

4. CURRICULUM STRUCTURE AND COURSE DESCRIPTIONS

Curriculum Overview

Doctor of Medical Science- Curricular Design									
Credit Hours	Term	Length	Core		Credit Hours	Term	Length	Concentration I	Concentration II
3	Fall 1	6 weeks	DMSC 51XX- Introduction to Research Methods and Clinical Inquiry		3	Spring 2	6 weeks	DMSC 53XX- Survey of Organizational Finance in Healthcare Operations	DMSC 53XX- Program Operations and Institutional Financing
3	Fall 2	6 weeks	DMSC 51XX- Survey of Healthcare Law and Policy for the Clinician		3	Spring 3	6 weeks	DMSC 53XX- Leading Clinical Transformation	DMSC 53XX- Programmatic Assessment and Evaluation
			Concentration I	Concentration II					
3	Fall 2	6 weeks	DMSC 51XX- Applied Clinical Leadership Transformation Project I		3	Spring 3	6 weeks	DMSC 53XX- Applied Clinical Leadership Transformation Project III	DMSC 53XX- Applied Clinical Education Project III
			Concentration I	Concentration II				Concentration I	Concentration II
3	Fall 3	6 weeks	DMSC 52XX- Building Effective Teams within the Healthcare Environment		3	Summer 1	6 weeks	DMSC 54XX- Healthcare Quality and Safety	DMSC 54XX- Online Teaching and Course Design
3	Spring 1	6 weeks	DMSC 52XX- Fundamentals of Organizational Healthcare and Risk Assessment		3	Summer 2	6 weeks	DMSC 54XX- Strategic Innovation and Digital Health Leadership	DMSC 54XX- Faculty Development and Educational Leadership
3	Spring 1	6 weeks	DMSC 52XX- Applied Clinical Leadership Transformation Project II		3	Summer 2	6 weeks	DMSC 54XX- Applied Clinical Leadership Transformation Project IV	DMSC 54XX- Applied Clinical Education Project IV

The DMSc curriculum is designed as a 36-credit hour program delivered over one year for a full-time student or two years for a part-time student.

Course Descriptions (refer to full course descriptions in appendix)

Core Courses (2)

DMSC 51XX- Introduction to Research Methods and Clinical Inquiry

This comprehensive introductory course establishes the foundational research principles, methodologies, and scholarly approaches essential for physician assistant doctoral students pursuing advanced roles in clinical leadership and education. Designed as the gateway to the doctoral research sequence, this course integrates perspectives from both clinical transformation and educational scholarship domains, preparing students to engage in rigorous inquiry regardless of their specialized track.

The curriculum cultivates the scholarly mindset and critical research competencies needed to address complex challenges in PA practice, healthcare delivery, and professional education. Students will explore the interconnected nature of clinical practice improvement and educational advancement, developing versatile research skills applicable across the continuum of PA doctoral scholarship.

DMSC 51XX- Survey of Healthcare Law and Policy for the Clinician

This comprehensive course provides healthcare practitioners with an essential understanding of the legal frameworks, regulatory requirements, and policy dynamics that shape clinical practice and healthcare delivery in contemporary systems. Designed specifically for physician assistants seeking to navigate the complex intersection of law, policy, and patient care, the curriculum examines how legislative, regulatory, and judicial decisions influence clinical decision-making and professional responsibilities.

Doctoral students will develop a working knowledge of fundamental healthcare laws, regulations, and policies while exploring their practical implications for day-to-day practice. The course emphasizes application rather than theoretical legal scholarship, focusing on how clinicians can effectively navigate legal requirements while delivering high-quality, patient-centered care.

Clinical Leadership Transformation Track (6 courses plus a 4-part research course)

DMSC 52XX- Building Effective Teams Within the Healthcare Environment

This course explores the theory, practice, and leadership principles essential for developing high-performing healthcare teams in today's complex medical environments. Physician Assistant doctoral students will examine the unique challenges and opportunities of interprofessional collaboration within healthcare settings, where diverse disciplines must work cohesively to deliver safe, effective, and patient-centered care.

