

September 15, 2025

Sanjay K. Rai, Ph.D., Secretary of Higher Education
Maryland Higher Education Commission (MHEC)
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Dear Dr. Rai:

The University of Maryland, Baltimore is seeking approval to substantially modify the approved and existing Doctor of Nursing Practice (DNP) Program (HEGIS 1203-02; CIP 51.3818) to establish a competency-based curriculum and designate the Certified Registered Nurse Anesthesia (CRNA) curriculum as an area of concentration within the existing DNP program.

The re-conceptualized curriculum will align with the American Association of Colleges of Nursing's (AACN) recently revised and published document The Essentials: Core Competencies for Professional Nursing Education (Essentials). The Essentials calls for a transition to competency-based education focusing on two levels of professional nursing education: entry-level and advanced-nursing level practice. Recognizing the new competency-based doctoral CRNA curriculum as a formal area of concentration will allow University of Maryland School of Nursing (UMSON) to bridge the gap between theory and practice, as it relates to nurse practitioner accreditation standards, employers, and certification bodies.

Graduates from the CRNA concentration enter the workforce immediately with unique qualifications as an advanced practice nurse anesthetist prepared with the knowledge and skills to lead interdisciplinary health care teams. The revised curriculum will provide greater clarity for expectations of applicants, graduates, stakeholders, and a more disciplined approach to nursing education. UMSON is on the leading edge of nursing schools nationwide to re-conceptualize its DNP curriculum to meet these Essentials.

As shown in this proposal, UMSON has the resources to appropriately fund, teach, and support this modification. Thank you for your time and consideration of this request. Please contact Meghan Bruce Bojo at 410-706-2055 or mbojo@umaryland.edu if you have any questions.

Sincerely,



Dr. Roger J. Ward, EdD, JD, MSL, MPA
Provost and Executive Vice President
University of Maryland, Baltimore



Cover Sheet for In-State Institutions

New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	University of Maryland, Baltimore
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Each action below requires a separate proposal and cover sheet.

- | | |
|--|---|
| ☐ New Academic Program | ☐ Substantial Change to a Degree Program |
| ☒ New Area of Concentration | ☐ Substantial Change to an Area of Concentration |
| ☐ New Degree Level Approval | ☐ Substantial Change to a Certificate Program |
| ☐ New Stand-Alone Certificate | ☐ Cooperative Degree Program |
| ☐ Off Campus Program | ☐ Offer Program at Regional Higher Education Center |

Payment ☒ Yes	Payment ☐ R*STARS # JE314010	Payment Amount: 250	Date Submitted: 5/7/2025
Submitted: ☐ No	Type: ☐ Check #		

Department Proposing Program	School of Nursing
Degree Level and Degree Type	Doctorate
Title of Proposed Program	DNP: AoC Certified Registered Nurse Anesthesia (CRNA)
Total Number of Credits	80
Suggested Codes	HEGIS: 1203.02 CIP: 51.3818
Program Modality	☐ On-campus ☐ Distance Education (fully online) ☒ Both
Program Resources	☒ Using Existing Resources ☐ Requiring New Resources
Projected Implementation Date (must be 60 days from proposal submission as per COMAR 13B.02.03.03)	☐ Fall ☐ Spring ☒ Summer Year: 2026
Provide Link to Most Recent Academic Catalog	URL: https://www.nursing.umaryland.edu/academics/doctoral/dnp/

Preferred Contact for this Proposal	Name: Meghan Bruce Bojo
	Title: Executive Director, Academic Administration
	Phone: 410-706-2055
	Email: mbojo@umaryland.edu

President/Chief Executive	Type Name: Dr. Roger Ward
	Signature:  Date: 9/15/2025
	Date of Approval/Endorsement by Governing Board:

Revised 4/2025



**Proposal for Substantial Modification to the Existing
Doctor of Nursing Practice Program
to Establish a New Area of Concentration:**

Nurse Anesthesia

To the
Maryland Higher Education Commission

R-Star Confirmation: JE314010 (May 7, 2025)

University of Maryland School of Nursing
At the University of Maryland Baltimore

A proposal for a substantial modification to the existing Doctor of Nursing Practice to establish a new area of concentration at the University of Maryland, Baltimore School of Nursing:

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A. Centrality to Institutional Mission and Planning Priorities

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

In 2013 the University of Maryland School of Nursing (UMSON) was approved to offer two admission pathways into the Doctor of Nursing Practice (DNP) program's six Advance Practice Register Nurse (APRN) specialties (HEGIS 1203-02; CIP 51.3818). Building on that approval, this proposal outlines two admission pathways for the proposed competency-based Certified Registered Nurse Anesthesia (CRNA) area of concentration (AoC) within the existing DNP program:

Post-baccalaureate with APRN-specialty option. The post-baccalaureate (PB) APRN-specialty option is a 93-credit program designed for baccalaureate-prepared nurses aiming to advance their career as advanced practice nurses in a designated AoC.

Post-master with APRN-specialty option. The post-master (PM) APRN-specialty option offers a variable credit program tailored to master's -prepared nurses pursuing advanced practice roles. Depending on prior academic and clinical experience, students complete between 47 to 93 credits in a chosen AoC. For the PM with specialty option, the specialty director collaborates with each student to complete the National Task Force (NTF) *Gap Analysis Documentation Form for NP Post-Graduate Certificate Program*¹, which informs an individualized plan of study.

In April 2021², the American Association of Colleges of Nursing (AACN) published *The Essentials: Core Competencies for Professional Nursing Education (Essentials)* which calls for a transition to competency-based education focusing on two levels of professional nursing education: entry-level and advanced-level nursing practice. The principles of competency-based education present a new model and framework for preparing registered nurses for contemporary practice. These *Essentials* introduce 10 domains and the expected competencies (and sub-competencies) for each domain that represent professional nursing practice and reflect the diversity of practice settings. The competencies are applicable across four spheres of care defined by AACN (disease prevention/promotion of health and wellbeing, chronic disease care, regenerative or restorative care, and hospice/palliative/supportive care), across the lifespan, and with diverse patient populations.

As the leader in advanced practice education in the state, UMSON is on the leading edge of nursing schools nationwide to re-conceptualize its Doctor of Nursing Practice (DNP) curriculum to meet the 2021 *Essentials*.

The reconceptualized curriculums support a more focused and transformative educational experience. This redesign is intended to better prepare students to be "practice ready" and capable of making an immediate and lasting impact across diverse clinical healthcare settings. UMSON plans to begin offering the redeveloped CRNA curriculum in summer 2026, while teaching out the remaining terms in the legacy CRNA specialty track. By summer 2031 all CRNA students will be enrolled in the revised competency-based curriculum. This timeline aligns with AACN's recommended three-year transition period for implementing the new *Essentials*. Please see Appendix A for phase in and phase out plan and Appendix B for a curriculum comparison.

2. Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority.

¹ NTF Gap Analysis Form: https://cdn.ymaws.com/www.nonpf.org/resource/resmgr/ntfstandards/ntfs_form_b.pdf

² AACN Essentials: <https://www.aacnnursing.org/Portals/42/AcademicNursing/pdf/Essentials-Executive-Summary.pdf>

The CRNA objective is to prepare graduates for the highest level of nursing practice beyond the initial preparation in the discipline. Adopting the competency-based curriculum and designating the pre-existing PB and PM CRNA specialty track as an AoC within the existing DNP aligns with this objective and is consistent with UMSO's mission to prepare leaders and to address local, national, and global health priorities. The University of Maryland, Baltimore (UMB) is the state's leading public health, law, and human services university and devoted to excellence in professional and graduate education, research, patient care, and public service. We emphasize interdisciplinary education and research in an atmosphere that incorporates the following core values: respect and integrity, equity and justice, well-being and sustainability, and innovation and discovery. By conducting internationally recognized research to cure diseases and to improve the health, social functioning, and just treatment of the people we serve, we foster economic development in the city, state, and nation. We are committed to ensuring that the knowledge we generate provides maximum benefit to society and directly enhances Maryland communities.

Ranked in the top 10 nationwide by U.S. News & World Report³ and at one of the country's largest schools of nursing, our DNP program is a rigorous and nationally respected program that transforms students into top-tier advanced practice nurses. To meet the increasing demand for healthcare across settings, the sequential order of DNP coursework allows students to complete the degree with a demonstrated proficiency as an advanced practice nurse. Upon completion, graduates are prepared with skills focused on patient centered care, population health, quality improvement and scientific inquiry, leadership and adoption of electronic information systems in health care organizations. This timely revision builds upon the new National Academy of Medicine's Future of Nursing report, which outlines urgent changes in nursing education⁴; new technologies in teaching and learning such as simulated clinical experiences; increased content in public health and emergency management post-Covid; increased awareness for electronic, mobile, and telehealth systems; and a new emphasis on social determinants of health and an understanding of the broadened student demographics with a variety of learning styles.

The mission of the UMSO is to shape the profession of nursing and the health care environment by developing nursing leaders in education, research, and practice. Through comprehensive academic preparation, immersive clinical experiences, and dedicated faculty mentorship, the reconceptualized DNP program cultivates highly practice-ready graduates, underscoring the program's transformative impact and its elevated standards of excellence. The revised PB and PM CRNA curriculums will have an increased focus on quality and safety, social determinants of health, global health, data driven decisions and patient centered care. With a continued focus on evidence informed care, leadership, health policy, and drive decision-making. This proposal to substantially modify the DNP curriculum by adopting the AACN's *Essentials* is consistent with the school's mission and will assist the school in meeting objectives in the strategic plan.

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation.

UMSON has offered the DNP for nearly 20 years, and the CRNA specialty track for over a decade. The state appropriation budget supports the full range of DNP specialties offered by UMSO, with funding allocated across the entire program. As described in Appendix C and Appendix D, financial projections include an expenditure increase of 2% for estimated COLA/merit increases and 3% related to other costs. Currently, the DNP CRNA specialty track enrolls 30 students annually and we built in a 2% resource increase consistent with the estimated program expenditures.

³ U.S News & World Report: <https://www.usnews.com/best-graduate-schools/top-nursing-schools/university-of-maryland-baltimore-33121>

⁴ National Academy of Medicine's Future of Nursing report: <https://nam.edu/publications/the-future-of-nursing-2020-2030/>

4. Provide a description of the institution's a commitment to: a) ongoing administrative, financial, and technical support of the proposed program; b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

The DNP program has been offered since 2006 with an enrollment of 19 students in the first year. Presently, the DNP program has more than 600 PB and PM matriculating students across nine specialties. UMSON has committed and will continue to commit faculty and resources to each DNP AoC. By revising our current curriculum, to include recognizing the CRNA specialty track as a formal AoC in MHEC's Academic Program Inventory, the DNP program will continue to meet workforce needs in the state. The existence of the program for more than ten years reflects the quality and the satisfaction of our graduates. The UMSON and its faculty are committed to the success and graduation of our students. This includes continuation of the program for a period sufficient to allow enrolled students to complete the program.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan:

1. Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general

The reimagined DNP curriculum, rooted in the new AACN Essentials, directly responds to 2022 State of Maryland's Healthcare Workforce Report ⁵ which highlights the region's critical provider shortages and the increasing complexity of care delivery models. These evolving demands require nurses who are not only clinically adept but also equipped with system-level competencies, precisely the skill set fostered through UMSON's redesigned program. By transitioning to a competency-based framework and formalizing pre-existing specialties as areas of concentration, UMSON is strategically positioned to graduate nurse leaders with the precise skills demanded by today's complex health care ecosystem.

