

Rowan-Virtua SOM
PA Program
Course Descriptions

Fall Semester 1:

- **Advanced Human Anatomy (5 credits)**
 - This is a one-semester course with focus on the study of functional and applied human anatomy. Each topic will utilize lecture and lab experiences using the latest technology and human cadaver dissection. When appropriate, clinical and surgical correlations are made from diagnostic and operative points of view. Instruction is primarily in lecture and laboratory format. Textbooks, atlases, computer software programs, virtual anatomy dissection tables, and other visual aids and models are available for study. Applied learning based on clinically relevant examples will be emphasized. Faculty presentations in lectures will be correlated with laboratory experiences.
- **Advanced Human Pathology/Pathophysiology (4 credits)**
 - This is a one-semester course that will provide students with a detailed overview of the fundamental aspects of human physiology and pathophysiology, including the normal function of the human body and its major organ systems for patients across the life span. Understanding the normal physiologic processes will serve as a foundation for understanding altered health states and their therapeutic interventions. An understanding of the abnormal pathophysiology of disease and disease states is necessary to apply basic science knowledge to a clinical situation. This course will concentrate on the basic physiologic and pathophysiologic understanding of disease and its clinical manifestations.
- **Foundations in Medical Science (3 credits)**
 - This is a one-semester course that will focus on reviewing and extending basic fundamental knowledge in medical sciences in the areas of genetics, microbiology, molecular mechanisms of health and disease, and an introduction to pharmacokinetics/dynamics. Mastery of this information is necessary to progress to the organ systems clinical medicine and fundamentals courses, which will follow in subsequent semesters. Instruction will utilize lecture, problem-solving, and workshop experiences followed by an examination. Applied learning based on clinically relevant cases will be emphasized.
- **History Taking and Physical Examination (5 credits)**
 - This is the first of three sequential courses designed to provide students with the fundamental grounding and cognitive knowledge to prepare them for their clinical role in patient-centered care. The course will serve as an introduction to history taking, physical examination techniques, patient counseling, preventative health screening, documentation, and communication skills used to conduct age-appropriate, culturally sensitive histories and physical exams. The course will progress to acquiring the skills, knowledge, and sensitivity needed to communicate and intervene effectively in diverse patient encounters. This is a combined lecture and lab course using teaching methods to include small group demonstrations and practice sessions. This course will instruct the students on the normal history and physical exam and prepare them for the problem-focused techniques they will learn in later clinical medicine courses. Students

will also be involved in active learning with simulation lab experiences. At the completion of this course, students will have obtained the necessary skills to elicit a comprehensive history and perform a comprehensive physical exam, as well as complete the associated documentation.

- **Introduction to PA practice (1 credit)**

- This course lays the foundation for successfully navigating PA school, the PA profession and the practice of medicine. The course will give the new PA student the history, roots, and models of the PA profession in medicine and look at the expected future role of the PA in medicine both in the United States and globally. Students will learn the various roles and responsibilities of health care professionals and then explore the physician-PA relationship and the role of the PA within the medical team today with an emphasis on patient-centered care. Culturally aware and collaborative communication with patients, families, and other healthcare providers will be a focus. Students will also be introduced to the state and national professional organizations and the resources they offer. Students will learn the importance of academic integrity, intellectual honesty, and the expected professional conduct of a PA. Student wellness, stress management and prevention of burnout will be addressed. The final section of the course will allow the students to explore principles and practice of public health.

- **Introduction to Research and Evidence-Based Medicine (1 credit)**

- This is a one-credit course, and is the first of a four-part series focusing on evidence-based medicine and scholarly research. This course is the first course in the preparation of the student for the masters capstone project that will cumulate at the end of their clinical year. This course will focus on introducing students to formulating research questions that lead to new findings that ultimately impact the care of patients through evidence-based medicine. Students will obtain an understanding of basic biostatistical research as well as the limits and ethical considerations in medical research design and sampling methods. Students will be introduced to evaluating published scientific articles through scientific reasoning including the interpretation and critique of published manuscripts dealing with current important issues in evidence-based medicine. Each topic will utilize lecture and classroom discussions. In addition, library staff will provide instruction on the use of the library research database resources available to support the research process.

