The additional coursework supports the increasingly important concept of life-long learning for health professionals.

### **Relationship of the Proposed Program to Other Related Programs within the Institution**

The proposed DNAP will share faculty with the Department of Healthcare Leadership and Management (DHLM). The Department of Healthcare Leadership and Management awards a Doctor in Health Administration (DHA) degree with options that focus on interprofessional collaboration and healthcare information systems. The faculty in the DHLM department has experience and expertise in economics, organizational change, healthcare policy, leadership, and interprofessional collaboration. The DNAP program and students will have access to faculty with experience and expertise in areas that are recommended by the American Association of Colleges of Nursing and the Institute of Medicine.

This collaboration between the DHLM and the DNAP program will provide students with content experts for both the nurse anesthesia courses and the leadership/policy/economics courses.

The MUSC College of Nursing awards a clinical doctorate degree, the Doctor of Nursing Practice (DNP). However in order to be admitted to the DNP program, the College of Nursing requires that the applicant possess a master's degree in nursing. The CRNA graduates of the current MUSC Anesthesia for Nurses program graduate with a Master's of Science in Nurse Anesthesia (MSNA) and are therefore ineligible to apply. Also, the combination of the degree requirement and the lack of presence of nurse anesthesia faculty, the MUSC College of Nursing website states that "CRNA's cannot apply for our Post-MSN DNP program." The other nurse anesthesia program in South Carolina, offered by USC, also not does offer a nursing master's degree; USC confers a Master in Nurse Anesthesia (MNA) degree. According to the DNP program director at USC, the post-MSN DNP faculty will be taking the question under advisement but would

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<sup>6</sup> Institute of Medicine. (2011) Report on the Future of Nursing: Leading Change, Advancing Health. Washington DC: The National Academies Press

probably accept a CRNA without a Master in Nursing with the provision that the applicant acquires prerequisite coursework in nursing at the master's degree level.

### **Comparisons and Relationships with other programs in the state, region, and nation**

The MUSC Nurse Anesthesia program is one of only two nurse anesthesia programs in the state of South Carolina. Neither of the current nurse anesthesia programs in South Carolina is housed in Colleges of Nursing. Therefore, the graduates possess master's degrees in nurse anesthesia, but not in nursing. The other program is at the University of South Carolina (USC), which confers a Master in Nurse Anesthesia degree. This program is housed in the USC School of Medicine. While USC also plans to transition to a doctoral program, the timeline for doing so is unknown at this time. The current USC assistant program administrator has a doctoral degree but the program administrator does not. As required by the accrediting body, by 2018, both the nurse anesthesia program administrator and the assistant program administrator must have doctoral degrees. According to the USC Director of Academic Programs, two additional clinical CRNAs are in the process of obtaining their doctoral degrees.

There are no DNAP programs currently in South Carolina. As of July 2013, of the twelve COA accredited post-Master's doctoral degrees, 50% are DNAP degrees and the remainder are DNP degrees. Three of the programs are located in the southeast (in Florida and Virginia). The programs are primarily offered as a hybrid distance program with online content and minimal on-campus time. The post-masters DNP degrees are housed in either a college of nursing or a college of health sciences. CRNAs in South Carolina are qualified to apply for these programs but will incur the increased cost of out-state tuition.

### **ADMISSION CRITERIA**

Prerequisites for admission into the proposed DNAP program are:

1. Evidence of graduation from an accredited baccalaureate or higher nursing program, or possession of a bachelor of science degree in a basic or appropriate health sciences field
2. Evidence of a master's degree from a nationally accredited nurse anesthesia program and certification as a CRNA
3. A minimum cumulative GPA of 3.0
4. Submission of a curriculum vitae and three professional references
5. Submission of required essays. One essay will focus on the applicant's professional goals. The second essay should discuss the applicant's research area of interest and proposed doctoral capstone project.

The Anesthesia For Nurses Admissions and Progressions Committee reviews all applicant files for merit. When determining which applicants to interview and then accept to the program, the committee will focus on academic achievement, professional experience, recommendations, and the quality of the essays. The twenty most qualified applicants will be invited to an in-person panel interview then the top ten applicants will be invited to join the program.