The curriculum integrates insights from organizational psychology, leadership studies, healthcare management, and implementation science to provide a comprehensive understanding of team dynamics in medical contexts. Students will explore how effective teamwork directly impacts patient outcomes, organizational efficiency, and provider well-being in various healthcare delivery models.

DMSC 52XX- Fundamentals of Organizational Healthcare Risk Assessment

This course provides a comprehensive introduction to the principles, methodologies, and applications of risk assessment within healthcare organizations. Physician assistant doctoral students will develop the knowledge and skills necessary to identify, analyze, and mitigate risks that impact patient safety, clinical outcomes, organizational reputation, and financial sustainability in complex healthcare environments.

The curriculum bridges theoretical frameworks with practical applications, examining how systematic risk assessment processes can be integrated into organizational governance structures to support proactive decision-making and continuous improvement. Students will explore the interconnected nature of clinical, operational, financial, and strategic risks unique to healthcare delivery systems.

DMSC 53XX - Survey of Organizational Finance in Healthcare Organizations

This course provides a comprehensive overview of financial management principles and practices essential for understanding the complex fiscal landscape of modern healthcare organizations. Physician assistant doctoral students will explore the unique financial challenges and opportunities within healthcare delivery systems, developing the analytical frameworks needed to make informed financial decisions that support organizational sustainability and mission fulfillment.

The curriculum examines both foundational financial concepts and healthcare-specific applications, giving students insight into how financial management intersects with clinical operations, strategic planning, and healthcare policy. Through a balanced approach that addresses both for-profit and not-for-profit healthcare models, students will gain practical knowledge applicable across diverse healthcare settings.

DMSC 53XX – Leading Clinical Transformation

This course explores the strategic approaches, leadership competencies, and change management methodologies essential for guiding successful clinical transformation initiatives in healthcare organizations. Physician assistant doctoral students will examine how to effectively lead complex change processes that enhance care delivery models, improve outcomes, and create sustainable value within evolving healthcare landscapes.

The curriculum integrates perspectives from clinical practice, leadership theory, implementation science, and organizational development to provide a comprehensive framework for leading transformative clinical change. Students will develop the strategic vision and practical skills needed to navigate the unique challenges of transformation efforts that involve clinical workflows, professional cultures, and patient care systems.

DMSC 54XX – Healthcare Quality and Safety

This course provides a comprehensive examination of the principles, practices, and systems that promote excellence in healthcare quality and patient safety. Physician assistant doctoral students will explore the multifaceted dimensions of quality healthcare delivery, including the theoretical frameworks, practical methodologies, and regulatory standards that guide organizational approaches to reducing harm and improving outcomes.

The curriculum integrates perspectives from clinical practice, management science, systems engineering, and implementation research to address the complex challenges of delivering consistently safe, effective, and patient-centered care. Students will develop the analytical skills and practical knowledge needed to identify quality gaps, implement evidence-based interventions, and foster cultures of safety within healthcare organizations.

DMSC 54XX- Strategic Innovation and Digital Health Leadership

This course prepares physician assistant doctoral students to lead strategic innovation initiatives and digital health transformation within healthcare organizations. Students will explore emerging technologies, innovation frameworks, and strategic leadership approaches necessary to drive technological advancement while maintaining focus on patient-centered care and clinical effectiveness in rapidly evolving healthcare environments.

The curriculum integrates perspectives from healthcare innovation, digital health strategy, implementation science, and change leadership to provide comprehensive preparation for leading technology-enabled healthcare transformation. Students will develop competencies to evaluate, select, implement, and scale digital health solutions while addressing the unique challenges of technology adoption in clinical practice settings.