Spring Semester 1:

- **Clinical Medicine 1 (4 credits)**

- This 4-credit course is the first of two designed to educate the student with diseases encountered in primary care and internal medicine. The course will cover the etiology, epidemiology, pathophysiology, risk factors, clinical findings, diagnostic studies, differential diagnoses, pharmacologic/pharmacotherapeutic and non-pharmacologic treatment/management plans, complications, prognosis, and patient education for each disease where applicable. The topics covered include: Dermatology, Endocrinology, EENT, Pulmonary, Cardiovascular, and Gastroenterological disorders. Additionally, students will be expected to integrate knowledge from prior courses within each unit. Instruction includes clinical applications and considerations relating to patients with normal and abnormal development through the lifespan including prenatal, infants, children, adolescents, and the elderly where applicable. Instruction also includes

instruction on preventative, emergent, acute and chronic conditions, and rehabilitative encounters where applicable. Knowledge from prior and concurrent coursework will be applied in the form of anatomy and pharmacology review sessions. Patient education and patient counseling are integrated throughout the course with smoking cessation, infectious disease safety, cardiovascular risk-factors, and through the discussion of both prevention/screening and management plans of each applicable disease.

- **Clinical Seminar 1 (3 credits)**

- Clinical Seminar 1 is a 3-credit course designed to develop foundational skills in clinical reasoning through case-based and problem-based learning principles. Students will focus on the clinical presentation of patients, integrating laboratory, radiologic, and other diagnostic modalities to evaluate and manage common conditions encountered in primary care and internal medicine. This course aligns with and complements *Clinical Medicine I*, reinforcing topics such as, dermatology, endocrinology, EENT, pulmonology, cardiology, and gastroenterology. Emphasis will be placed on synthesizing knowledge from concurrent and prior coursework, including anatomy and pharmacology, to construct differential diagnoses and formulate evidence-based management plans. Clinical Seminar I prepares students to apply a patient-centered approach to diagnostics and treatment, fostering skills essential for lifelong learning and effective medical practice.

- **Patient Assessment 1 (2 credits)**

- This is the second of three sequential courses and is designed to move the student from the normal history and physical exam to a problem-focused history and physical exam, in concert with abnormal findings and pathologies found in all of the organ systems. In addition, students will learn advanced skills required in clinical practice. This course incorporates knowledge from the History and Physical Examination course, and concurrent courses, including Clinical Medicine I and Pharmacology and Pharmacotherapeutics I. Building on this, the goals of this course are to have students gain the necessary skills to develop a problem-oriented, clinical approach to the evaluation, diagnosis and management of common clinical conditions. Students will practice ordering and interpreting diagnostics, generating differential diagnoses, clinical reasoning and problem solving, documentation of care including formulating acute, chronic and rehabilitative care plans, providing patient education and referrals, and performing oral case presentations. Students will also be involved in active learning with simulation lab experiences. Students will review the indications, contraindications, procedural steps, potential complications and post-procedural care of the outlined clinical technical skills. Students will also learn communication techniques and appropriate professional conduct for patients suffering from substance use disorder, and other behavioral modification. Students will work on motivational interviewing, basic counseling skills, and providing patient education that is focused on helping patients adhere to treatment plans, modify their behaviors to more healthful patterns, and develop coping mechanisms.