### **ENROLLMENT**

The program will start in the summer semester of 2015. Because this program is a new degree program, all students will be new students. It is anticipated that the majority of the applicants and matriculated students will be South Carolina CRNAs who will have the benefit of in state tuition in a program that is focused on doctoral education for practicing CRNAs.

The current master’s degree program has a policy for the admission of transfer students from other nurse anesthesia programs; however, this policy has not been used for at least five years. Therefore, transfer students were not included in the projected total enrollment. However, transfer students will be accepted providing they meet the requirements set forth in the MUSC Anesthesia For Nurses Administrative Handbook: space available in the program, recommendation letter from current program, and ability to meet the academic prerequisites.

**Table A – Total Enrollment**

<b>PROJECTED TOTAL ENROLLMENT</b>						
<b>YEAR</b>	<b>FALL</b>		<b>SPRING</b>		<b>SUMMER</b>	
	Headcount	Credit Hours	Headcount	Credit Hours	Headcount	Credit Hours
2014-2015					10	40
2015-2016	10	70	10	80	25	100
2016-2017	25	165	15**	120	30	120
2017-2018	30	195	15	120	30	120
2018-2019	30	195	15	120	30	120

\*\*the drop in enrollment from the fall semester to the spring semester is due to a fall semester graduation and not reflective of anticipated program attrition.

**CURRICULUM**

The post-Master’s DNAP degree will consist of a 29 credit hour curriculum with a focus on healthcare policy development, leadership, and advanced clinical management. The post-Masters DNAP will be offered primarily through distance education with a requirement for two three-day on-campus sessions per semester. The program is offered on a part-time basis for working professionals returning for the nurse anesthesia terminal degree.

Courses denoted by the \* are currently offered in the MUSC Doctor in Health Administration curriculum and will be taught by faculty already engaged in teaching these courses. The existing nurse anesthesia faculty will teach the additional five courses with adjunct CRNA content experts providing lecture support within the courses. When the post-baccalaureate DNAP is in-progress, DNAP students from the post-Masters DNAP and the post-baccalaureate DNAP will participate in the same courses.

Because the accrediting body is in the process of finalizing and implementing the Standards for Doctoral Education, the exact content areas have not been fully established. However, the final draft has been vetted among stakeholders and will require additional didactic content that incorporates the principles of nurse anesthesia practice and healthcare management. Additional content will include but is not limited to translation of research into practice; leadership theory; healthcare improvement/outcomes; informatics; public policy, and health systems management. CRNA doctoral students will already be experienced in their clinical advanced practice role; therefore this curriculum will not have a required anesthesia clinical component.

Increased rigor will be demonstrated by expanding the expectations for student performance through examination and simulation; by requiring an evidence-based quality improvement capstone project; and by requiring students to demonstrate acquisition of knowledge not only through examination but through scholarly projects in the form of written and oral presentation, academic writing, discussion, and teaching experiences. Students admitted to the DNAP program will already have clinical expertise in their field; therefore, additional anesthesia clinical time is not required in this curriculum.

Summer I	Fall I	Spring I	Summer II	Fall II
Managing Health Care Information Resources* (3s.h.)	Foundations in Leadership* (3s.h.)	Strategic Management of Change* (3s.h.)	Management Principles for Nurse Anesthesia (2s.h.)	Principles of Pain Management (2s.h.)
DNAP Seminar (1s.h.)	Principles of Evidence-Based Practice (3s.h.)	Foundations in Health Policy* (3s.h.)	DNAP Seminar (2s.h.)	Introduction to Teaching and Learning (2s.h.)
	Clinical Simulation for Crisis Management (1s.h.)	DNAP Seminar (2s.h.)		DNAP Seminar (2s.h.)

The courses noted below will be entirely new courses. The new courses will be offered in a blended at that includes asynchronous distance education and traditional classroom experiences. Students will be required to attend classes on campus twice a semester. This will enable face-face engagement with other students and faculty and allow for advising for the scholarly project.

AFN-8xx      **Principles of Evidence-based Practice (3 s.h.)**  
 An analysis of evidence-based practice with a focus on types/levels of evidence and application of the best evidence to clinical practice. Includes the use of evidence-based clinical guidelines.