The Essentials' ten domains emphasize interprofessional collaboration, leadership, data-informed decision-making, population health, and direct patient care, all competencies flagged by employers, state policymakers, and certification bodies as urgent priorities. These domains provide a shared language and measurable benchmarks that enhance alignment with state boards of nursing and reinforce workforce readiness for Maryland's hospitals, clinics, and community health systems.

UMSON's liberal education foundation intentionally supports the development of both intellectual agility and practical expertise, equipping graduates to engage with diverse populations and address public health disparities across the state. Feedback from stakeholders, including employers, alumni, and members of our DNP advisory board, consistently emphasizes the demand for nurse practitioners who can confidently navigate role-specific competencies, particularly in acute care and clinical nurse specialist tracks. In response, we refined credit allocation, and course sequencing ensuring compliance with the national standard⁶ of 750 direct care hours while maintaining a manageable credit load.

Most importantly, the DNP redesign positions UMSON as a key contributor to the goals outlined in the Maryland General Assembly's SB440/CH0708 (2022) ⁷ report on the health care workforce crisis. By

⁵ 2022 State of MD Healthcare Workforce Report: <https://mhaonline.org/wp-content/uploads/2023/02/2022-State-of-Maryland-s-Health-Care-Workforce-Report.pdf>

⁶ NONPF: NP Standards: <https://www.nonpf.org/page/NTFStandards>

⁷ MD Commission to Study the Health Care Workforce Crisis (2022):

[https://health.maryland.gov/docs/SB%20440%20Ch.%20708%20\(2022\)%20%E2%80%93%202023%20Final%20Report%20%E2%80%93%20Commission%20to%20Study%20the%20Heal.pdf](https://health.maryland.gov/docs/SB%20440%20Ch.%20708%20(2022)%20%E2%80%93%202023%20Final%20Report%20%E2%80%93%20Commission%20to%20Study%20the%20Heal.pdf)

training practice-ready nurses who embody the competencies essential to meeting both current and future health demands, UMSON affirms its leadership in advancing the health of Maryland's communities.

2. Provide evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education.

UMSON has systems in place to address the Maryland State Plan for Postsecondary education's goals of "equitable access, student success, and innovation."⁸ To demonstrate support of the goals outlined by the Maryland State Plan for Postsecondary Education, we list aligned priorities below in the UMSON's goals and practice^{7,9}:

Priority 2. UMSON's website draws attention to financial aid and scholarships in several places to include the admission's landing page¹⁰ and student life page. The Workforce Shortage Student Grant Program provides financial assistance to aspiring nursing students¹¹ in addition to the Graduate and Professional Scholarship program¹², employer tuition remission programs, and scholarship opportunities¹³ support access to affordable postsecondary education. In addition, UMB's Division of Student Affairs¹⁴ (UMB Student Affairs) coordinates University-wide initiatives, programs, and services that foster all students' academic, personal, and professional development.

Priority 3. UMSON Admissions counselors and student ambassadors meet with prospective students across Maryland to answer questions¹⁵. One-on-one admission counseling sessions are offered daily from 10:00am to 2:00pm¹⁶.

Priority 4. Systems to analyze and improve student's academic readiness and access to quality education are outlined in UMSON's 2024 accreditation report¹⁷. Biannually in the spring, a comprehensive survey of academic support services is distributed to all UMSON students and reviewed for areas of student need or suggested improvements in related services. In addition, nursing student organizations meet with UMSON leadership to review processes, policies, and areas of common emphasis and student concern.

To respond to the responsibilities of military personnel, non-traditional students, and lifelong learners, UMSON offers several resources to include flexible plans of study, and course work only options. Additionally, the Office of Professional Education, and Academic-Hospital Partnerships allow students to pursue academic endeavors that align with personal needs.^{18, 19,20,21}

⁸ 2022 State Plan for Postsecondary Education: [https://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105\(b\)\(3\)\(i\)_2022.pdf](https://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105(b)(3)(i)_2022.pdf)

⁹ 2017-2021 MD State Plan for Postsecondary Education: [https://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105\(b\)\(3\)\(i\)_2017.pdf](https://dlslibrary.state.md.us/publications/Exec/MHEC/ED11-105(b)(3)(i)_2017.pdf)

¹⁰ UMSON Admissions: <https://www.nursing.umaryland.edu/admissions/>

¹¹ Workforce Shortage Student Assistant Grant Program:

https://mhcc.maryland.gov/preparing/pages/financialaid/programdescriptions/prog_wssag.aspx

¹² Graduate and Professional Scholarship Program:

https://mhcc.maryland.gov/preparing/Pages/FinancialAid/ProgramDescriptions/prog_gradprof.aspx

¹³ UMSON Admissions: <https://www.nursing.umaryland.edu/admissions/>

¹⁴ UMB Student Affairs: <https://www.umaryland.edu/umb-student-affairs/>

¹⁵ UMSON on the Road: <https://www.nursing.umaryland.edu/admissions/visit-us/umson-on-the-road/>

¹⁶ UMSON Admission Counseling: <https://www.nursing.umaryland.edu/admissions/contact/#counseling>

¹⁷ UMSON CCNE Self-Study Reports: <https://www.nursing.umaryland.edu/about/accreditation/>

¹⁸ UMSON Military and Veteran Services: <https://www.nursing.umaryland.edu/admissions/military-veteran-nursing-education/>

¹⁹ UMSON Course Work Only: <https://www.nursing.umaryland.edu/academics/coursework-only/>

²⁰ UMSON Office of Professional Education: <https://www.nursing.umaryland.edu/academics/pe/>

²¹ UMSON Academic-Hospital Partnerships: <https://www.nursing.umaryland.edu/academics/academic-partnerships/academic-hospital-partnerships/>

Priority 6. The UMSON Student Life webpage²² provides easy access to resources, tools, schedules and events. The UMB Office of Educational Support and Disability Services²³ provides academic and non-academic support services for students with disabilities through an interactive process and the UMB Writing Center²⁴ provides students with free writing assistance, via in-person and online, that ranges from planning a paper to polishing a dissertation.

Priority 7. UMSON offers several support systems to promote degree completion. Clinical partnerships with major healthcare institutions across the state improve student success as they graduate and begin a professional career. As an example, we have worked with the University of Maryland Medical System, Johns Hopkins Medicine, MedStar, and other renowned facilities in Maryland to provide innovative practicum experiences to facilitate student learning and support the DNP workforce. These arrangements provide expert instruction for the students, including career mentoring and job offers to students in some cases before graduation.

Priority 8. UMSON's Information and Learning Technology (ILT)²⁵ team assists students with media applications for research, in the classroom, and with presentations for conferences, providing audiovisual technical support, audiovisual equipment maintenance, and teleconference operation and management. ILT offers many services online and in person to support research and distributed learning, including web servers and a Blackboard courseware server. Because many administrative, instructional, academic, and research materials are delivered electronically rather than in person, and clinical sites are selected for logistical appropriateness, online students have similar access to academic support services as students attending our brick-and-mortar locations. Students have access to view their grades and information about their registration, account, and financial aid online through the Student User Friendly System (SURFS). The Center for Information Technology Services (CITS)²⁶, the central information technology organization for the University, provides support for student-related systems.

C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State:

1. Describe potential industry or industries, employment opportunities, and expected level of entry (*ex: mid-level management*) for graduates of the proposed program.

Graduates from the CRNA AoC will enter the workforce immediately with unique qualifications as an advanced practice nurse anesthetist prepared to provide anesthesia services to a diverse diagnostic and surgical population, with the knowledge and skills to lead interdisciplinary health care teams. DNP graduates serve in various settings and industries, including hospitals, community clinics, public health, rehabilitation centers, primary care offices, along with faculty roles in universities²⁷.

2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.

According to recent estimates from the Bureau of Labor Statistics, the job outlook for NPs is expected to grow by 28% between 2018 and 2028, compared to overall job growth of just 5% for

²² UMSON Student Life: <https://www.nursing.umaryland.edu/student-life/>

²³ UMB Office of Educational Support and Disability Services: <https://www.umaryland.edu/disabilityservices/>

²⁴ UMB Writing Center: <https://www.umaryland.edu/writing/>

²⁵ UMSON Student Technology: <https://www.nursing.umaryland.edu/technology/students/>

²⁶ UMB Center for Information Technology Services: <https://www.umaryland.edu/cits/>

²⁷ AACN. (2022). Special Survey on Vacant Faculty Positions for Academic Year 2022-2023 <https://www.aacnnursing.org/Portals/42/News/Surveys-Data/2022-Faculty-Vacancy-Report.pdf>

all occupations²⁸. According to a Special Survey on Vacant Faculty Positions released by AACN in October 2022, a total of 2,166 full-time faculty vacancies were identified in a survey of 909 nursing schools with baccalaureate and/or graduate programs across the country. The data show a national nurse faculty vacancy rate of 8.8%. Most of the vacancies (84.9%) were faculty positions requiring or preferring a doctoral degree²⁷. Additionally, the DNP responds to following Maryland Occupational Projections, as of March 2025:

Projections by Occupational Groups ²⁹ :	Annual Openings	Base Employment	Projected Employment	Total Openings
Healthcare Practitioners	12,626	2,490	2,564	378
Healthcare Diagnosing/Treating Practitioners		6,491	6,601	837
Register Nurses		48,808	52,368	30,761
Nurse Practitioners		4,417	4,818	810

Industry Projections ³⁰ :	Base Employment	Projection Employment
Healthcare and social assistance (NAICS*: 621, 622, 623)	370,447	383,052
Private General Medical and Surgical Hospitals (NAICS*: 6221)	93,674	95,326
Private Specialty Hospitals (NAICS*: 6221, 6222)	4,062	4,078
State Government Specialty (NAICS*: 6221, 6222)	394	371

*North American Industry Classification System (NAICS): 621 – ambulatory health care services; 622 – hospitals; nursing and residential care facilities; 623- nursing and residential care facilities; 6221 – general medical and surgical hospitals; 6222- psychiatric and substance abuse hospitals³¹

3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.

As the U.S. population continues to rapidly grow and age, ensuring access to healthcare becomes increasingly vital for maintaining the nation's overall health and quality of life. Studies report an ongoing shortage of CRNAs in addition to other anesthesia providers, especially in rural hospitals due to growing demand, aging workforce, and burnout^{32,33,34}. Additionally, the Bureau of Labor Statistics (BLS), operating under the U.S. Department of Labor (DOL), projects a substantial increase in the demand for nurse practitioners (NPs) in the coming years. In 2019, there were 211,300 NP jobs, and this number is expected to rise significantly to 322,000 by 2029, marking a remarkable 52% increase³⁵. The BLS also anticipates 242,000 occupational separations over the span of ten years (approximately 24,200 per year). Consequently, there is a projected total of 352,700 job openings over the decade, equating to 35,270 annual openings.