- **Pharmacology and Pharmacotherapeutics 1 (3 credits)**

- This is the first of two courses designed to provide a solid foundation in the pharmacology and pharmacotherapeutics utilized throughout clinical medicine. Drugs will be discussed by class with attention given to specific drugs, indications, contraindications, dosage, mechanism of action, side effects, adverse effects, similarities, and differences, black box warnings, and prescribing considerations. Emphasis will be placed on the more common drugs in treatment of common diseases,

and current standards of care. Instruction will occur with horizontal integration from the Clinical Medicine 1 course topics including hematologic, dermatologic, ophthalmologic diseases, disorders of the ears, nose and throat, infectious diseases, and respiratory, cardiovascular, and gastroenterological diseases. Learning to prescribe will include instruction on reducing error, mandatory reporting, prescription databases, and facilitating adherence to a treatment plan. Students will learn the impact of pharmacology on preventive medicine with instruction on travel medicine and safety, and the legal, political, social, and preventive implications of vaccinations.

- **Professional Practice 1 (1 credit)**

- Professional Practice I builds upon the foundations from the Introduction to PA Practice course and guides the student through considerations for a variety of patient encounter types. The course begins with the principles and practice of clinical ethics and professional conduct. Social determinants of health are then explored to ensure that students are able to care for all patients with considerations for social determinants of health, special needs, and in the setting of healthcare disparities. Students will then explore considerations for patient care and family support throughout the process of death and dying and concepts and practice of palliative care. Other considerations for patient encounters are also covered, such as challenging patient encounters, rehabilitative patient encounters, and acute, chronic, emergent, and preventive care encounters. The course wraps up with exploration of the impact of stress on patient management and overall patient wellness and response to illness, injury, stress, and the development of coping mechanisms.

- **Research Methods 1 (1 credit)**

- This course is the second of four required courses in the Physician Assistant research sequence. This course continues and builds upon concepts learned and projects started during Introduction to Research and Evidence-Based Medicine. Students will continue developing and refining skills to critically analyze clinical research papers and evidence-based medicine. Students will utilize advanced literature database search strategies and begin drafting their rapid literature review capstone project. At the conclusion of the course, students will be required to develop a critical analysis of scientific literature, and to produce a draft of the introduction and methods sections of their rapid literature review that will culminate in their final written capstone project as part of the PA Capstone course.

- **Foundations of Obstetrics and Gynecology (2 credits)**

- This 2-credit course provides an introduction to women's health, obstetrics, gynecological, reproductive, and genitourinary issues, conditions, diseases, and disorders issues across the life span. This course will focus on identifying the risk factors, etiologies, physiology, pathophysiology, signs and symptoms, diagnostic evaluation, therapeutic approach, prognosis, and potential complications of diseases, disorders, and conditions primarily affecting the female patient. Students will participate in simulation lab experiences in order to work through a differential diagnosis and develop a therapeutic treatment plan in a team-based manner. Students will also learn and perform a genitourinary exam on both male and female standardized patients.

Summer Semester 1:

- **Clinical Medicine 2 (4 credits)**

- o This 4-credit course is the second of two designed to educate the student with diseases encountered in primary care and internal medicine. The course will cover the etiology, epidemiology, pathophysiology, risk factors, clinical findings, diagnostic studies, differential diagnoses, pharmacologic/pharmacotherapeutic and non-pharmacologic treatment/management plans, complications, prognosis, and patient education for each disease where applicable. The topics covered include: Infectious Diseases, Hematology/Oncology, Nephrology, Urology, Rheumatology, Orthopedics, Neurology, and Psychiatry. Additionally, students will be expected to integrate knowledge from prior courses within each unit. Instruction includes clinical applications and considerations relating to patients with normal and abnormal development through the lifespan including prenatal, infants, children, adolescents, and the elderly where applicable. Instruction also includes instruction on preventative, emergent, acute and chronic conditions, and rehabilitative encounters where applicable. Knowledge from prior and concurrent coursework will be applied in the form of anatomy and pharmacology review sessions. Patient education and patient counseling are integrated throughout the course with infectious disease safety, diabetic care, weight management, substance abuse screening and modification of behaviors, and through the discussion of both prevention/screening and management plans of each applicable disease. Students will finish the course with a module on the medical care surrounding gender identity and gender affirming care.
- **Clinical Seminar 2 (3 credits)**
 - o Clinical Seminar 2 is a 3-credit course that builds on the foundational skills developed in Clinical Seminar I, focusing on advanced clinical reasoning through case-based and problem-based learning approaches. Students will analyze complex clinical presentations using laboratory, radiologic, and other diagnostic tools to evaluate and manage conditions encountered in primary care and internal medicine. This course aligns with and complements *Clinical Medicine II*, emphasizing topics such as infectious diseases, nephrology, urology, endocrinology, rheumatology, orthopedics, neurology, and psychiatry. Students will integrate knowledge from prior and concurrent coursework, including anatomy and pharmacology, to enhance differential diagnosis and management planning. Special attention will be given to patient education and counseling in areas such as infectious disease prevention, diabetic care, weight management, and substance abuse. Additionally, the course will address the unique considerations surrounding gender identity and gender-affirming care, preparing students to deliver inclusive, patient-centered healthcare.
- **Patient Assessment 2 (2 credits)**
 - o This is the third of three sequential courses and is designed to move the student from the normal history and physical exam to a problem-focused history and physical exam, in concert with abnormal findings and pathologies found in all of the organ systems. In addition, students will learn advanced skills required in clinical practice. This course incorporates knowledge from the History and Physical Examination course, and concurrent courses, including Clinical Medicine 2 and Pharmacology and Pharmacotherapeutics 2. Building on this, the goals of this course are to have students gain the necessary skills to develop a problem-oriented, clinical approach to the evaluation, diagnosis and management of common clinical conditions. Students will practice ordering and interpreting diagnostics, generating differential diagnoses, clinical reasoning and problem solving, documentation of care including formulating acute, chronic and rehabilitative care plans, providing patient education and referrals, and

performing oral case presentations. Students will also be involved in active learning with simulation lab experiences. Students will review the indications, contraindications, procedural steps, potential complications and post-procedural care of the outlined clinical technical skills. Students will also learn communication techniques and appropriate professional conduct for patients suffering from substance use disorder, and other behavioral modification. Students will work on motivational interviewing, basic counseling skills, and providing patient education that is focused on helping patients adhere to treatment plans, modify their behaviors to more healthful patterns, and develop coping mechanisms.

- **Pharmacology and Pharmacotherapeutics 2 (3 credits)**

- This is the second of two courses designed to provide a solid foundation in the pharmacology and pharmacotherapeutics utilized throughout clinical medicine. Drugs will be discussed by class with attention given to specific drugs, indications, contraindications, dosage, mechanism of action, side effects, adverse effects, similarities, and differences, black box warnings, and prescribing considerations. Emphasis will be placed on the more common drugs in treatment of common diseases, and current standards of care. Instruction will occur with horizontal integration from the Clinical Medicine 1 course topics including infectious diseases, endocrine, genitourinary, reproductive, musculoskeletal, neurological, psychiatric, and behavioral medications. Students will learn about pain management, scheduling of medications by the FDA, and the abuse potential of medications. This will include instruction on the history of the opioid epidemic, underlying addiction pathophysiology, alternative pain management methods for acute and chronic pain, interprofessional management of patients with substance abuse disorder, Medication Assisted Therapy (MAT), and barriers to care including socioeconomic factors and regulation of controlled substances. Additionally, students will learn about prescribing medications across the lifespan, including dosing and dose considerations for pediatrics, geriatrics, and patients with chronic disease.

- **Professional Practice 2 (1 credit)**

- Professional Practice II builds upon the foundations from the Introduction to PA Practice and Professional Practice I courses and guides the student through the business, legal, policy, risk management, and employment topics. The course begins with health care delivery systems, payment and reimbursement, billing and coding, and electronic medical records. Students will then learn about the principles and practice of laws and regulations related to PA practice, including but not limited to EMTALA, HIPAA, and AMA. Students will explore concepts related to decision-making capacity and health care surrogates, including legal parameters, clinical evaluation, and appropriate communication regarding these topics. The course continues on as it advocates for routine practices that enhance patient safety including quality improvement, prevention of medical errors, risk management, malpractice, and minimizing cognitive errors.