AFN-8xx      **Management Principles for Nurse Anesthesia (2 s.h.)**

A survey of management principles relevant to leaders in nurse anesthesia. Includes content on financial management; billing/payment strategies; efficient deployment of resources

- AFN-8xx     **Principles of Pain Management (2 s.h.)**  
Foundational pain management course that focuses on all aspects of chronic and acute pain management. Interventional pain management, ultrasound, pharmacotherapeutics, and complementary medicine techniques.
- AFN-8xx     **Clinical Simulation for Crisis Management (1 s.h.)**  
High-fidelity simulation lab course that applies theories of learning through simulation to clinical management of low occurrence, high-risk anesthetic crisis.
- AFN-8xx     **Introduction to Teaching and Learning (2 s.h.)**  
Components of effecting teaching/learning. Emphasis on application of learning theories; designing effective models of teaching/learning; and developing innovative educational experiences that facilitate achievement of desired learner outcomes.
- AFN- 8xx     **DNAP Seminar I (1 s.h.)**  
Analysis and discussion of the role of doctoral prepared nurse anesthetists in the healthcare arena. Introduction to the capstone project.
- AFN-8xx     **DNAP Seminar II (2 s.h.)**  
Integration of organizational change concepts, leadership, ethics, and economics into the capstone project.
- AFN-8xx     **DNAP Seminar III (2 s.h.)**  
Application of concepts of quality assurance/quality improvement to clinical situations. Continued development of the capstone project. Includes concerns with professional wellness and chemical dependency.
- AFN8Xx     **DNAP Seminar IV (2 s.h.)**  
Continued synthesis of the components of the capstone project into the final project.

## **ASSESSMENT**

Student and program effectiveness will be an ongoing process with assessment milestones throughout the implementation of the curriculum and at the time of graduation of each cohort.

## **Student Competencies**

In addition to exams administered as part of normal coursework, student competency will be evaluated in the simulation lab and in their ability to conduct a process improvement capstone project.

1. Satisfactory evaluation of the student's ability to manage rare but life-threatening simulated crises. Students will be evaluated in the areas of critical thinking, advanced technical skills, knowledge of pharmacology and physiology, and overall anesthetic decision-making.
2. Satisfactory achievement of the DNAP capstone project. Students will be evaluated on their ability to research, plan, execute, and evaluate a process improvement capstone project. The DNAP and DHLM faculty, their student peers, and other expert stakeholders will serve as evaluators. A successful evaluation of the project will be a condition of eligibility for graduation.

The Anesthesia For Nurses Admissions and Progressions Committee reviews student evaluations annually and at other times as needed. The committee will make recommendations for changes to the reporting form and for changes in the student competency metrics. The curriculum committee will evaluate the clinical simulation curriculum and simulation rubrics for effectiveness and measurement of student achievement.

### **Program Effectiveness**

Program effectiveness will be evaluated by students and by the success of the graduates. The following metrics will be monitored.

1. Evaluation of didactic instruction. Students will evaluate each didactic course and course instructor.
2. Evaluation of overall program effectiveness. Prior to graduation, students will participate in an anonymous survey as well as an exit interview with the Associate Dean.
3. Alumni survey. Between three to five years post-graduation, alumni will be surveyed regarding their career trajectory and their engagement in education, healthcare policy, and leadership.
4. Program attrition. Program attrition will be benchmarked against national nurse anesthesia program data.

Evaluations of student outcomes and program effectiveness will be used to make changes in course sequencing within the curriculum; the instruction delivery method; course content; and the overall effectiveness of the faculty

The MUSC Office of Institutional Effectiveness tracks and assists in setting benchmarks for academic programs as part of the Southern Colleges and Schools reporting mechanism on evaluating the effectiveness of the program.

### **FACULTY**

Current faculty will provide the course direction for the nurse anesthesia-focused courses in pain management, simulation, and evidence-based practice. Additional content experts will provide lectures as needed but will not be full-time faculty members. Adjunct faculty will also be used to provide course instruction in the current Master's degree program to allow the doctoral prepared faculty to instruct in the proposed DNAP program. Doctoral prepared CRNAs who are employed at our clinical sites may be used to augment the advising portion of the capstone

project. A doctoral prepared faculty member from the MUSC Department of Healthcare Leadership and Management will direct the health administration courses. Upon implementation of the post-baccalaureate DNAP program, these courses will be delivered jointly to the post-master's DNAP and the post-baccalaureate DNAP students.

