



Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Andrew R. Smarick
Chair

James D. Fielder, Jr., Ph. D.
Secretary

March 24, 2021

Dr. Roger J. Ward
Interim Provost and Executive Vice President
Dean, Graduate School
University of Maryland, Baltimore
220 Arch Street
Baltimore, MD 21201

Dear Dr. Ward:

The Maryland Higher Education Commission has reviewed a request from University of Maryland, Baltimore to offer a Professional Certificate (P.C.) in Nurse Anesthesia within the existing Doctor of Nursing Practice (DNP) program.

I am pleased to inform you that the program proposal is approved. This decision is based on an analysis of the program proposal in conjunction with the law and regulations governing academic program approval, in particular Code of Maryland Regulations (COMAR) 13B.02.03. The program meets COMAR's requirements and demonstrates potential for success, an essential factor in making this decision.

For the purposes of providing enrollment and degree data to the Commission, please use the following HEGIS and CIP codes:

Program title	Award level	HEGIS	CIP
Nurse Anesthesia	P.C.	1203.00	51.3804

Should University of Maryland, Baltimore desire to make a substantial modification to the program in the future, review by the Commission will be necessary. I wish you continued success.

Sincerely,

Dr. James D. Fielder
Secretary

JDF:KKS:gra

C: Dr. Antoinette Coleman, Associate Vice Chancellor for Academic Affairs, USM
Dr. Shannon Idzik, Associate Dean, DNP Program, UMB

File: 20674

OFFICE OF THE CHANCELLOR

January 25, 2021

Dr. Bruce E. Jarrell
President
University of Maryland, Baltimore
Office of the President
220 N. Arch Street
Baltimore, MD 21201

Dear Bruce,

Thank you for forwarding the request of the University of Maryland, Baltimore to offer the Professional Certificate Program in Nurse Anesthesia. I understand that the certificate program will align with the national recommendations required for doctoral education for Advance Practice Registered Nurses (APRNs) and will enable nurses with doctoral degrees to develop nursing practice expertise. And the requirements for the certificate are composed of curriculum within the existing Doctor of Nursing Practice (DNP) program and students will be required to complete a minimum of thirteen (13) credit hours with the opportunity to take additional credits.

I am pleased to approve this action. I have confidence that the certificate program will meet with much success.

Sincerely,



Jay A. Perman
Chancellor

Cc: Roger J. Ward, Interim Provost, Executive Vice President, and Dean of the Graduate School
Antoinette Coleman, Associate Vice Chancellor for Academic Affairs

November 10, 2020

James D. Fielder, PhD
Secretary
Maryland Higher Education Commission
6 North Liberty Street
Baltimore, MD 21201

Dear Secretary Fielder:

The University of Maryland School of Nursing (UMSON) is seeking authorization to add a Professional Certificate program in Nurse Anesthesia to the existing Doctor of Nursing Practice (DNP) program. This Professional Certificate Program would align with national recommendations requiring doctoral education for Advance Practice Registered Nurses (APRNs). Candidates for the program would be required to have a doctoral degree or be concurrently enrolled in a doctoral program and complete the doctoral degree while earning the certificate.

Thank you for your time and for considering this program. Please contact me if you need further information.

Regards,



Dr. Roger J. Ward, JD, MSL, MPA
Interim Provost and Executive Vice President
Dean, Graduate School



Cover Sheet for In-State Institutions Non-substantial Modification to Existing Program

Institution Submitting Proposal	
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Each action below requires a separate proposal and cover sheet.