According to data from the American Association of Colleges of Nursing (AACN) in their 2022-2023 enrollment report, there was an increase in applications to Doctor of Nursing Practice (DNP) programs

²⁸ Chi, J. (2020, March). Careers for nurses: Opportunities and options. U.S. Bureau of Labor Statistics. <https://www.bls.gov/careeroutlook/2020/article/careers-for-nurses-opportunities-and-options.htm>

²⁹ MD Occupational Projections: <https://labor.maryland.gov/lmi/iandoprojshort/>

³⁰ MD Industry Projections: <https://labor.maryland.gov/lmi/iandoprojshort/industryshort.shtml>

³¹ North American Industry Classification System: <https://www.census.gov/naics/?input=6222&year=2022>

³² Daugherty, L., Benito, R. F., Kumar, K. B., Michaud, P. (2010). Is There a Shortage of Anesthesia Providers in the United States? RAND Health. https://www.rand.org/pubs/research_briefs/RB9541.html

³³ Nagrusa, S., Hogan, P., Cintina, I., Quraishi, J., Hoyem, R., Jordan, L., Zhou, M. (2021). Anesthesia Services: A Workforce Model and Projections of Demand and Supply. Nursing Economic, 39(6) 274-284

³⁴ Association of American Medical Colleges. The complexities of physician supply and demand: projections from 2018 to 2033. <https://www.aamc.org/media/45976/download?attachment>

³⁵ BLS Occupational Outlook: <https://www.bls.gov/ooh/healthcare/nurse-anesthetists-nurse-midwives-and-nurse-practitioners.htm>

nationwide, while applications to other nursing programs are declining. This data underscores the high demand for advanced nursing education. Importantly, there is an evident shortage of available slots in educational programs to accommodate the growing number of qualified applicants. In 2023, schools of nursing across the country had to turn away a staggering 65,766 qualified applications. These rejected applications encompassed 55,111 for entry-level baccalaureate programs, 703 for RN-to-BSN programs, 5,491 for master's programs, 4,225 for DNP programs, and 236 for PhD nursing programs³⁶.

This data collectively highlights the increasing demand for nurse practitioners, particularly in the state of Maryland, and underscores the critical need for expanded nursing education programs to meet this growing demand.

4. Provide data showing the current and projected supply of prospective graduates

Over the last ten years, on average UMSON graduates 20.4 CRNA students from 7.2 out of 24 Maryland counties. On average UMSON graduates 24 CRNA students from 3.8 out of 50 states. In 2022-2023, 75% of all UMSON CRNA students were employed full time in nursing within one year of graduating.

The numbers of specialty graduates for the past three academic years

AY	DNP SPECIALTIES ³⁷ PM-DNP, AGACNP/CNS, AGPCNP, FNP, NNP, NA, PMHNP, PACNP, PPCNP	CRNA Specialty only
2021-2022	139	28
2022-2023	128	25
2023-2024	132	22
Average	133	25

The employment rate for graduates during the past three academic years

AY	DNP SPECIALTIES PM-DNP, AGACNP/CNS, AGPCNP, FNP, NNP, NA, PMHNP, PACNP, PPCNP	CRNA Specialty only
2021-2022	90 %	100 %
2022-2023	91 %	75 %
2023-2024*	95 %	100 %

Data for 2023-2024 is based on the current responses of 2024 spring graduate's employment survey, not the final responses. Final data will be available after June 2025.

D. Reasonableness of Program Duplication

³⁶ AACN New Data Show Enrollment Declines in Schools of Nursing: <https://www.aacnnursing.org/news-data/all-news/new-aacn-data-points-to-enrollment-challenges-facing-us-schools-of-nursing>

³⁷ Concentrations: Post-Master's to DNP without specialty; Adult-Gerontology Acute Care Nurse Practitioner/Adult-Gerontology Acute Care Clinical Nurse Specialist; Adult-Gerontology Primary Care Nurse Practitioner; Family Nurse Practitioner; Neonatal Nurse Practitioner; Nurse Anesthesia; Psych-Mental Health Nurse Practitioner; Pediatric Acute Care Nurse Practitioner; Pediatric Primary Care Nurse Practitioner

In addition to UMSO, Johns Hopkins University (JHU), Coppin State University (CSU), Uniformed Services University of Health Sciences (USU), and Salisbury University (SU) offer DNP programs. Compared to UMSO's three-year plan of study options, comprised of 93 credit hours and 3,355 clinical/practicum hours, respectively:

JHU offers three-year PM and PB DNP programs. The curriculum is offered predominantly online with onsite immersions. The CRNA consists of 88 credit hours.

CSU offers a Family Nurse Practitioner BSN to DNP and PM-certificate to DNP degree. CSU does not offer a CRNA program.

USU's three-year DNP programs center around care for military members and their families, with an emphasis on understanding Military Health Systems (MSH), branches of the Armed Forces, and the Defense Health Agency (DHA). The CRNA consists of 103 credit hours.

SU offers PM and PB DNP programs in leadership and FNP. SU does not offer a CRNA program.

Because all DNP programs across the state will be modifying their curriculum to meet the Essentials, there is some level of duplication across these degree programs given standards of care expected of nursing education. We do not anticipate that this change will impact other universities' existing offerings but instead aligns with our goals of excellence in education and clinical care.

In 2024, the DNP program received a 10-year accreditation from the Commission on Collegiate Nursing Education (CCNE). Aligned with CCNE standards, the Maryland Board of Nursing (MBON) conducted a comprehensive site visit in fall 2024. At the February 2025 MBON Open Session, board members accepted the findings, confirming that all UMSO programs met the requirements outlined in *COMAR 10.27.03.02–16: Nursing Education Program standards*. Lastly, the CRNA program was accredited for 10 years by the Council on Accreditation of Nurse Anesthesia Educational Program (COA) in 2017.

This curriculum revision and designation of the CRNA specialty track as an AoC is necessary secondary to the new *AACN Essentials* document published in 2021. We expect other nursing schools will need to make similar changes to align with the *Essentials* and maintain accreditation.

E. Relevance to High-demand Programs at Historically Black Institutions (HBIs)

One Historically Black Institution (HBI) in Maryland offers a DNP program; Coppin State University (CSU). CSU offers a Family Nurse Practitioner DNP program but does not offer a CRNA. CSU opened its DNP program after UMSO. There is some overlap between the two programs, but the changes to UMSO's CRNA curriculum will not impact CSU.

In addition, several schools offer advanced practice programs at the graduate level. Bowie State University (BSU) offers two Masters of Science in Nursing (MSN) degree programs in Family Nurse Practitioner and Nurse Educator. Currently, BSU does not offer a DNP program. Morgan State University (MSU) offers a Master of Science degree program in nursing, with primary emphasis for the roles of Nurse Educator and Leadership / Management in Nursing. Currently, MSU does not offer a DNP program.

F. Relevance to the identity of Historically Black Institutions (HBIs)

There is no change in impact because of the modification to the DNP curriculum or designation of CRNA specialty track as an AoC on the uniqueness and institutional identities and missions of HBIs.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes

1. Describe how the proposed program was established and also describe the faculty who will oversee the program.

The American Association of Colleges of Nursing (AACN) published *The Essentials: Core Competencies for Professional Nursing Education (Essentials)* which calls for a transition to competency-based education focusing on two levels of professional nursing education: entry-level and advanced-level nursing practice. This AoC revises and formalizes the PB and PM CRNA curriculum. Dr. Shannon Idzik, associate dean for the DNP program, and Dr. Veronica Quattrini, Sr. Director for the DNP program, will maintain curricular oversight of the DNP program. Additionally, Dr. Veronica Amos, program director for the CRNA specialty, is responsible for multiple supervisory tasks related to the management of the AoC team, curriculum delivery, and quality. Please see Appendix E for a list of program faculty. The UMSON DNP curriculum committee and the faculty governance structure at UMSON have final decision-making authority regarding the DNP curriculum.

2. Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.

Our program modality is primarily face to face with some on-line, asynchronous didactic instruction, allowing flexibility for the working adult student. The PB-CRNA specialty includes 3,355 hours, respectively, whereas the PM curriculum is a variable credit program, that builds on prior course work and practice experience. In the PM-CRNA option, students complete between 47 and 93 credits of DNP core and specialty specific coursework as needed to meet certification and 1,130-hour requirement. Both the PB and PM involve a variety of teaching strategies to address diverse learning styles. Many of the courses include real-world experience and application of content. The DNP program outcomes have been revised to reflect changes in the new *Essentials*. A DNP graduate:

1. Applies scientific knowledge from nursing and other disciplines in ethical, legal, and competent professional advanced nursing practice.
2. Practices intentional humanizing person-centered nursing care, with advanced expertise, compassion and respect for diversity and determinants unique to individual, families, and communities.
3. Engages locally and globally in practice partnership and advocacy to promote equitable health care and to prevent/manage illness in diverse populations.
4. Synthesizes, translates, and disseminates evidence to inform healthcare decision-making and improve processes to impact healthcare outcomes.
5. Executes effective communication and collaborative leadership to optimize healthcare delivery and outcomes and advance policy in a resource-efficient and innovative manner.
6. Securely utilizes data, information, patient-care technology, and information systems to support, measure, communicate, and improve health care practices.
7. Exemplifies a personal, professional, and leadership identity, predicated on nursing's standards of advanced practice, with a commitment to well-being of self, the nursing profession, society, and the human condition.

3. Explain how the institution will: provide for assessment of student achievement of learning outcomes in the program document student achievement of learning outcomes in the program

Student achievement of learning outcomes is measured and documented across the program of study, increasing in complexity, and demonstrated across different practice populations. Faculty use a multitude of assessment tools such as performance rubrics, exams, quizzes, assignments, and weekly feedback to the student about their achievement of daily, weekly, and course objectives. The program objectives are met by successful completion of the program of study as described in Appendix F.

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

Study Plan: Appendix F

Course Descriptions: Appendix G

5. Discuss how general education requirements will be met, if applicable.

Admission for all DNP programs

- An undergraduate cumulative grade point average of at least 3.0.
- Valid, unrestricted (current) RN license in the United States.

Education:

- Post-bachelors to DNP – have a bachelor’s degree with a major in nursing from an Accreditation Commission for Education in Nursing (ACEN) or Commission on Collegiate Nursing Education (CCNE) or Commission for Nursing Education Accreditation (CNEA) accredited college or university or an equivalent degree from a comparable foreign institution.
- Post-masters to DNP - have a master's degree in nursing or possess a bachelor’s degree in nursing or a master’s degree in a relevant field (MBA, MPA, MPH) or currently utilize master's preparation in an area of advanced nursing practice such as health services leadership management, nursing informatics, or community and public health.

Required work experience for the CRNA specialty track- at least two years of continuous full-time acute care nursing experience at the time of application.

Transfer of Credits

A transfer credit is credit for a course taken at an accredited institution that is eligible for credit at UMSO. Grades for transfer credits are not calculated in the UMSO GPA. Courses taken prior to enrollment at UMSO must meet the following criteria:

- The course must have 100% of the essential competencies/content area needed to successfully complete degree requirements, including the DNP project. The course must duplicate a course required in the program or be directly relevant to the student’s plan of study and congruent with the purpose of the program. Independent studies cannot be used to make up content.
- No more than two courses of graduate coursework can be applied toward the DNP degree.
- The course(s) was completed within five years preceding initial enrollment at UMSO. For courses not completed within five years preceding initial enrollment students must repeat coursework or apply for a waiver. Students adding or changing specialty may be granted an exception if they maintained relevant practice. An exception to the five-year limit may be considered for NPHY 612, NURS 723, and NDNP 819 courses.
- Courses included in the DNP project series are not eligible for transfer or waiver. These must be completed at UMSO. These courses are found in Appendix B.
- Courses eligible for transfer credit in the DNP program are identified in the coursework audit performed during the admission process. Only courses identified through the coursework audit

are eligible for transfer credit. Students must complete the transfer of credit process before the end of their first semester in the program for course to be reviewed for transfer.