Ten students will be admitted initially with an increase to 15 students in later years. The smaller class size will allow for gradual hiring of faculty. During the initial two years of the program, the DNAP students will take the health administration courses with the Doctor in Health Administration students rather than have a faculty member dedicated to instruct a class of 10 students. At the time that the post-baccalaureate DNAP students matriculate, the post-master's DNAP will then share courses with that DNAP cohort. At this time, a dedicated faculty member will be employed to instruct for the DNAP program.

Table B- Faculty List

<b>List Staff by Rank (e.g. Professor #1, Professor #2, Associate Professor #1, etc.)</b>	<b>Highest Degree Earned</b>	<b>Field of Study</b>	<b>Teaching in Field (Yes/No)</b>
Professor #1	PhD	Adult & Occupational Education	Yes
Assistant Professor #1	DNP	Nursing	Yes
Assistant Professor #2	MHS	Nurse Anesthesia	Yes
Instructor	MSNA/MHS/DNAP	Nurse Anesthesia	Yes
Assistant Professor #3	DNP	Nursing	Yes
Associate Professor #1	PhD	Research	Yes
Assistant Professor #4	DHA or PhD	Health Administration	Yes

The MUSC College of Health Profession's strategic plan includes goals on national recognition in research, interprofessional education and practice, and service. In support of these goals, MUSC provides educational sessions for faculty on diverse topics such as effective use classroom technology, educational instruction, and curriculum design. The Research Administration supports research efforts through the staff in the grants office. The grants staff assists with the submission of nurse anesthesia traineeship grants and with providing overall support. MUSC supports the professional development of its faculty by providing release time and funding to enable faculty to attend national educator meetings. In acknowledgement of the importance of national recognition of its faculty, the College of Health Professions has endorsed the actions of current faculty presenting at the state and national level by including these efforts in the yearly performance evaluation. A new initiative that will impact new doctoral faculty is the Faculty Mentoring and Career Development Program. Any new faculty in the DNAP program will be

required to participate in this program that supports the mentoring process through the academic system and in the creation of overall career goals and objectives.

**Table C – Unit Administration, Faculty, and Staff Support**

The Program Administrator serves a dual role, instructing students as well as directing the program administration of the program and course instruction/direction. The Program

<b>UNIT ADMINISTRATION, FACULTY, AND STAFF SUPPORT</b>						
<b>YEAR</b>	<b>NEW</b>		<b>EXISTING</b>		<b>TOTAL</b>	
	Headcount	FTE	Headcount	FTE	Headcount	FTE
<b>Administration – AFN Program Administrator and Department Chair</b>						
2014 – 15	0	0	2	0.02	2	0.02
2015-2016	0	0	2	0.17	2	0.17
2016-2017	0	0	2	0.17	2	0.17
2017-2018	0	0	2	0.17	2	0.17
2018-2019	0	0	2	0.22	2	0.22
<b>Faculty</b>						
2014 – 15	1	0.2	2	0.1	3	0.3
2015-2016	3	0.6	3	0.3	6	0.9
2016-2017	1	0.2	6	0.9	7	1.1
2017-2018	0	0	7	1.1	7	1.1
2018-2019	0	0	7	0.96	7	0.96
<b>Staff</b>						
2014 – 15	0	0	2	0.06	2	0.06
2015-2016	0	0	2	0.06	2	0.06
2016-2017	0	0	2	0.06	2	0.06
2017-2018	0	0	2	0.06	2	0.06
2018-2019	0	0	2	0.06	2	0.06

Administrator is expected to direct both the post-master's DNAP and the post-baccalaureate DNAP. In Table C, the Program Administrator is included in the Administration head count and FTE with the understanding that this faculty member will also teach full time.

One FTE represents a full-time faculty member who has been appointed to the MUSC faculty by the Vice President for Academic Affairs and Provost and who receives 100% of compensation through MUSC or through MUSC authorized activities. The faculty member engages in clinical practice, instruction, research, and/or administrative activities on the MUSC Campus or any of its affiliated locations. The faculty position may be tenured, tenure eligible or non-tenured.

## **PHYSICAL PLANT**

At present, the existing Master of Science degree in Nurse Anesthesia (MSNA) program has a dedicated classroom that includes an area for full high-fidelity simulation. Because the MSNA students will primarily be away at clinical sites, the current dedicated classroom will be available for any on-campus class sessions. The classroom is equipped with SmartBoard technology, high-definition cameras, and all other necessary audiovisual equipment. Online interaction with students will continue to be delivered using the internet-based learning management system – Moodle. All current faculty are proficient with Moodle system. New faculty will be oriented to the program upon academic appointment.