- | | |
|---|----------------------|
| Articulation Agreement | Closed Site Approval |
| New Certificate Program within Existing | Discontinue Program |
| Change in Program Modality | Suspend Program |
| Title Change | Reactivate Program |
| Code Change | |

Department Proposing Program				
Degree Level and Degree Type				
Current Title of Proposed Program				
Total Number of Credits				
Current Codes	HEGIS:	CIP:		
Program Modality	Current:	On-campus	Distance Education (<i>fully online</i>)	Both
	Proposed:	On-campus	Distance Education (<i>fully online</i>)	Both
Program Resources	Using Existing Resources		Requiring New Resources	
Projected Implementation Date	Fall	Spring	Summer	Year:
Provide Link to Most Recent Academic Catalog	URL:			
Preferred Contact for this Proposal	Name:			
	Title:			
	Phone:			
	Email:			
President/Chief Executive	Type Name:			
	Signature:			Date:

Revised 5/15/18



**Proposal to Offer a Professional Certificate in Nurse Anesthesia Program
within an Existing Doctoral in Nursing Practice Program**

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A. Centrality of the Proposed Certificate to the Mission of the Institution

Prior to 2014, there were two avenues for nurses to become APRNs at the UMSON. First, nurses with baccalaureate degrees could enroll in a master's degree program. Second, nurses who had already earned a master's degree could enroll in a post-master's certificate program.

In 2014, UMSON converted all master's degree APRN specialty programs to the doctoral degree, specifically the Doctor of Nursing Practice (DNP). At that time, UMSON also stopped admitting students to post-master's APRN certificate programs and did not pursue a post-doctoral professional certificate program for their APRN specialty programs.

In 2017, UMSON sought and received approval to convert the post-master's APRN certificate programs to post-doctoral professional certificate programs. At the time, there were no post-master's certificate programs to prepare nurses as certified registered nurse anesthetists (CRNAs); therefore, there were no programs to convert.

This proposal seeks to add the CRNA specialty to the six professional certificates already offered at UMSON. As the leader in APRN education in the state UMSON is committed to offering opportunities to meet the demand of health care in the state. There continues to be a significant increase in the number of doctoral prepared nurses across the nation and in Maryland. Nurses with a doctoral degree seek additional education for a variety of reasons. For example, nurses that are not prepared as APRNs may want to expand their education and scope of practice by returning for additional advanced practice education. Nurses with advanced practice education may also want to change their area of certification and practice. Currently, UMSON has no academic option for nurses who have completed a doctoral program or are enrolled in a non-advanced practice doctoral program to obtain the additional education to become a CRNA.

Nurses who complete a doctoral degree or professional certificate in an APRN specialty in the DNP program are eligible for national board certification so that they can apply for licensure in the state as an APRN. In addition, the professional certificate programs will keep UMSON aligned with the national requirements as published in 2008 by AACN. The APRN Consensus Document established that all applicants for national board certification as an NP must have completed and graduated from a formal graduate degree or post-graduate certificate program. As of January 1, 2014, with the implementation of the Standards for Accreditation of Baccalaureate and Graduate Nursing Programs (Standards) (2013), Collegiate Commission on Nursing Education (CCNE) began reviewing post-graduate APRN certificate programs for accreditation. UMSON received full accreditation for the post-graduate APRN certificate program at the last accreditation review in 2014.

This proposal is also consistent with the University of Maryland, Baltimore (UMB) mission and UMSON mission, and 2017 strategic goals:

UMB Mission: "To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service."

UMSON Mission: "We shape the profession of nursing and the health care environment by developing leaders in education, research, and practice."

UMSON Strategic Goal 1: “Design contemporary teaching and learning environments that are accessible and affordable to prepare students to be exemplary professionals and leaders in society.”

B. Adequacy of curriculum design and delivery to related learning outcomes

The primary educational objective of the certificate program is to enable nurses with doctoral degrees to develop nursing practice expertise that can expand their practice role. The curriculum focuses on providing the necessary content and clinical expertise to make the graduates eligible for certification in an APRN role and population foci. The professional certificate program will prepare nurses with a doctoral degree or concurrently enrolled in a doctoral degree program to incorporate expertise in the CRNA role. The professional certificate will only be awarded at the completion of the doctoral degree for those nurses concurrently enrolled in a doctoral program. The program will focus on the healthcare concepts and skills that can further expand their roles and develop advanced nursing practice in primary or acute care management.

All students in the proposed program will be required to take a minimum of 13 credits, but most will need to complete many more to meet eligibility for national certification. The number of additional courses (credits) that each candidate will be required to take is determined by the directors of the program who will perform a gap analysis of a candidate's previous education credits by utilizing the Standards for Accreditation for Nurse Anesthesia programs guidance (2018).