Four-Part Research Series:

DMSC 51XX- Applied Clinical Leadership Transformation Project I

This first-part course introduces physician assistant doctoral students to the principles of evidence-based practice and critical appraisal methodologies essential for leading clinical transformation initiatives. This is a continuation of the core research course that students take in Module I. Students will develop advanced skills in evaluating, synthesizing, and applying research evidence to address complex clinical practice challenges within healthcare organizations.

The curriculum focuses on building scholarly competencies that enable PA leaders to bridge the gap between research evidence and clinical practice implementation. Students will learn systematic approaches to identify, analyze, and interpret various forms of evidence that can inform clinical transformation efforts.

DMSC 52XX- Applied Clinical Leadership Transformation Project II

This course equips physician assistant doctoral students with the methodological approaches and analytical tools specific to quality improvement research within healthcare settings. Students will explore research designs that effectively measure, evaluate, and improve clinical processes, outcomes, and value in healthcare delivery systems.

The curriculum emphasizes pragmatic research approaches that PA clinical leaders can employ to drive meaningful transformation while maintaining scientific rigor. Students will develop competence in quality improvement methodologies that generate valid, actionable evidence for clinical practice change.

DMSC 53XX - Applied Clinical Leadership Transformation Project III

This applied course guides physician assistant doctoral students through the development of a comprehensive research proposal focused on clinical transformation. Building on knowledge

from previous courses, students will create a detailed research plan that addresses a significant practice challenge within their clinical environment while demonstrating methodological rigor and feasibility.

The curriculum focuses on the integration of clinical expertise, contextual understanding, and research methodology to design studies that can meaningfully impact healthcare delivery. Students will receive structured mentoring to refine their research focus, questions, and design elements.

DMSC 54XX - Applied Clinical Leadership Transformation Project IV

This capstone research course supports physician assistant doctoral students through the implementation, analysis, and dissemination phases of their clinical transformation research project. Students will execute their approved research plans within healthcare settings, collecting and analyzing data while navigating the complex dynamics of clinical practice change.

The curriculum combines structured guidance with individualized mentoring to help students complete projects that demonstrate scholarly excellence and practical impact on clinical care delivery. Emphasis is placed on rigorous execution, meaningful interpretation of findings, and translation into sustainable practice improvements.

Clinical Educator Track (6 courses plus a 4-part research course)

DMSC 52XX - Fundamentals of Pedagogy and Curriculum Development for Adult Learners

This course provides a comprehensive foundation in the principles, theories, and evidence-based practices for effective teaching and curriculum design for graduate and adult learners. Students will explore the unique characteristics of adult learning environments while developing the knowledge and skills necessary to create engaging, transformative educational experiences across diverse professional contexts.

The curriculum integrates theoretical frameworks with practical applications, enabling students to bridge pedagogical science with the art of teaching. Through an examination of adult learning theory, instructional design models, and curriculum development processes, students will build a versatile toolkit for facilitating meaningful learning experiences that address the distinct needs, motivations, and contexts of adult learners.

DMSC 52XX- Foundations of Program Development and Institutional Structures

This course examines the theoretical frameworks and practical applications of physician assistant program development within institutional contexts. Students will explore the interconnected relationships between organizational structures, policy frameworks, and effective program design. The curriculum integrates concepts from organizational theory, systems thinking, and

change management to provide a comprehensive understanding of how successful programs are conceptualized, implemented, and sustained within various institutional environments.

DMSC 53XX- Program Operations and Institutional Financing

This course provides a comprehensive examination of the operational frameworks and financial mechanisms that sustain successful programs within institutional settings. Students will develop a deep understanding of how organizational financial structures intersect with day-to-day program operations to create sustainable and impactful initiatives.

The curriculum bridges theory and practice by exploring financial management strategies alongside operational best practices. Students will learn to navigate the complex landscape of institutional financing while optimizing program delivery, resource allocation, and organizational effectiveness.