## **EQUIPMENT**

It is not anticipated that additional equipment will be necessary. The crisis simulation course will be taught using the program's current high-fidelity human simulator. The current equipment will be updated and replaced using the normal acquisition process. The College of Health Professions has the necessary technology to deliver hybrid, online courses and has a track record of successful distance education through the Department of Healthcare Leadership and Management.

## **LIBRARY**

Students will continue to have full access to the resources of the MUSC library, which includes an extensive selection of electronic journals and electronic databases (PubMed, MedLine, CINAHL). The MUSC Library's primary purpose is to meet the information needs of faculty, staff and students, and to support the curriculum, research, and patient care goals of the Colleges of Health Professions, Medicine, Pharmacy, Nursing, Dental Medicine, and Graduate Studies and the Medical Center. The Library serves as a database and knowledge center, an academic support unit, an electronic educational center, and a leader in information planning. The modern library consists of electronic resources, services including the education of students and faculty in the most effective use of these resources. The MUSC Library has over 220 databases and over 19,000 electronic journals.

Recognizing that users expect to access information where they are, the library has concentrated on making resources available online. The DNAP faculty, students and staff would be able to access all resources via the Internet wherever they are physically located by using their MUSC NetID login and password. The MUSC Library's Webpage (<http://www.library.musc.edu/>) provides access to those electronic resources.

Resources not owned by the library can be requested at no charge through the Interlibrary Loan document delivery service. Every effort is made to get an electronic copy of a journal article, which on average takes 1.3 business days to obtain. Books can also be borrowed from other

libraries. Through PASCAL, faculty and students are able to borrow books held by South Carolina Colleges and Universities within two to three business days (if the book is not checked out). Faculty and students may request that books and journals be added to the collection.

### **ACCREDITATION, APPROVAL, LICENSURE, OR CERTIFICATION**

The Medical University of South Carolina, where the program will be delivered, has been continuously accredited by its regional accreditation agency, the Southern Association of Colleges and Schools Commission on Colleges (SACS) since 1971. The next re-affirmation date is 2017.

The Council on Accreditation of Nurse Anesthesia Educational Programs (COA) accredits the current AFN master's degree program. An application for approval of a practice-oriented doctoral completion degree will be submitted to the COA. The COA is the national agency responsible for establishing the educational standards for nurse anesthesia programs through rigorous evaluation of programmatic content, effectiveness, and quality improvement. The process for approval of the DNAP program includes the submission of proof of program and institutional accreditation and submission of narrative and supporting documentation of resources, program effectiveness, accountability, and governance. The COA will evaluate the program of study for the scope and content of doctoral work, evaluation of competence of scholarly work, and the inclusion of the required content in biologic systems, professional role, ethics, healthcare improvement, informatics, social policy, health systems management, and ethics. The application for approval for this program will be submitted March 2017 for review in May 2017.

Post-masters completion program DNAP graduates will not be required to obtain additional certification.

### **ARTICULATION**

The MUSC transfer credit policy and articulation policy is located on the MUSC website: [http://academicdepartments.musc.edu/esl/bulletin/acad\\_policies/transfer\\_policy/](http://academicdepartments.musc.edu/esl/bulletin/acad_policies/transfer_policy/). The MUSC Anesthesia For Nurses program currently accepts prerequisite courses as described in the articulation agreements. However, nurse anesthesia specific content is interwoven in the DNAP curriculum and transfer courses do not contain information specific to the program. The DNAP is considered a terminal nurse anesthesia degree.

### **ESTIMATED COST OF THE PROGRAM AND SOURCES OF FINANCING**

The implementation of this program will not incur any unique costs or special state appropriations. It is anticipated that this proposal will result in an initial additional expense of \$50,000 for the additional course instruction in the doctoral program and to supplement current doctoral faculty in the Master's in Nurse Anesthesia curriculum. This program will run concurrently with the existing Master's in Nurse Anesthesia program initially then upon implementation of the post-baccalaureate DNAP, both DNAP programs will run concurrently. The majority of the faculty will teach in both programs. Any additional faculty will not be included in year-one budget but will be added over the first two years of the program. The faculty in the Doctor in Health Administration Program will teach the leadership and management courses. Following the implementation of the post-baccalaureate program in summer 2018, both the post-master's and the post-baccalaureate DNAP students will share the Doctor in Health Administration and the new nurse anesthesia courses. Total expenses and sources of financing are noted in Table D.