Waiver of Credits

If a student takes a course at an institution other than UMB, they must apply for a waiver to substitute a course if the course is in the UMSON required plan of study. A waived course is a course taken at another institution that is equivalent to a course at UMSON and meets the curriculum requirements for that course. The number of credits is not transferred to UMSON and the student will need to make up the waived number of credits. There is a three-course maximum for waivers. A course waiver must be requested in writing and must include justification for the request from the student's advisor, who meets with the student to discuss how the waiver may affect their plan of study. The student must have earned a grade of B or better in the course from an accredited institution to be eligible for a waiver.

DNP students must complete the Transfer/Waiver Request Form on the UMSON website and submit appropriate documentation. The course director/coordinator reviews the request and makes a recommendation to the associate dean of the program.

All students receiving course waivers will be required, with advisement, to take another course that will provide the appropriate number of credits to compensate for the waived course.

Gap Analysis

The gap analysis is performed by the specialty director of the respective DNP specialty track in which the student is enrolled to determine the practicum hours necessary to complete the degree or certification requirements. Specialty Directors complete the National Task Force (NTF) Gap Analysis Documentation Form for NP Post-Graduate Certificate Program². The gap analysis is part of the student's permanent record.³⁸

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

All PB and PM DNP students are required to complete all course work including a DNP project.

Upon program completion, graduates are prepared to sit for the National Board of Certification and Recertification for Nurse Anesthetist (NBCRNA) Examination.

Graduates of the CRNA program are eligible for this exam.

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

Not applicable.

8. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

³⁸ UMSON Student Handbook: <https://www.nursing.umaryland.edu/media/son/student-life/Student-Handbook-2022-2023-POSTED-1-27-2023.pdf>

Category	Evidence	Weblink
Curriculum; degree requirements	DNP	https://www.nursing.umaryland.edu/academics/doctoral/dnp/
	CRNA	https://www.nursing.umaryland.edu/academics/doctoral/dnp/dnp-nurse-anesthesia/
	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
Faculty/student interaction	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
Technology	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
	Student Life	https://www.nursing.umaryland.edu/student-life/
	Technology	https://www.nursing.umaryland.edu/technology/
Academic support services	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
	Student Life	https://www.nursing.umaryland.edu/student-life/
	Office of Academic and Career Success	https://www.nursing.umaryland.edu/student-life/office-of-academic-and-career-success/
Financial	Financial Aid and Scholarships	https://www.nursing.umaryland.edu/admissions/financial-aid/
	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
	Admissions	https://www.nursing.umaryland.edu/admissions/
	Tuition and Fees	https://www.nursing.umaryland.edu/admissions/tuition/

9. Provide assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

Category	Evidence	Weblink
Advertising	Copyright Privacy Statement	https://www.nursing.umaryland.edu/about/administration/offices/comm/copyright-privacy/
	Communications	https://www.nursing.umaryland.edu/about/administration/offices/comm/
	Publications	https://www.nursing.umaryland.edu/news-events/archive/
	The Elm	https://elm.umaryland.edu/nursing/
	Handbook	https://www.nursing.umaryland.edu/student-life/handbook/
Recruiting and Admissions	Admissions	https://www.nursing.umaryland.edu/admissions/
	Program Explorer	https://www.nursing.umaryland.edu/admissions/program-explorer/
	UMSON On the Road	https://www.nursing.umaryland.edu/admissions/visit-us/umson-on-the-road/
	Visit Us	https://www.nursing.umaryland.edu/admissions/visit-us/

H. Adequacy of Articulation

Not applicable.

I. Adequacy of Faculty Resources

1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, terminal degree title and field, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faculty member will teach in the proposed program.

Since UMSON currently offers the DNP CRNA specialty track, the faculty and resource infrastructure already exist to support the modified curriculum. All DNP faculty members are experienced nurses and have taught across the curriculum within their respective AoC. The range of experience of the DNP faculty is varied, providing students with a rich learning environment. Doctorally prepared faculty provide instruction to students across the curriculum. Faculty backgrounds span all advanced practice roles taught at UMSON and span positions such as practice owner, director of nursing, vice president of clinical operations, quality improvement officer, chief nurse officer, informatician, and public health nurse. Faculty setting expertise ranges from rural health settings to high acuity tertiary care as well as civilian privately owned practice to military war time deployment. In addition, faculty have expertise in examining the impact of nursing practice and quality and safety in hospital settings, as well as expertise in supporting and implementing change across the care continuum. Appendix E lists faculty with appointment type, terminal degree, academic title/rank, and status for the CRNA specialty.

2. Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidenced-based best practices, including training in: a) pedagogy that meets the needs of the students; b) the learning management system; c) evidenced-based best practices for distance education, if distance education is offered.

UMB has a robust process for training faculty through the Institute for Educators. The institute provides ongoing professional development for faculty and educators to ensure effective instruction. Based on Quality Matters standards, UMB developed a rubric which details the best practices for distance education. This rubric helps faculty and instructional designers create the courses; assesses the readiness of the course and ensures that the online courses are instructionally and pedagogically sound. The best practices are a synthesis of strategies, activities, design techniques, and 20 organizational items that have been successful in higher education. The specific domains of this checklist are as follows:

- Course overview and introduction to the students
- Course organization and design
- Learning Objectives (competencies)
- Instructional Materials
- Learner Communication, Interaction and Collaboration
- Assessment and Evaluation (measurement)
- Course Technology
- Learner Support

The Learning Management Platform UMB utilizes and provides IT support for is the Blackboard Learning Management System for online and in-person course delivery. Within Blackboard is the Collaborate conferencing software that is used for our synchronous live activities. The UMSON's Office of Learning Technology is dedicated to improving the quality of teaching, learning, research, and community service through technology. Services provided by the office include instructional design and technology, video production, distance education, online learning, and faculty development in teaching with technology.

J. Adequacy of Library Resources

UMSON was successfully reaccredited by the Commission on Collegiate Nursing Education (CCNE) in 2024 for the maximum of ten years. The CRNA program was successfully reaccredited by the Council on Accreditation of Nurse Anesthesia Educational Program (COA) in 2017 for the maximum of ten years. Professional accreditation focuses specific attention on the adequacy of library resources. UMSON students completing their degree can use the UMB Health Science and Human Service Library (HS/HSL).

Health Sciences and Human Services Library (HS/HSL) Facilities and Resources ³⁹

The University of Maryland Health Sciences and Human Services Library (HS/HSL) serves as a hub for collaboration and learning on the UMB campus and is one of the largest health sciences libraries in the United States both physically and by collection size. Opened in 1998, the HS/HSL building is fully equipped with Wi-Fi and has seating for over 900 users including 41 group study rooms, three computer classrooms, an Innovation Space that includes 3D printers, a presentation and production studio, art gallery, and technology-enhanced meeting and collaboration spaces. The HS/HSL website (www.hshsl.umaryland.edu) provides access to a range of resources and services.

The library provides access to 108 databases, 4,737 e-journals, 17,669 e-books, and maintains a collection of 144,416 print books and 7,586 archival print journals. Through the library's interlibrary loan and document delivery services, faculty, staff, and students may acquire articles and other resources not available through the library's collections. The HS/HSL also provides access to the UMB Digital Archive, an open access university repository hosting university created research including white papers, research posters, and more.

The HS/HSL has a track record of innovative and user-centered services. With a team of 26 faculty librarians and 28 library staff, the HS/HSL serves UMB's 6,900 students and over 8,000 faculty and staff members in the schools of dentistry, medicine, nursing, pharmacy, social work, and graduate studies. The library also provides access and services to the University of Maryland Medical Center (UMMC) and other affiliated institutions. The library's suite of research services is available for all programs on campus, and includes research and publication strategy consultations, systematic review and expert literature searching services, research impact assessment, public access policy compliance review, and other research services as requested. The library's Center for Data and Bioinformation Services offers consultations and workshops on data access, management, and sharing, as well as support for bioinformatics research, including information on high throughput sequence analysis, DNA, RNA, protein data resources, and research computing.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment

UMSON currently offers the DNP program, including the CRNA specialty track and other coursework, through established online and face-to-face modalities. The institution maintains state-of-the-art physical facilities, comprehensive instructional infrastructure, and advanced technology systems that collectively support high-quality delivery across both formats.

No additional space, capital investments, or instructional equipment are anticipated, as existing assets have demonstrated their capacity to support enrollment growth and evolving program needs. Classroom spaces, simulation labs, and remote learning platforms are maintained to institutional standards and routinely evaluated to ensure sustainability, accessibility, and innovation.

Digital tools and software platforms, such as Blackboard learning management system, simulations, and assessment tools, are institutionally licensed and funded. These resources meet accreditation requirements and pedagogical standards while fostering student engagement, clinical reasoning, and competency

³⁹ HS/HL By the Numbers: <https://www.hshsl.umaryland.edu/about/bythenumbers.php>

development. The current infrastructure not only accommodates the CRNA specialty but positions UMSON to expand or adapt program offerings without requiring further capital expenditure.

UMSON's physical and digital infrastructure reflects a long-standing commitment to educational excellence, regulatory compliance, and fiscal responsibility. Based on current delivery methods and projected enrollment, no additional facilities, equipment, or instructional technologies are required at this time.

L. Adequacy of Financial Resources with Documentation

Establishing CRNA specialty track as an AoC in MHEC's Academic Program Inventory and modifying the PB and PM curriculums will not require new state funds. Over time, based on changes in education, technology and student demand, UMSON has incrementally increased its use of learning technologies and faculty technology expertise. Therefore, offering the revised curriculum will not result in additional expense and no new general funds will be required for implementation.

Existing faculty and staff resources are sufficient to support the transition to the DNP program. Library and other resources are adequate for this modification to the UMSON offerings. Please see Appendix C and Appendix D for resource and expenditures.

M. Adequacy of Provisions for Evaluation of Program

1. Discuss procedures for evaluating courses, faculty and student learning outcomes.

The majority of nursing programs, including UMSON programs, rely heavily on professional accreditation as the primary means of evaluation and quality control. Professional accreditation is based on a national consensus around student competencies and program standards. UMSON's Master Evaluation Plan requires the annual evaluation of courses, faculty performance, and student learning outcomes. At the end of each term, students complete a course evaluation questionnaire and a faculty evaluation questionnaire. Department chairs and associated deans collaboratively review this information at the end of the term to determine if course/program revisions or faculty development are needed. In addition, retention/graduation data, program assessment questionnaires, alumni questionnaires, employment data and certification exam pass rates are reviewed by the associate dean annually. This plan and the resulting findings were reviewed during the October 2024 Commission on Collegiate Nursing Education (CCNE) reaccreditation process. UMSON will apply for a substantive change to the CCNE for modification of the DNP curriculum. The substantive change notification must be submitted to CCNE no earlier than 90 days prior to implementation or occurrence of the change, but no later than 90 days after implementation or occurrence of the change. Additionally, UMSON will apply for a substantive change to the Maryland Board of Nursing (MBON). The substantive change notification must be submitted to MBON after MHEC approval and prior to implementation or occurrence of the change.

Since the UMSON's DNP program is an accredited competency-based program, all students are expected to graduate with a demonstrated core set of competencies. The DNP curriculum will use the same competencies across course sections to ensure quality control and consistency.

2. Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

As noted above, each semester, students evaluate the courses in which they were enrolled. The evaluation includes an anonymous online assessment of various aspects of the course as well as the student's

perspectives on the quality of instruction. Results of these evaluations are compiled, analyzed, and reviewed by faculty and UMSON administration and are used for course improvement and faculty development. In addition, retention/graduation data, program assessment questionnaires, alumni questionnaires, employment data and certification exam pass rates are reviewed by the associate dean annually.