The plans of study will be designed to fill the academic gaps with the necessary coursework to meet the learning needs as recommended by the APRN Consensus Document (2008) and national competencies. The more similar the prior advanced practice education, the fewer credits will be required. For example, a family nurse practitioner may need to take many more credits if enrolled in the CRNA program. The specific knowledge and skills that will be offered in the proposed program will be new content to the incoming students. They must show completion of a specified plan of study that includes advanced pathophysiology, advanced physical assessment across the life span, and pharmacology along with all the necessary nurse anesthesia didactic and clinical courses.

Students will be required to complete the courses and proposed plans of study listed in Appendix A, or equivalent courses in their plans of study either in their previous degree program, or in their post-doctoral plan of study to be eligible for graduation and for board certification in nurse anesthesia.

All advanced practice courses have significant portions of the didactic taught in a face-to-face format so that instructors can assess student learning through problem-based learning techniques. Face-to-face instruction and communication between instructors and students are combined with Web-based instruction that provides course materials (lectures, notes, and visual and audio resources). UMSON uses the Blackboard learning platform to provide web-based instruction.

All students are placed in clinical environments under the supervision of highly skilled preceptors to allow students opportunities to apply their learning with patients. Often faculty members serve as preceptors in their own faculty practice sites so student's learning can be evaluated in both the classroom and clinical setting throughout the program. Faculty involved in determining the admissions of applicants the CRNA program are mindful of the number of preceptors and clinical sites available prior to the actual admission cycle to ensure sufficient resources. Clinical sites are

contracted to provide clinical instruction and supervision in various local healthcare agencies. Faculty and clinical instructors are integral members of the UMB learning community.

UMSON received accreditation by Commission of Collegiate Nursing Education (CCNE) for the post-graduate certificate program at UMSON in 2014 and is due for reaccreditation in 2025. UMSON will notify CCNE of this substantive change to the post-graduate certificate program in accordance with the CCNE substantive change timeline. The Maryland Board of Nursing will be apprised, as well.

C. Quantifiable and reliable evidence and documentation of market supply and demand in the region and the state

The professional certificate will be attractive to applicants who would have historically applied to the post-master's certificate programs at UMSON. UMSON has typically admitted an average of 26 students per semester in the prior certificate program. Professional certificate CRNA students will join a robust pool of current CRNA students. Appendix B provides data about enrollment trends in those programs.

In the state of Maryland, nationally certified APRNs can diagnose, prescribe, and manage acute and chronic health care conditions of the population, so they are regarded as a highly essential workforce in Maryland. Hospitals are increasingly relying on APRNs to meet the acute care needs of patients. There is a significant and urgent need for building the anesthesia workforce, and University of Maryland School of Nursing offers the only in-state CRNA program. While there is no state specific data on nurse anesthesia workforce, at the time of this writing there are currently 17 vacant CRNA positions at the University of Maryland Medical Center alone and 48 vacant CRNA positions on Indeed. The Bureau of Labor Statistics (BLS) estimates that the projected job growth for CRNAs between 2014 and 2024 will be 31%, much faster than the 16% expected job growth for RNs (BLS, 2018). Many rural areas are already using high numbers of CRNAs when they are available, and this is expected to increase significantly. Many organizations are utilizing them in place of anesthesiologists due to availability and costs. Facilitating a route for nurses to add to or change their APRN specialty areas will aid in meeting the anesthesia needs. Many doctoral prepared nurses with degrees in non-APRN fields such as nursing administration, community health, or informatics return to the UMSON to add the APRN core essentials so they can be eligible for national board certification as an APRN. We believe this expedited route for nurses who already possess a doctoral degree will help to meet current and projected workforce needs.

The program will also respond to recommendations proposed by many national health reports including:

The Future of Nursing by the Institute of Medicine (IOM, 2011)

Four key messages discussed and recommended in this report:

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
3. Nurses should be full partners, with physicians and other health professionals, in redesigning health care in the United States.