The initial projected enrollment for the post-Master's DNAP is 90% in-state and 10% out-of-state. However, since this program will be offered with a significant online presence, the outstate applicant pool may be larger. The post-Master's DNAP will continue to be offered as long as the applicant pool stays competitive.

Table D – Estimated Costs and Sources of Financing by Year

<b>ESTIMATED COSTS BY YEAR</b>						
<b>CATEGORY</b>	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	<b>5<sup>th</sup></b>	<b>TOTALS</b>
Program Administration*	27,839	39,741	40,535	41,346	54,213	203,674
Faculty Salaries *	27,432	42,471	50,020	51,938	44,545	216,406
Graduate Assistants	0	0	0	0	0	0
Clerical/Support Personnel*	3,472	3,542	3,613	3,685	3,758	18,070
Supplies and Materials	2,796	11,648	15,356	14,866	15,608	60,274
Library Resources	0	0	0	0	0	0
Equipment	0	0	0	0	0	0
Facilities	0	0	0	0	0	0
Other: Faculty development, CE faculty, Traineeship	749	4,857	6,401	6,198	6,507	24,712
<b>TOTALS**</b>	<b>62,288</b>	<b>102,259</b>	<b>115,925</b>	<b>118,033</b>	<b>124,631</b>	<b>523, 136</b>
<b>SOURCES OF FINANCING BY YEAR</b>						
Tuition Funding	68,185	361,122	589,181	638,224	638,224	2,294,936
Program-Specific Fees	0	0	0	0	0	0
State Funding	0	0	0	0	0	0
Reallocation of Existing Funds	0	0	0	0	0	0
Federal Funding	0	0	0	0	0	0
Other Funding (Specify)	0	0	0	0	0	0
<b>TOTAL</b>	<b>68,185</b>	<b>361,122</b>	<b>589,181</b>	<b>638,224</b>	<b>638,224</b>	<b>2,294,936</b>

\*The first year staffing costs of the program are reflective of the sharing of faculty, administration, and staff between the master's, post-masters DNAP, and the post-baccalaureate DNAP. When dividing these costs between programs, the faculty salaries are calculated based on percent effort between the programs and timing of the transition between the MSNA and the DNAP. The costs associated with clerical support and supplies are based on the number of students enrolled in the program and the anticipated student and clinical services workload. The

additional faculty who that will be hired to support this program will be adjunct faculty who may not direct a full course but will be responsible instead for providing lectures in their area of expertise. These adjunct faculty appointments will increase as the student enrollment increases resulting in an increase in cost.

\*\* MUSC subscribes to the funds flow model for budgeting and distribution of funds with all of the sources of financing coming into the division then portions of the income are allocated out to areas in the department, the college, and the university that support the AFN division.



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September 9<sup>th</sup>, 2013

Ms. Renea H. Eshleman  
Acting Director  
Academic Affairs and Licensure  
The South Carolina Commission on Higher Education  
1122 Lady Street, Suite 300  
Columbia SC 29201

Dear Ms. Eshleman,

In compliance with the Commission on Higher Education requirement for outside assessment for doctoral programs, the MUSC Anesthesia for Nurses Program consulted with Kathleen Fagerlund CRNA PhD, Clinical Associate Professor ad Honoreum from the University of Minnesota. She reviewed both the post-Master's Doctor in Nurse Anesthesia Practice (DNAP) and the post-baccalaureate DNAP.

Dr. Fagerlund has extensive experience as a nurse anesthesia educator and administrator in a variety of academic settings. Dr. Fagerlund has a PhD in educational policy and administration. Her area of expertise is the economics of nurse anesthesia education. She also was the lead nurse anesthesia faculty during the development and implementation of the first Doctor of Nursing Practice (DNP) program in the country at the University of Minnesota. This background made her very qualified to review all areas of the proposals including justification of need, program assessment, and resources.

The suggestions from Dr. Fagerlund regarding clarity of resources were incorporated into these final documents.