Students enrolled in the DNP program are required to meet core competencies. The curriculum for the DNP program is designed to meet the essential elements or outcomes of advanced, graduate level education as set forth by the *AACN Essentials*. Student achievement of these program outcomes is required for program completion as well as for program accreditation. In addition to meeting the AACN curriculum standards, for graduates to be eligible for national board certification in the APRN specialty, the curriculum and program outcomes must meet the standards and competencies of DNP related professional nurse certification. Graduates of the CRNA can seek national certification through one of the following organizations: the National Board of Certification and Recertification for Nurse Anesthetist (NBCRNA) Examination.

Evaluation of student progress and achievement is determined by:

- Examinations of core and specialty knowledge.
- Clinical/practicum evaluations
- Evaluation of written papers, projects, and case studies.
- Assessment of learning in the DNP project series which enables students to demonstrate the ability to apply knowledge gained from previous coursework.
- Completion of a DNP project which demonstrates mastery of program outcomes.
- Presentation of a DNP project at DNP Poster Day.

Evaluation of Faculty is determined by:

- Student Course Evaluation of Instructional Effectiveness is completed at the end of the term as described above.
- Faculty performance is evaluated annually, and areas of teaching needing improvement are addressed by the faculty member's department chair. UMSON has an Associate Dean for Faculty Development, as well as the Institute for Educators, that provide one on one consultations and workshops to further develop teaching expertise.⁴⁰

N. Consistency with the State's Minority Student Achievement Goals

The DNP program adheres to the University's Notice of Non-Discrimination in all recruitment and admission activities. DNP program leadership regularly meets with the UMB Institutional Effectiveness Office to examine admission, retention and graduation rates across and among various groups of students.

The DNP program provides a variety of learning experiences and flexible offerings designed to address the needs of a diverse student body. UMSON's Office for Academic and Career Success provides services such as guided study sessions, peer tutoring and additional types of academic support.

O. Relationship to Low Productivity Programs Identified by the Commission

⁴⁰ UMSON Institute for Educators: <https://www.nursing.umaryland.edu/institute-for-educators/>

Not applicable.

P. Adequacy of Distance Education Programs

The DNP program provides for appropriate real-time and delayed interaction between faculty and students. All DNP faculty members maintain office hours during which they are available via telephone, email, videoconferencing, or through the Blackboard learning platform which provides the means for both synchronous and asynchronous interactions between faculty and students and among students.

PB and PM CRNA courses were designed by expert nurse anesthetist and instructional design personnel to assure that distance education courses (when applicable) operate efficiently and with ease for students. Technology evaluation is included in course evaluations. The appropriateness of the specific technology used is determined through faculty and student feedback as part of our ongoing curricular evaluation process.

Under the direction of the Assistant Dean, Information and Learning Technology⁴¹, a highly skilled staff of instructional technology specialists provide ongoing training for faculty teaching with technology in a distance education format. Training includes the use of the Blackboard Learning Management System and other technology necessary for effective teaching in a distance education environment. The Institute for Educators within the UMSON provides professional development on the pedagogy of distance education provided by faculty experts in online teaching. These sessions are offered in the form of grand rounds and webinars covering topics ranging from creative online teaching approaches to evaluation of online learning.

UMSON principles of best practices for online teaching and learning are based on Quality Matters (QM) principles⁴². QM provides a comprehensive framework for assuring the quality of online education and student learning. QM principles provide the basis for the use of evidence-based approaches to online teaching and the ongoing evaluation of outcomes. Faculty enhance the quality of their online teaching by enrolling in QM training or by attending UMSON professional development workshops.

All students enrolled in distance education courses have access to the same library services as students enrolled in campus-based courses. With a username and password, students can access a variety of databases, journals, eBooks, reference managers, and other resources and services. Workshops, tutorials, a digital archive, and expert advice for the use of library resources are available from the HS/HSL librarians assigned to academic programs. Specific instructions for off-campus access are available online.

Students enrolled in UMSON distance education have the same access to information as students enrolled in face-to-face education. The UMSON website⁴³ provides clear, complete, and timely information for both face-to-face and distance students on curriculum and degree requirements, technology competence and skills, and technical equipment requirements to engage in online learning. Online tutorials and resources are available to assist students to use the Blackboard Learning Management System. Online course information provides students with information about accessing faculty, faculty availability and modes of communication including synchronous and asynchronous interactions.

Information about student support services is provided on the UMSON website for all students, both traditional and online. The website provides information on academic support services, student organizations and activities, tuition and fees, and financial aid resources and policies.

⁴¹ UMSON Technology: <https://test-www.nursing.umaryland.edu/technology/>

⁴² Quality Matters: <https://www.qualitymatters.org/index.php/>

⁴³ UMSON website: <https://www.nursing.umaryland.edu/>

The Blackboard Learning Management System provides 24-hour online help, and during regular business hours, the UMSO help desk is available via telephone and email. The UMSO Student Success Center provides remote access for student assistance and the HS/HSL provides online resources to assist students in literature searches, managing references, and other skills needed for graduate education.

APPENDIX A
PHASE IN AND PHASE OUT PLAN
CRNA PROGRAM

Fall 2025	Spring 2026	Summer 2026	Fall 2026	Spring 2027	Summer 2027	Fall 2027	Spring 2028	Summer 2028	Fall 2028	Spring 2029	Summer 2029	Fall 2029	Spring 2030	Summer 2030	Fall 2030	Spring 2031	Summer 2031
YR 1			YR 2			YR 3		Plan of Study (POS) Retired									
Last cohort of CRNA students on current 3 YR Plan of Study (POS)																	
		YR 1			YR 2			YR 3				YR 1			YR 2		YR 3
First cohort of CRNA students on revised 3 YR POS											Second cohort of DNP students on revised 3 YR POS....						

APPENDIX B

CRNA CURRICULUM COMPARISON

Pre-2025 Doctor of Nursing Practice Nurse Anesthesia Post-Baccalaureate Option

Course	Title	Credits
Semester 1		
NDNP 819	Health Assessment Across the Lifespan	4
NPHY 612	Advanced Physiology and Pathophysiology	3
NRSRG 617	Chemistry, Technology, and Physics of Nurse Anesthesia	3
Total		10
Semester 2		
NURS 613	Principles of Nurse Anesthesia I	3
NRSRG 603	Introduction to Pharmacology for Nurse Anesthesia	3
NPHY 625	Pathophysiology for Nurse Anesthesia	3
NRSRG 785	Professional Writing	1
NRSRG 790	Methods for Research and Evidence-Based Practice	3
Total		13
Semester 3		
NURS 614	Principles of Nurse Anesthesia II	3
NURS 615	Regional Anesthesia	3
NURS 604	Pharmacology of Anesthesia Nursing	3
NRSRG 782	Health Systems Policy and Leadership	3
NRSRG 795	Biostatistics for Evidence-Based Practice	3
Total		15
Semester 4		
NURS 654	Principles of Nurse Anesthesia III	3
NDNP 804	Theory for Evidenced-Based Practice	3

Post 2025 Doctor of Nursing Practice Nurse Anesthesia Post-Baccalaureate Option

Course	Title	Credits
Semester 1		
NDNP 701	Professional Writing	1
NDNP 700	Advanced Professional Nursing Practice	3
NPHY 612	Advanced Physiology and Pathophysiology	3
NDNP 617	Chemistry, Physics, and Technology of Nurse Anesthesia	3
Total		10
Semester 2		
NDNP 704	Population/Global Health	3
NDNP 702	Healthcare Delivery: Quality, Access, and Economics	3
NDNP 613	Principles of Nurse Anesthesia I	3
NDNP 603	Introduction to Pharmacology for Nurse Anesthesia I	3
NPHY 625	Advanced Pathophysiology for Nurse Anesthesia	3
Total		15
Semester 3		
NDNP 706	Evidence-informed Practice and Statistics	4
NDNP 819	Advanced Health Assessment Across the Life Span	4
NDNP 614	Principles of Nurse Anesthesia II	3
NDNP 615	Regional Anesthesia	3
NDNP 604	Pharmacology for Nurse Anesthesia II	3
Total		17
Semester 4		
NDNP 708	Healthcare Informatics for Advanced Practice	3
NDNP 712	Advanced Practice Leadership in Healthcare Systems	3

NDNP 814	Practice Leadership Within Complex Adaptive Health Care Systems/Practicum	3
Total		9
Semester 5		
NURS 672	Principles of Nurse Anesthesia IV	3
NURS 637	Practicum I	4
NURS 834	Translation and Outcomes of Evidenced-Based Practice	3
NDNP 809A	DNP Project Readiness	0
Total		10
Semester 6		
NURS 657	Practicum II	4
NDNP 807	Healthcare Informatics for Advanced Practice	3
NDNP 810	DNP Project Identification	3
Total		10
Semester 7		
NURS 673	Practicum III	3
NDNP 811	DNP Project Development	1
NRS 780	Population Health and Promotion	3
Total		7
Semester 8		
NRS 670	Anesthesia Seminar I	2
NURS 674	Practicum IV	4
NDNP 710	Evidence-Informed Health Policy and Advocacy	3
NDNP 812	DNP Project Implementation	1
Total		10
Semester 9		
NURS 642	Professional Aspects of Nurse Anesthesia	1
NURS 675	Anesthesia Nursing Seminar II	3
NURS 676	Clinical Practicum V	4
NDNP 813	DNP Project Evaluation/Dissemination	1
Total		9

Total 93 credits; Practice/Clinical/Practice hours: 3,355

NDNP 654	Principles of Nurse Anesthesia III	3
Total		9
Semester 5		
NDNP 714	Translating Evidence to Practice	3
NDNP 672	Principles of Nurse Anesthesia IV	3
NDNP 637	Nurse Anesthesia Clinical I	4
Total		10
Semester 6		
NDNP 810	DNP Project Development	3
NDNP 710	Evidence-informed Health Policy and Advocacy	3
NDNP 657	Nurse Anesthesia Clinical II	4
Total		10
Semester 7		
NDNP 811	DNP Project Advancement	1
NDNP 673	Nurse Anesthesia Clinical III	3
Total		4
Semester 8		
NDNP 812	DNP Project Implementation	2
NDNP 670	Anesthesia Seminar I	3
NDNP 674	Nurse Anesthesia Clinical IV	4
Total		9
Semester 9		
NDNP 813	DNP Project Evaluation/Dissemination	1
NDNP 642	Professional Aspects of Nurse Anesthesia	1
NDNP 675	Anesthesia Seminar II	3
NDNP 676	Anesthesia Clinical V	4
Total		9

Total 93 credits; Practice/Clinical/Practice hours: 3,355

APPENDIX C PROGRAM RESOURCES

Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	6,068,946	6,190,325	6,314,132	6,440,414	6,569,223
2. Tuition/Fee Revenue	12,604,642	12,817,700	13,043,301	13,269,796	13,552,377
(c + g below)	0	0	0	0	0
a. Number of F/T Students	0	0	0	0	0
b. Annual Tuition/Fee Rate	0	0	0	0	0
c. Total F/T Revenue (a x b)	0	0	0	0	0
d. Number of P/T Students	1,580	1,580	1,580	1,580	1,580
e. Credit Hour Rate	0	0	0	0	0
f. Annual Credit Hour Rate	0	0	0	0	0
g. Total P/T Revenue	0	0	0	0	0
(d x e x f)	0	0	0	0	0
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	0	0	0	0	0
TOTAL (Add 1 – 4)	18,673,588	19,008,025	19,357,433	19,710,210	20,121,600

The reallocated funds represent the portion of UMSON's state appropriation budget attributable to all specialties within the entire Doctor of Nursing Practice program and includes an estimated increase consistent with the estimated salary increases on the program expenditures table. Historically when cola and merit have been awarded they have been funded via state appropriations increases.