4. Effective workforce planning and policy making require better data collection and an improved information infrastructure.

The APRN Consensus Model (2008)

“APRN education programs/tracks leading to APRN licensure, including graduate degree-granting and post-graduate certificate programs will:

1. Follow established educational standards and ensure attainment of the APRN core, role core, and population core competencies;
2. Be accredited by a nursing accrediting organization that is recognized by the U.S. Department of Education (USDE) and/or the Council for Higher Education Accreditation (CHEA);
3. Be pre-approved, pre-accredited, or accredited prior to the acceptance of students, including all developing APRN education programs and tracks;
4. Ensure that graduates of the program are eligible for national certification and state licensure; and
5. Ensure that official documentation (e.g., transcript) specifies the role and population focus of the graduate.”

D. Adequacy of Faculty Resources

The UMSON currently has sufficient infrastructure to offer the additional specialty in the professional certificate program. UMSON has offered specialty certificates for decades with a successful record of pass rates on national board certification examinations. The highly skilled and certified faculty members are well qualified to maintain the CRNA professional certificate program. UMSON’s DNP program and specialties are consistently ranked in the top 10 in the nation.

All courses for the proposed specialty currently are offered in the existing DNP program. All necessary faculty resources to manage the additional specialty and teach the CRNA courses are already available at the UMSON. There are key faculty members for each of the specialty areas at UMSON. The same faculty that provide instruction for current CRNA DNP degree program will provide instruction in the CRNA post-doctoral professional certificate program. Key faculty members are listed for the CRNA specialty in charts on the following two pages.

All faculty and curricular resources necessary to offer the proposed CRNA specialty in the certificate program already exist in the UMSON. The CRNA specialty will be housed exclusively within an existing degree program. There are no additional faculty or financial resources needed to support this program. This will be the first CRNA post-doctoral professional certificate program offered at a nursing school in the state of Maryland.

Faculty Member Name	Terminal Degree	Full-Time or Part-Time	Courses Taught
Veronica Quattrini, DNP, FNP	Doctor of Nursing Practice	Full-Time	NDNP 819
Artur Caridha, PhD, RN	PhD, Cardiovascular Pathophysiology	Full-Time	NPHY 612
Joseph Pellegrini, PhD, CRNA, FAAN	PhD, Nursing	Full-Time	NSRG 603 (CM) NURS 604 (CM) NURS 613 (CM) NURS 614 (CM) NURS 615 (CM/CT) NURS 617 (CM) NURS 637 (SIM) NURS 654 (SIM) NURS 657 (SIM) NURS 672 (PI) NURS 673 (SIM) NURS 674 (SIM) NURS 676 (SIM) NPHY 625 (CM) NDNP 810 (PI) NDNP 811 (PI) NDNP 812 (PI) NDNP 813 (PI)
Richard P. Conley, Jr. MS, CRNA	MS, Nurse Anesthesia	Full-Time	NRSG 603 (TT) NURS 604 (TT) NURS 613 (PI/SIM) NURS 614 (MI/SIM) NURS 615 (CT/SIM) NURS 617 (CT) NURS 637 (SIM) NURS 654 (CT/SIM) NURS 657 (SIM) NURS 672 (TT) NURS 673 (SIM) NURS 674 (SIM) NURS 676 (SIM) NPHY 625 (PI)

CM – Course Master
 TT – Team Teaching
 CT – Co Teaching
 SC – Simulation Coordinator
 PI – Primary Instructor
 SIM - Simulation