DMSC 53XX- Programmatic Assessment and Evaluation

This course explores the principles, methodologies, and applications of continuous assessment in program development and implementation for physician assistant programs. Students will learn how to design and execute evaluation frameworks that provide meaningful insights throughout a program's lifecycle, moving beyond traditional end-point evaluations toward integrated assessment systems that inform real-time decision-making.

The curriculum emphasizes both theoretical foundations and practical skills needed to develop robust evaluation strategies that measure program effectiveness, impact, and efficiency. Students will explore how ongoing assessment can be leveraged to foster a culture of continuous improvement within organizations.

DMSC 54XX- Online Teaching and Course Design

This course provides a comprehensive introduction to the principles, practices, and technologies that support effective online teaching and learning environments within PA educational contexts. Students will explore the unique pedagogical approaches and design considerations necessary for creating engaging virtual educational experiences that foster meaningful student engagement and achievement.

The curriculum balances theoretical frameworks with practical applications, enabling participants to develop the skills needed to design, deliver, and evaluate high-quality online courses across various disciplines and educational contexts. Students will examine how digital tools and instructional strategies can be strategically integrated to support diverse learning needs and preferences in virtual settings.

DMSC 54XX - Faculty Development and Educational Leadership

This course prepares physician assistant doctoral students to lead faculty development initiatives and educational leadership functions within academic and clinical teaching environments.

Students will explore the principles, strategies, and best practices for fostering professional growth among healthcare educators while building sustainable cultures of teaching excellence and scholarly engagement across diverse educational settings.

The curriculum integrates perspectives from adult learning theory, organizational development, leadership studies, and educational scholarship to provide comprehensive preparation for advancing faculty capabilities and institutional teaching missions. Students will develop competencies to design, implement, and evaluate faculty development programs that enhance teaching effectiveness, promote scholarly activities, and support career advancement for healthcare educators.

Four-Part Research Series:

DMSC 51XX – Applied Clinical Education Project I

This foundational course introduces physician assistant doctoral students to the theoretical frameworks, methodological approaches, and scholarly traditions that inform educational research in clinical environments. This is a continuation of the introductory research course that students complete in Module I. Students will explore the unique intersection of clinical practice and educational scholarship, developing the skills needed to critically evaluate and contribute to the evidence base for PA and health professions education.

The curriculum emphasizes the development of a scholarly mindset that enables PA educators to approach educational challenges through systematic inquiry. Students will examine various research paradigms and their applications to questions of teaching, learning, assessment, and curriculum development in clinical education contexts.

DMSC 52XX- Applied Clinical Education Project II

This course equips physician assistant doctoral students with advanced methodological approaches for researching, designing, and evaluating assessment systems in clinical education. Students will develop expertise in research methods specifically applicable to measuring learning outcomes, evaluating educational effectiveness, and improving teaching practices in health professions education.

The curriculum focuses on the integration of assessment theory with practical research skills, preparing students to conduct scholarly inquiry that enhances the quality and effectiveness of educational assessment in PA programs and clinical training environments.

DMSC 53XX- Applied Clinical Education Project III

This applied course guides physician assistant doctoral students through the comprehensive development of a research proposal focused on advancing clinical education practice. Building on knowledge from previous courses, students will create a detailed research plan addressing a significant educational challenge or innovation opportunity within PA education or clinical teaching environments.

The curriculum emphasizes the alignment between educational questions, methodological approaches, and practical implications for PA education. Students will receive structured mentoring to refine their research focus and design elements while considering implementation feasibility in educational settings.

DMSC 54XX- Applied Clinical Education Project IV

This capstone research course supports physician assistant doctoral students through the implementation, analysis, and dissemination phases of their clinical education research project. Students will execute their approved research plans within educational settings, navigating the challenges of conducting rigorous inquiry in dynamic teaching and learning environments.

The curriculum combines structured guidance with individualized mentoring to help students complete projects that demonstrate scholarly excellence and meaningful contribution to PA education. Emphasis is placed on thoughtful analysis, interpretation of educational findings, and translation into improved teaching and learning practices.