The UMSON tuition and fee structure is multi-layered and is based upon a student's residency status (in-state vs. out-of-state), full-time vs. part-time, number of credit hours, semester of study in the program, etc. It does not allow for the formulaic approach called for in the program resource table. We have built in a 2% increase consistent with what has historically been approved by UMB President's office, the University System of Maryland Board of Regents and the State of Maryland Governor's office.

APPENDIX D
PROGRAM EXPENDITURES

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty					
a. Number of FTE	56	56	56	56	56
b. Total Salary	8,197,456	8,361,405	8,528,633	8,699,206	8,873,190
c. Total Benefits	2,128,391	2,170,959	2,214,378	2,258,666	2,303,839
2. Admin. Staff					
a. Number of FTE	27	27	27	27	27
b. Total Salary	2,495,202	2,545,106	2,596,008	2,647,929	2,700,887
c. Total Benefits	965,229	984,534	1,004,225	1,024,309	1,044,795
3. Support Staff					
a. Number of FTE	8	8	8	8	8
b. Total Salary	1,241,016	1,265,837	1,291,153	1,316,976	1,343,316
c. Total Benefits	436,810	445,546	454,457	463,546	472,817
4. Technical Support and Equipment	645,000	645,000	645,000	645,000	645,000
5. Library	1,470	1,470	1,470	1,470	1,470
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	1,478,765	1,478,765	1,478,765	1,478,765	1,748,765
TOTAL	17,589,339	17,898,621	18,214,089	18,535,866	18,864,079

The expenses in the above table represent allocations for all specialties in our Doctor of Nursing Practice programs. Our organizational department structure and financial systems do not allow for direct reporting on individual Doctor of Nursing Practice specialty programs.

The faculty salary and fringes shown on the program expenditures table represent an allocation based on faculty FTE effort for all specialties within the Doctor of Nursing Practice program. The administrative and support staff salary and fringes represent an allocation based on percent of master’s students to our overall student enrollment. The salary and fringes in years 2-5 include a 2% adjustment for estimated COLA/merit increases.

The technical and support equipment represent an allocation attributable to the Doctor of Nursing Practice program and include annual increases of 3% related to cost increases, simulation technology replenishment and new and emergency instructional technologies. The library and other expenses represent an allocation attributable to the Doctor of Nursing Practice program and include an annual increase of 3% related to cost increase.

APPENDIX E
CRNA FACULTY

Last Name	First Name	Title	Highest Degree	Field of Study	Type of Course	FTE Status	Courses Taught		
Aguirre	Priscilla	Assistant Professor	DNP	Anesthesia	Didactic Practicum Clinical	FT	NDNP 810 NDNP 811 NDNP 812 NDNP 813	NDNP 654 NDNP 637 NDNP 657 NDNP 614	NDNP 673 NDNP 674 NDNP 676 NDNP 613 NPHY 625
Amos	Veronica	Director, Anesthesia; Assistant Professor	PhD	Anesthesia	Didactic Practicum Clinical	FT	NDNP 810 NDNP 811 NDNP 812 NDNP 813	NDNP 657 NDNP 673 NDNP 670 NDNP 675	NDNP 674 NDNP 642 NDNP 654 NDNP 637 NDNP 676
Conley	Richard	Assistant Professor	DNP	Anesthesia	Didactic Practicum Clinical	FT	NDNP 810 NDNP 811 NDNP 812	NDNP 613 NDNP 603 NDNP 615 NDNP 672	NPHY 625 NDNP 614 NDNP 813 NDNP 617
Douglas	Yvonne	Assistant Professor	DNP	Anesthesia	Practicum Clinical	FT	To be determined		
Gayden	Johnny	Assistant Professor	DNP	Anesthesia	Didactic Practicum Clinical	FT	NDNP 810 NDNP 811 NDNP 812	NPHY 625 NDNP 604 NDNP 813	NDNP 654 NDNP 613 NDNP 812
Mitchell	Jacqueline	Director of Clinical Education	PhD	Anesthesia	Didactic Practicum Clinical	FT	NDNP 654 NDNP 637	NDNP 673 NDNP 674	NDNP 676 NDNP 657
Faculty assignments are pending either because the course is newly developed or because faculty assignments vary by term, as it is a core course within the DNP program.							NDNP 701 NDNP 700 NPHY 612 NDNP 702 NDNP 704	NDNP 706 NDNP 708 NDNP 710 NDNP 712	NDNP 714 NDNP 860 NDNP 819 NDNP 723

APPENDIX F
CRNA PLAN OF STUDY
Post-Baccalaureate

Summer Year 1	Credits
NDNP 701: Professional Writing	1
NDNP 700: Advanced Professional Nursing Practice	3
NPHY 612: Advanced Physiology and Pathophysiology	3
NDNP 617: Chemistry, Physics, and Technology of Nurse Anesthesia	3
Total	10
Fall Year 1	
NDNP 702: Healthcare Delivery: Quality, Access, and Economics P: NDNP 700; C: NDNP 704	3
NDNP 704: Population/Global Health C: NDNP 702	3 (45) <i>2d/1pr</i>
NDNP 613: Principles of Nurse Anesthesia I P: NDNP 617; C: NDNP 603; NPHY 625	3
NDNP 603: Introduction to Pharmacology for Nurse Anesthesia I P: NDNP 617; C: NDNP 613, NPHY 625	3
NPHY 625: Advanced Pathophysiology for Nurse Anesthesia P: NDNP 617; NPHY 612 C: NDNP 613, NDNP 603	3
Total	15
Spring Year 1	
NDNP 706: Evidence-informed Practice and Statistics P: NDNP 702; NDNP 701	4
NDNP 819: Advanced Health Assessment Across the Life Span P: NPHY 612; P: NDNP 723 OR NDNP 603	4
NDNP 614: Principles of Nurse Anesthesia II P: NDNP 603, NDNP 613, NPHY 625; C: NDNP 615, NDNP 604	3
NDNP 615: Regional Anesthesia P: NDNP 603, NDNP 613, NPHY 625; C: NDNP 604, NDNP 614	3
NDNP 604: Pharmacology for Nurse Anesthesia II P: NDNP 603, NDNP 613, NPHY 625; C: NDNP 614, NDNP 615	3
Total	17
Summer Year 2	
NDNP 708: Healthcare Informatics for Advanced Practice P: NDNP 706 OR C: NDNP 706	3 (45) <i>2d/1pr</i>
NDNP 712: Advanced Practice Leadership in Healthcare Systems P: NDNP 706	3 (45) <i>2d/1pr</i>
NDNP 654: Principles of Nurse Anesthesia III P: NDNP 614, NDNP 615, NDNP 604	3
Total	9
Fall Year 2	
NDNP 714: Translating Evidence to Practice P: NDNP 706	3

NDNP 672: Principles of Nurse Anesthesia IV P: NDNP 654; C: NDNP 637	3
NDNP 637: Nurse Anesthesia Clinical I P: NDNP 654; C: NDNP 672	4 (515)
Total	10
Spring Year 2	
NDNP 710 Evidence-informed Health Policy and Advocacy P: NDNP 702	3
NDNP 810: DNP Project Development P: NDNP 712, NDNP 714	3 (90) <i>1d/2pr</i>
NDNP 657: Nurse Anesthesia Clinical II P: NDNP 637	4 (592-640)
Total	10
Summer Year 3	
NDNP 811: DNP Project Advancement P: NDNP 810	1
NDNP 673: Nurse Anesthesia Clinical III P: NDNP 657	3 (360-400)
Total	4
Fall Year 3	
NDNP 812: DNP Project Implementation P: NDNP 811	2 (45) <i>1d/1pr</i>
NDNP 670: Anesthesia Seminar I P: NDNP 673; C: NDNP 674	3
NDNP 674: Nurse Anesthesia Clinical IV P: NDNP 673; C: NDNP 670	4 (684-760)
Total	9
Spring Year 3	
NDNP 813: DNP Project Evaluation/Dissemination P: NDNP 812	1 (5)
NDNP 642: Professional Aspects of Nurse Anesthesia P: NDNP 670, NDNP 674; C: NDNP 675, NDNP 676	1
NDNP 675: Anesthesia Seminar II P: NDNP 670, NDNP 674; C: NDNP 642, NDNP 676	3
NDNP 676: Anesthesia Clinical V P: NDNP 670, NDNP 674; C: NDNP 642, NDNP 675	4 (684-760)
Total	9

Total credit hours: 93; Total practice hours: 3,355

CRNA PLAN OF STUDY
Post-Masters

DNP Core (33 credits; 275 practicum hours) ¹

Course Number/Title	Credits
NDNP 706: Evidence-informed Practice and Statistics	4
NDNP 704: Population/Global Health	3 (45)
NDNP 702: Healthcare Delivery: Quality, Access, and Economics	3
NDNP 700: Advanced Professional Nursing Practice	3
NDNP 701: Professional Writing	1
NDNP 708: Healthcare Informatics for Advanced Practice	3 (45)
NDNP 714: Translating Evidence to Practice	3
NDNP 810: Project Identification	3 (90)
NDNP 811: DNP Project Development	1
NDNP 812: DNP Project Implementation	2 (45)
NDNP 712: Advanced Practice Leadership in Healthcare Systems	3 (45)
NDNP 813: DNP Project Evaluation/Dissemination	1 (5)
NDNP 710: Evidence-Informed Health Policy and Advocacy	3

APRN Core (7 credits) ²

Course Number/Title	Credits
NPHY 612: Advanced Physiology and Pathophysiology	3
NDNP 819: Advanced Health Assessment Across the Life Span	4 *

Specialty-Specific Core (53 credits; 2,975 -3,215 hours) ³

Course Number/Title	Credits
NDNP 617: Chemistry, Physics, and Technology of Nurse Anesthesia	3
NPHY 625: Advanced Pathophysiology for Nurse Anesthesia	3
NDNP 603: Introduction to Pharmacology for Nurse Anesthesia I	3
NDNP 613: Principles of Nurse Anesthesia I	3
NDNP 604: Pharmacology of Anesthesia Nursing II	3
NDNP 614: Principles of Nurse Anesthesia II	3
NDNP 615: Regional Anesthesia	3
NDNP 654: Principles of Nurse Anesthesia III	3
NDNP 637: Nurse Anesthesia Clinical I	4 (515)
NDNP 672: Principles of Nurse Anesthesia IV	3
NDNP 657: Nurse Anesthesia Clinical II	4 (592-640)
NDNP 673: Nurse Anesthesia Clinical III	3 (360-400)
NDNP 670: Anesthesia Seminar I	3
NDNP 674: Nurse Anesthesia Clinical IV	4 (684-760)
NDNP 642: Professional Aspects of Nurse Anesthesia	1

NDNP 675: Anesthesia Seminar II	3
NDNP 676: Anesthesia Clinical V	4 (684-760)

Minimum Specialty-Specific Core Credits Required:	12 (minimum) ^{3 *}
Minimum DNP Core + Specialty Core Credits Required:	45 (minimum) ^{1, 2, 3 *}
Total Credits to Earn Degree:	45 - 93 ^{4, 5 *}
Total Clinical/Practicum Hours to Earn Degree:	1,130 (minimum) ^{5, 6 *}

1. Maximum of two courses can be transferred to satisfy DNP Core.*

2. APRN Core may not be required.*

3. Minimum of 12 Specialty-Specific Core credits required.*

4. All students must complete a minimum of 45 credits to receive a DNP with specialty. *

5. Additional credits as needed to meet APRN certification and the 1,130- hour requirement. *

6. A maximum of 500 clinical hours from a prior advanced practice program may be applied toward the required 1,130 hours. All students must complete at least 630 of the 1,130 clinical, practicum, or practice hours at the UMSO. *

* The final determination is made at the time of admission. The Specialty Director will complete the National Task Force (NTF) for Quality Nurse Practitioner Education's *Sample Form B: Gap Analysis Documentation Form for NP Post-Graduate Certificate Program* to assess eligible courses and clinical hours earned through a prior degree program and current APRN practice experience.