Faculty Member Name	Terminal Degree	Full-Time or Part-Time	Courses Taught
Jacqueline Mitchell, MS, CRNA	MS, Nurse Anesthesia	Full-Time	NURS 637 (PI/SIM) NURS 654 (SIM) NURS 657 (PI/SIM) NURS 673 (PI/SIM) NURS 674 (PI/SIM) NURS 676 (PI/SIM)
Veronica Amos, PhD, CRNA, PHCNS-BS	PhD, Policy Sciences (Health Policy)	Full-Time	NURS 637 (CM/SIM) NURS 642 (PI) NURS 654 (CM/SIM) NURS 657 (CM/SIM) NURS 673 (CM/SIM) NURS 674 (CM/SIM) NURS 75 (PI) NRSG 670 (PI) NDNP 810 (PI) NDNP 811 (PI0) NDNP 812 (PI)
Priscilla Aguirre, DNP CRNA, CRNP-AC	Doctor of Nursing Practice, Nurse Anesthesia	Full-Time	NSRG 603 (TT) NURS 604 (TT) NURS 613 (CT/SIM) NURS 614 (CT) NURS 637 (SC) NURS 654 (SC) NURS 657 (SC) NURS 672 (CT) NURS 673 (SC) NURS 674 (SC) NURS 676 (SC) NPHY 625 (CT/SIM) NDNP 810 (PI) NDNP 811 (PI)

CM – Course Master
 TT – Team Teaching
 CT – Co Teaching
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 PI – Primary Instructor
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Appendix A: Plans of Study

Nurse Anesthesia

Course	Title	Credits/Clinical Hours
NURS 616	Chemistry of Nurse Anesthesia	2
NURS 617	Technology & Physics of Nurse Anesthesia	2
NPHY 612	Advanced Physiology and Pathophysiology	3
NURS 723	Clinical Pharmacology and Therapeutics Across the Life Span	3 (135 hours)
NDNP 819	Advanced Health Assessment Across the Life Span	4
NPHY 625	Advanced Pathophysiology for Nurse Anesthesia	3
NRSG 603	Advanced Pharmacology for Nurse Anesthesia I	3
NURS 613	Principles of Nurse Anesthesia	3
NURS 604	Advanced Pharmacology II	3
NURS 614	Principles of Nurse Anesthesia II	3
NURS 615	Regional Anesthesia	2
NURS 654	Principles of Nurse Anesthesia III	3
NURS 637	Practicum I	4 (180 hours)
NURS 672	Principles of Nurse Anesthesia IV	3
NURS 657	Practicum II	4
NURS 673	Practicum III	3 (135 hours)
NRSG 670	Anesthesia Seminar I	2
NURS 674	Practicum IV	4 (180 hours)
NURS 642	Professional Aspects of Nurse Anesthesia	1
NURS 675	Anesthesia Nursing Seminar II	3
NURS 676	Clinical Practicum V	4
	Total Credits	62
	Clinical Hours	630

* If the student has already taken some of the required courses, the option of lowering the number of credits is possible upon review by the program director

Appendix B: Historical Enrollment Data for CRNA DNP program

Admit Semester	Specialty	#ENROLLED
201302	Nurse Anesthesia	57
201306	Nurse Anesthesia	55
201309	Nurse Anesthesia	79
201402	Nurse Anesthesia	52
201406	Nurse Anesthesia	77
201409	Nurse Anesthesia	76
201502	Nurse Anesthesia	48
201506	Nurse Anesthesia	71
201509	Nurse Anesthesia	71
201602	Nurse Anesthesia	48
201606	Nurse Anesthesia	71
201609	Nurse Anesthesia	69
201702	Nurse Anesthesia	69
201706	Nurse Anesthesia	69
201709	Nurse Anesthesia	68
201802	Nurse Anesthesia	64
201806	Nurse Anesthesia	72
201809	Nurse Anesthesia	72

References

- Bureau of Labor Statistics (BLS), U. S. Department of Labor. (2018). Nurse Anesthetists. Retrieved October 30, 2019, from <https://www.bls.gov/oes/current/oes291151.htm#ind>
- Council on Accreditation of Nurse Anesthesia Educational Programs. (2018). *Standards for Accreditation of Nurse Anesthesia*. Park Ridge, IL.
- IOM (Institute of Medicine). (2011). *The Future of Nursing: Leading Change, Advancing Health*. Washing, DC: The National Academies Press.
- National Council of State Boards of Nursing APRN Advisory Committee. (2008). *Consensus Model for APRN Regulation: Licensure, Accreditation, Certification & Education*.