Please let me know if you need additional information,

A handwritten signature in cursive script that reads "Angela Mund".

Angela Mund CRNA DNP  
Division Director  
Anesthesia for Nurses

Report on Evaluation of Doctor of Nurse Anesthesia Practice (DNAP)  
New Program Proposal: **Post Masters**  
Medical University of South Carolina  
College of Health Professions  
Department of Health Professions

**I. Merits of the proposed program**

- A. Starting post-MS DNAP first to provide faculty for future post-baccalaureate students  
Starting the post-MS DNAP program first (before the post-baccalaureate program) to prepare faculty for future students is a strong point of the proposal. The program administrator has several years of experience as a certified registered nurse anesthetist (CRNA) with a practice doctorate, and can be a role model as well as the administrator of the program.
- B. Blended instruction  
By using distance technologies, but requiring 3 on-campus sessions each semester, the CRNAs obtaining the post-masters DNAP will be able to do their coursework at home, but experience the benefits of networking with other students on campus. It is an excellent model for working adult students.
- C. Use of healthcare leadership expertise in the College of Health Professions (CHP)  
Exposure to faculty with expertise in healthcare leadership and management will be a benefit for the post-masters DNAP students. Depending on how the courses are structured, the DNAP students may be in classes with students who are majoring in Healthcare Leadership and Management, which would be a benefit for both groups of students.
- D. DNAP program in line with MUSC CHP strategic goals and the IOM Report  
The proposed DNAP program fits with at least two of the CHP strategic goals (“Lead South Carolina and the nation in translating research into the classroom and clinic of our respective professions, and demonstrate the value and maximize the ability of all health professions represented in the College to participate in new models of health care delivery emerging from health care reform”. CHP Annual Report 2012, p. 11.). The program proposal also fits with all four key messages of the Institute of Medicine report on the future of nursing. (The Future of Nursing: Leading Change, Advancing Health, IOM, October 2010). This proposal could not be more timely.

**II. Potential effect on existing programs at the institution**

- A. Small overall impact  
The impact on existing programs at MUSC should be almost non-existent. Due to the specialized coursework that addresses the needs of CRNAs, students from other programs will not be eligible to transfer to the program. The MUSC DNP program in the College of Nursing does not accept CRNAs, so there should be no impact on that program.
- B. Classroom space

The proposal provides details on how the current classroom space will be used by the post-masters and post-baccalaureate MSNA and DNAP students. The classroom and simulator space can be scheduled to prevent overlap.

C. Healthcare Leadership and Management faculty

There may be an impact on the CHP Healthcare Leadership and Management (HLM) faculty because these faculty will be teaching new courses or have increased numbers of students in their current classes. When the post-masters DNAP students are eventually joined by the post-baccalaureate DNAP students, the effect on HLM faculty will be greater.

**III. Relationship to similar programs in the state**

A. University of South Carolina College of Nursing

The MUSC post-masters DNAP program will be the first in South Carolina. The program will accept CRNAs who may or may not have a masters degree in nursing. On the other hand, the University of South Carolina College of Nursing might accept a CRNA with a masters degree in nursing, but would not likely accept a CRNA with a non-nursing masters degree. The two programs have some similarities and some differences, and each will be attractive to a different sub-set of applicants.

**IV. Institution's readiness and ability to support the proposed program**

A. At the time of this review, the DNAP post-masters proposal had been approved by the MUSC Board of Trustees only.

Before the proposal is submitted to the S.C. Commission on Higher Education, signatures by the Provost and Vice President for Academic Affairs, and the CHP Leadership Council will need to be secured.

C. Would like to see more detail about how the increased faculty workload will be addressed.

It appears that the Department of Healthcare Leadership and Management faculty will have a slight increase in workload due to additional students and courses, but the AFN program faculty will have a large increase in workload. With a post-baccalaureate DNAP and post-masters DNAP program running simultaneously, the AFN program could have approximately 100 students at one time, as opposed to 56 students at one time in the current program. Will the addition of one full-time faculty member and other adjunct faculty meet the needs of the program and students? I would like to see an institutional sign-off on a faculty workload document that demonstrates adequate faculty for teaching and advising of the capstone project.

Report prepared by:

Kathleen Fagerlund, CRNA, PhD

Clinical Associate Professor Ad Honorem

University of Minnesota School of Nursing