This evaluation will be used to establish the student's specific plan of study.
All Gap Analysis documentation becomes part of the student's permanent record.

APPENDIX G

CRNA COURSE DESCRIPTIONS

NDNP 700: Advanced Professional Nursing Practice, 3 credits

This course is designed to examine nursing as a professional discipline, predicated on both unique and shared knowledge, perspectives, and ways of knowing with other disciplines. Learners will explore advanced nursing practice roles and the Doctor of Nursing Practice. Topics will include scope and standards, values and ethical comportment, professional roles, interprofessional partnerships, and self-governance through laws, policies, and regulations. Learners will develop knowledge and abilities as Doctor of Nursing Practice to apply scientific knowledge to advance health and wellness and optimize healthcare quality, safety, and outcomes in diverse settings and populations.

NDNP 701: Professional Writing, 1 credit

This course is designed to provide graduate learners with the opportunity to develop skills in both accessing relevant online library resources and engaging in scholarly writing. The portions of the course focus on library resources teaching and strengthen lifelong research and information competency skills by introducing student to the nature of research and the role of the library in the research process. The scholarly writing portion of the course will place emphasis on organization, effective conveyance of thoughts through written words, and writing for multiple types of audiences.

NDNP 702: Healthcare Delivery: Quality, Access, and Economics, 3 credits

This course is designed to examine the interconnectedness among the healthcare delivery concepts of quality, access, and cost and the impact on health care and outcomes. The course is predicated on knowledge derived from systems, policy, and improvement science. Learners will explore the force and influence of individual and system needs vs resources and the impact of imbalance on the health and well-being of individuals and systems. Learners will engage in analysis of nationally recognized healthcare metrics in the context of quality, access, and cost, to identify prevalent issues and opportunities of priority for improvement. Attention will focus on problem drivers/root causes with an emphasis on identification of structure and process changes to impact quality, access, and costs.

NDNP 704: Population/Global Health , 3 credits

The course is designed to examine population health and distribution of disease, predicated on the knowledge derived from prevention, promotion, and protection science and social justice. Learners will examine how health care delivery systems, public health agencies, community and national organizations intersect to improve the health outcomes of local, national, and global communities. Learners will identify a population health issue of importance, research, design, and conceptualize partnership approaches to economically improve access to care and health service utilization and reduce morbidity and mortality. Health care approaches will reflect health determinants that influence distribution of care and the policies and interventions that impact determinants. Emphasis will be placed on analysis of epidemiological and system-level aggregate data to determine healthcare outcomes and trends within a population to establish priorities to improve the health status of the population.

NDNP 706: Evidence-informed Practice and Statistics, 4 credits

The course is designed to advance the scholarship of nursing by teaching evidence-based concepts of practice, predicated on empirical and applied research, statistical competency, and translation science to improve healthcare. Learners will identify contemporary healthcare issues of importance based on nationally recognized metrics and datasets and retrieve evidence for solution identification. Emphasis will be on critical appraisal of research and non-research evidence for validity, including data analytics, and synthesize to recommend best practices. Evidence-based practice models, appraisal tools, and analytic

software will be utilized to guide the evidence review process. Integration of factors such as strength and quality of evidence, contextual factors of risk, cost/benefit analysis, patient preferences, and clinician expertise will be examined to make practice recommendations.

NDNP 708: Healthcare Informatics for Advanced Practice, 3 credits

This course will build an array of abilities (knowledge, skills, and attitudes) necessary for the Doctor of Nursing Practice (DNP) student to develop competence in healthcare information and communication technologies (ICT). Students will apply informatics processes to improve the delivery of care to patients, communities, and populations to include social determinates of health; explore data for quality improvement initiatives; and leverage data and information to drive clinical decision making. Students will also discuss ethical, legal, professional, regulatory and workplace standards, examine emerging technologies, and analyze the role of the advanced practice nurse in technology analysis, planning, implementation, and evaluation. By the end of this course students will apply knowledge and demonstrate competencies related to healthcare ICT and informatics processes in an actual healthcare setting (45 practicum hours).

NDNP 710 Evidence-Informed Health Policy & Advocacy, 3 credits

The purpose of this course is to prepare doctoral students to influence health policy. Students will recognize population health problems and contribute to the advancement of policy solutions. The interplay between social determinants of health, including racism and other forms of systemic oppression, and health policy will be discussed. Students will demonstrate health policy competencies of analysis and communication by developing evidence-informed health policy messages and strategic plans for advocacy that promote social justice, diversity, equity, and inclusion.

NDNP 712 Advanced Practice Leadership in Healthcare Systems, 3 credits

The purpose of this didactic and practicum course is to prepare doctoral students to develop and apply systems-oriented thinking, predicated on leadership theories and principles. Students will learn to lead innovation and manage change to address health problems and promote optimal care in complex, and at times uncertain, healthcare environments. Learners will develop a capacity for proficient leadership to exert influence in organizations and facilitate evidence-based process and outcome improvements. The influence of internal and external barriers to change, coordination of resources, interpersonal and interprofessional conflict, moral courage, and issues of diversity, equity and inclusion will be evaluated. Through the practicum component, learners will gain increased awareness of personal/professional leadership style and competencies, with opportunity to appraise a real-world organization and its leaders. Learners will collaborate with organizational stakeholders in analyzing organizational dynamics and process improvement needs and initiatives, with the intent to potentially inform the DNP Project to redesign practice environments. The practicum is designed to provide the student with opportunities to learn and practice new leadership skills and behaviors.

NDNP 714: Translating Evidence to Practice, 3 credits

This course focuses on how to translate, evaluate, and disseminate evidence in a contemporary health care environment. Individual, organizational, and global barriers to translating evidence into practice are explored. Evidence will be summarized, and an action plan will be developed to produce valid and reliable clinical recommendations for dissemination into practice. An evaluation plan that includes the patient, health care providers and system outcome measures will be designed to measure the success of the evidence-based practice initiative. The integration of nursing theory and theories from other disciplines to guide practice will be emphasized.

NDNP 810 DNP Project Development, 3 credits

This didactic/practicum course is designed for the Doctor of Nursing Practice student to employ knowledge, leadership attributes, and interprofessional collaboration to advance the scholarship of

nursing and improve healthcare quality, safety, outcomes, and cost. The course is predicated on previous knowledge and abilities from evidence-based practice, systems and leadership, and implementation science. Learners will apply quality improvement concepts, leadership competency, and partner with stakeholders to design value-added practice initiatives across diverse settings and populations to improve healthcare structures, processes, outcomes, and costs. Experiential engagement will focus on team building, system/setting assessment to identify problems of priority, and contextual analysis of system, societal, and regulatory drivers and barriers to desired care. Learners will propose evidence-based solutions to problems and design equitable implementation plans to achieve desired improvements. Emphasis will be placed on just access to healthcare, application of quality improvement methodologies to impact change, return on investment and sustainability of initiatives, the use of communication technology to collect/store data and ethical data stewardship.

NDNP 811 DNP Project Advisement, 1 credit

In this course, students continue to engage stakeholders and maintain partnerships necessary for the development of the DNP project. Students submit the proposed project to the University of Maryland Baltimore Human Research Protections Office (HRPO) and clinical Institutional Review Board requesting a Non-Human Subjects Research determination. Students also participate in a peer and faculty review process that provides mutual feedback and guidance on the presentation of the application to their project practice site.

NDNP 812 DNP Project Evaluation and Dissemination, 2 credits

In this course students execute their approved project proposal with guidance from their scholarly project and practice site advisors.

NDNP 813 DNP Project Evaluation and Dissemination, 1 credit

This didactic course is designed for the Doctor of Nursing Practice student to apply knowledge, leadership attributes, and interprofessional collaboration to advance the scholarship of nursing and improve healthcare quality, safety, outcomes, and cost by analyzing and disseminating their DNP project data with a plan for sustainability. Engagement includes a peer and faculty review process that provides guidance on the DNP project manuscript and presentation. Learners will apply nursing and interdisciplinary knowledge to analyze innovative nursing practices, evaluate population health outcomes and continue collaboration with stakeholders. Synthesis, translation, application, and dissemination of quality improvement projects support nursing scholarship in this course. Information and communication technologies will be utilized for evaluation and dissemination of the DNP project. Learners will engage in ongoing development of nursing expertise and leadership. Upon completion of this course, the Doctor of Nursing Practice student will demonstrate the ability to synthesize, analyze, and disseminate quality improvement data from their DNP project, applying advanced nursing knowledge, leadership, and interprofessional collaboration to improve healthcare quality, safety, outcomes, and sustainability while promoting health equity and person-centered care.

NDNP 819: Advanced Health Assessment Across the Life Span, 4 credits

This course focuses on assessment and clinical decision-making in advanced nursing practice within a family context. Students develop and strengthen skills related to health assessment including physical, psychosocial, cultural, and family dimensions of assessment. Clinical decision-making skill development focuses on appropriate interpretation of multidimensional assessment data and individualization of assessment approaches based on client situation. Emphasis will be placed on proper physical examination and written documentation techniques.

NPHY 612: Advanced Physiology and Pathophysiology, 3 credits

This course provides graduate levels content of physiology and pathophysiology that is necessary for understanding the scientific basis of advanced practice nursing and for more advanced clinical courses in

a variety of settings. Structural and functional changes in cells, tissues, and organs that underlie selected diseases are discussed. The student will gain an understanding of the mechanisms underlying diseases and their clinical manifestations, thus providing a basis for clinical decisions related to diagnostic tests and initiation of therapeutic regimens. Pathogenesis of disease will be related to principles of health promotion and disease prevention. The course contributes to the scientific basis for advanced practice nursing.

NDNP 617: Chemistry, Technology, and Physics of Nurse Anesthesia, 3 credits

This first basic science in anesthesia course is designed to present a review of inorganic and organic chemistry followed by the principles of biochemistry as it applies to the practice of anesthesia. Students will build on their previous knowledge to develop an understanding of basic chemistry principles that apply to the physiology and pharmacology related to anesthesia. The second area of focus is physics principles required for understanding the mechanisms and actions of anesthetic agents, anesthesia equipment and metabolic theories as they apply to anesthesia practice. Emphasis is placed on the physics of anesthesia including molecular gas laws, density of gases, physics principles as they apply to anesthesia equipment. Additional topics include the basic principles of measurement, fluid dynamics, anesthesia equipment to include the anesthesia machine, basic operating room monitors, capnography, EKG, breathing systems and other monitors and devices used in the practice of anesthesia. Students will build on their previous clinical monitoring experience to understand the role of monitoring in vigilance and patient safety during anesthesia.

NDNP 613: Principles of Nurse Anesthesia I, 3 credits

This course provides introductory information pertinent to the clinical practice of anesthesia and the student begins to integrate foundational and advanced specialty knowledge into clinical reasoning. Students will build on their previous critical care clinical experience to develop essential and advanced information on providing pre-anesthesia, intra-anesthesia, and post-anesthesia patient care through the life span from neonatal to the geriatric patient. The emphasis of this course will be on basic principles of nurse anesthesia including: use of equipment and monitoring; patient positioning; review of basic sciences as related to uptake and distribution of inhalational agents and fluid management and general principles of patient care in the operating room environment. Students will also receive task training in which they will be expected to complete a machine checkout and basic airway setup. Additionally, students will build on previously learned critical care skills and knowledge and current literature to develop advanced skills in obtaining and completing a comprehensive pre-operative health history and physical. This will allow the student to develop competence in identifying, describing, and communicating normal and abnormal assessment findings in written and oral format and using this information to develop an anesthesia plan of care. Students will learn to develop an anesthesia plan using an evidenced-based approach that will include a review of current textbooks, anesthesia systematic and narrative reviews, and research.

NDNP 603: Advanced Pharmacology for Nurse Anesthesia I, 3 credits

The purpose of this first of two pharmacology courses is to provide the student with an in-depth knowledge of pharmacology and its applications to the clinical practice of anesthesia. The course is designed to provide the student with a thorough understanding of the basic science of pharmacology including pharmacodynamics, pharmacokinetics, pharmacotherapeutics, pharmacogenetics, pharmacy and toxicology. The class will consist of taped video instruction provided by Dr. John Nagelhout, PhD, CRNA, FAAN and formalized class instruction provided by faculty. The taped video lectures will be viewed by each student prior to class and will account for the “reading” portion of this class. The video lectures will have a workbook that the students can use to make supplemental notes etc. The formalized lectures provided by the faculty will discuss some of the materials covered in the videos as well as introduce new information.

NPHY 625: Advanced Pathophysiology for Nurse Anesthesia, 3 credits

This course is designed to describe the underlying pathophysiology of selected conditions and their unique anesthetic implications. Topics covered included pathophysiology unique to cerebrovascular, cardiac, respiratory, neurological, renal, hepatic, gastrointestinal, vascular, genitourinary, orthopedic, and endocrine systems. This course will consist of lecture, classroom discussions and electronic examinations.

NDNP 614: Principles of Nurse Anesthesia II, 3 credits

This course is designed to further explore and develop concepts taught in Principles of Anesthesia Nursing I with an expanded emphasis on principles, physiologic/pathophysiology for specific diseases processes that can occur throughout the life span. Topics covered include principles, physiologic/pathophysiology unique to cardiac, respiratory & lung diseases, renal, obstetrics, pediatrics, neurological, hepatic, trauma, geriatric and obese populations. Students will develop and modify standard anesthesia techniques to meet the specific anesthetic needs, unique physiological requirements and specific safety issues for these patient populations. This course will consist of lectures, classroom discussions, low-fidelity simulation (task training) via labs, quizzes and written examinations. In addition, medication regimens and anesthesia maintenance plans will be introduced via labs, low fidelity simulation and/or clinical scenarios and case studies. Students will have the opportunity to systematically reflect on an experience/simulation using Gibbs' Reflective Cycle. Current literature includes systematic reviews, meta-analysis, randomized controlled trials and review articles may be used in addition to traditional texts to supplement lecture materials and textbooks. By the end of this semester, the student will have a comprehensive understanding of anesthesia nursing principles, tailored to various patient populations, and will be proficient in applying these principles through lectures, simulations, and reflective practices.

NDNP 615: Regional Anesthesia, 3 credits

This course provides the anesthesia student with knowledge of anatomy, physiology, pharmacology and clinical aspects of the administration and management of regional anesthesia. It reviews neurophysiology and anatomy, pharmacology of local anesthetics, safety requirements and precautions and contraindications to regional anesthesia as well as correct documentation of regional anesthesia administration and maintenance. This course includes didactic instruction as well as skills demonstrations to enhance the student's familiarity with neurophysiology and anatomy and the equipment commonly utilized in the performance of regional anesthesia. The student will use a systematic and evidenced-based approach to determine the most comprehensive and up to date methods regarding the administration of regional anesthesia. Upon completion of this course, the CRNA student will be able to safely administer and manage regional anesthesia, utilizing comprehensive knowledge of neurophysiology, anatomy, pharmacology, and evidence-based techniques, while adhering to safety protocols and proper documentation practices.

NDNP 604: Advanced Pharmacology for Nurse Anesthesia II, 3 credits

The purpose of this second of two pharmacology courses is to provide the student with an in-depth knowledge of pharmacology and its applications to the clinical practice of anesthesia. The content of this course includes, complements and extends the content in NRSG 603 and NPHY 625, which included preparations and dosages, mechanism of action and dose-relationship and advanced pathophysiology as it relates to medications that they patient takes that may impact the safe administration of anesthesia. This course will involve the pharmacokinetics and pharmacodynamics of antibiotics, many home medications, illicit drugs, medications used in medical management, intravenous anesthesia drugs, opioids, opioid agonists, barbiturates, neuromuscular blocking agents and cardiovascular medications. However, the pharmacokinetics and pharmacodynamics of inhalation anesthetics, induction drugs, opiates, non-narcotic analgesics, and other anesthesia related drugs will also be incorporated. Students will also systematically reflect on their oral boards experience using Gibbs' Reflective Cycle.

NDNP 654: Principles of Nurse Anesthesia III, 3 credits

This course builds upon Chemistry, Technology and Physics of Anesthesia, Anesthesia Principles I and II, Regional Anesthesia and Advanced Pharmacology I and II. The goal is to prepare the student to begin their first anesthesia clinical rotation in a tertiary care facility. The student will utilize their critical thinking skills to address the perioperative anesthetic care of individuals across the lifespan through simulation, core competencies, workshops. This course prepares the anesthesia student to begin their clinical experience as a vigilant nurse anesthesia student by reviewing the first year of didactic education, lab experiences, simulation, and acquiring history and physicals to prepare patients to receive safe anesthesia.

NDNP 672: Principles of Nurse Anesthesia IV, 3 credits

The course is designed to build on the information and techniques presented in Principles of Anesthesia I, II and III with an emphasis on advanced topics. Relevant pathophysiology, pharmacology, assessment process, clinical management and safety issues will be emphasized through the life span from neonatal to the geriatric client. This course will also emphasize those advanced concepts not discussed in Principles of Anesthesia I, II, and III to include advanced obstetrics, non-obstetrical surgery in the obstetrical patient, chronic pain concepts, thoracic and vascular anesthesia. Other specialized topics to be discussed will be newer medication regimens and new evidence regarding surgical site infections and antineoplastic and antiviral drugs and the impact they have on anesthesia care. In addition, all students will participate in a cultural diversity workshop facilitated by an expert in the field of cultural diversity. This workshop is provided as part of this anesthesia principles class in an effort to facilitate a smoother transition as the student begins their anesthesia clinical experiences.

NDNP 637: Nurse Anesthesia Clinical I, 4 credits

This course will allow the student nurse anesthetist to provide comprehensive anesthesia care through the whole spectrum of the anesthesia process. Students will provide pre-anesthetic assessments, develop anesthesia care plans, provide safe and effective anesthesia pre-operatively, intra-operatively and post-operatively. Students will perform at a basic level under the supervision of a Certified Registered Nurse Anesthetist or anesthesiologist. Students will present and discuss cases, clinical difficulties and solutions with peers and faculty in a weekly clinical conference.

Additionally, in this course, students will explore evidence related to practice issues that can be addressed through the development of a DNP project. Students will initiate the development a DNP project proposal by analyzing and synthesizing the literature related to a specific practice problem, identifying a theoretical framework to guide the project, and developing an outline of an implementation plan for the project. Throughout the course, students will participate in a faculty and peer review process to refine and revise a proposed project as needed.

NDNP 657: Practicum II , 4 credits

This clinical course provides opportunity for the student anesthetist to continue to develop judgment, insight and knowledge of clinical practice. Students will provide a pre-operative assessment and develop anesthesia care plans for more complex patients under the direct supervision of a Certified Registered Nurse Anesthetist or an anesthesiologist instructor. Students will operate at a more advanced level, begin to develop more complex anesthesia care plans and administer anesthesia care more independently. Student nurse anesthetists will attend a weekly clinical conference to present cases to their peers and faculty.

NURS 673: Practicum III , 3 credits

During this course the student will continue to address the perioperative needs of their patients. Core competencies are an integral component of this course, as they allow the student to verbally discuss needed skills and management of future patients. The student will integrate and apply previous nurse

anesthesia courses and clinical experiences to provide quality anesthesia not only to patients undergoing elective cases, but also to complex and critical patients across the lifespan.

NDNP 670: Anesthesia Seminar I, 3 credits

This course is a review of information and techniques learned during the student's didactic and clinical experience throughout the nurse anesthesia program. It is the first of two review courses designed for preparation to take the National Certifying Exam (NCE). This course reviews respiratory, autonomic nervous system (ANS), central nervous system (CNS), cardiac, pharmacokinetics/pharmacodynamics, IV anesthetics, volatile anesthetics, neuromuscular blockers & reversals, opioids, as well as the anesthesia machine, breathing circuits, and monitoring equipment. Pathophysiology, pharmacology, the assessment process, patient anesthesia management and patient safety issues will be emphasized as it relates to the perioperative period.

NDNP 674: Practicum IV , 4 credits

During this course the student will continue to address the perioperative needs of their patients. Core competencies are an integral component of this course, as they allow the student to verbally discuss needed skills and management of future patients. The student will integrate and apply previous nurse anesthesia courses and clinical experiences to provide quality anesthesia not only to patients undergoing elective cases, but also to complex and critical patients across the lifespan.

NDNP 642: Professional Aspects, 1 credits

This course is designed to explore various professional issues and national health policy that affects nurse anesthesia practice and the nurse anesthesia profession. Students will review the history and organization of the American Association of Nurse Anesthetists and the responsibilities of the nurse anesthesia councils. Emphasis will be placed on the ethics of nurse anesthesia and the legal challenges and responsibilities of a CRNA. In addition, this course will stress using an Evidenced-based approach using the literature to support or refute various issues (both clinically and professionally) facing the profession of Nurse Anesthesia.

NDNP 675: Anesthesia Seminar II, 3 credits

This is the second of two review courses designed to prepare the student to take the National Certification Exam (NCE). This course comprises both formative and summative assessment. It includes a review of information that was learned during the student's didactic and clinical experience throughout the nurse anesthesia program. By the end of this course, the student will be able to provide safe and effective anesthesia to complex patients perioperatively across the life span as it relates to neurology, regional, fluid and blood, kidney, liver, endocrine, obstetrics, neonate, pediatrics, geriatrics, chemistry and physics, obesity, positioning and nerve injury.

NDNP 676: Practicum V, 4 credits

This course provides the student anesthetist a final opportunity to strengthen clinical skills and incorporate current anesthesia practices into their practice. Students practice independently under the direct supervision of a Certified Registered Nurse Anesthetist (CRNA) or anesthesiologist. Students assess patients, develop care plans and provide anesthesia for patients across the life span with minimal input from the supervising anesthesia provider. Students will participate in clinical conferences offered at their clinical sites, thus allowing the student to meet with their peers and clinical faculty to discuss cases and implement the best evidenced based practice.