- **Foundations of Medical Care Across the Lifespan (3 credits)**

- This 3-credit course begins by introducing students to the fundamentals of pediatric and geriatric medicine to include newborns, infants, children, adolescents and the elderly/geriatric patient populations. Students will review the physiology and pathophysiology, as well as learn the risk factors, etiologies, epidemiology, risk factors, genetics, clinical signs and symptoms, diagnostic evaluation, pharmacological/pharmacotherapeutic and non-pharmacological therapeutic management, complications, prognosis, and patient education of pediatric and geriatric-related diseases, disorders, syndromes, and conditions. Students will also learn

about normal and abnormal growth and development, preventive care and anticipatory guidance, immunizations, common pediatric and geriatric issues, special considerations for pediatric and geriatric patients, and review other diseases limited to the pediatric and geriatric populations. Students will receive instruction and participate in simulation lab experiences in order to work through a differential diagnosis and develop emergent, acute, chronic, and rehabilitative treatment plans. Students will also learn to identify and prevent violence and abuse involving pediatric and geriatric populations. Communication skills regarding death, dying, and loss are explored. Students are also instructed on palliative and end-of-life care.

- **Foundations of Surgery and Emergency Medicine (3 credits)**
 - This course is designed to provide students with an overview of the surgical patient, with an emphasis on adult surgical conditions. The focus of this course will be on the medical management of surgical patients from pre-operative, operative, and post-operative care settings. Students will learn to identify the risk factors, etiologies, signs and symptoms, diagnostics, therapeutics, prognoses, potential complications, and screening tools/recommendations for common surgical conditions. Students will be responsible for reviewing prior pertinent course work, such as anatomy, physiology, pathophysiology, and pharmacology. Students will participate in simulation lab experiences in order to work through a differential diagnosis and develop a therapeutic treatment plan in a team-based manner. Students will also participate in clinical surgical skills training.

 - This course also focuses on the specialty of emergency medicine and patients across the lifespan (neonates, infants, toddlers, children, adolescents, adults, elderly, geriatrics) who may present to the emergency room setting. Emphasis is placed on the diagnosis, evaluation, and therapeutic approach of acutely ill patients, conditions, and diseases in the emergency room setting. BLS & ACLS certification will be required for the successful completion of this course. Students will learn comprehensive encounter management from initial triage, intradepartmental management, referrals, admission, and discharge. Students will participate in simulation lab experiences of common acute care emergency complaints in order to work through a differential diagnosis and develop a therapeutic treatment plan in a team-based manner. Social and community aspects of emergency medicine are also reviewed, as well as considerations for special populations.
- **Research Methods 2 (1 credit)**
 - This course is the third of four required courses in the Physician Assistant research sequence. This course continues and builds upon concepts learned and projects started during Introduction to Research and Evidence-Based Medicine. Students will continue developing and refining skills to critically analyze clinical research papers and evidence-based medicine. Students will utilize advanced literature database search strategies and continue drafting their rapid literature review capstone project. At the conclusion of the course, students will be required to develop a critical analysis of scientific literature, and to produce a draft of the results and discussion sections of their rapid literature review that will culminate in their final written capstone project as part of the PA Capstone course.

Fall Semester 2:

- **Family Medicine SCPE (5 credits)**
 - This course is the first 5-week rotation in an outpatient setting at a family medicine office. The goal of this rotation is to educate the PA student in the diagnosis,

management and treatment of both preventative, acute, and chronic illness for the patient in the primary care setting. Experience is provided at the level of a primary care PA and will include becoming familiar with the primary care provider's role in overall patient health, prevention of disease and screenings, health and wellness counseling, and coordination of care within the health-care system for all patients across the lifespan to include adolescents, adults and the elderly.

- **Internal Medicine SCPE (5 credits)**

- This 5-week rotation provides the PA student with the practical experience to develop their clinical reasoning skills in the management of preventative, emergent, acute, and chronic medicine with an emphasis on the recognition of normal as well as abnormal developmental findings along with the diagnosis and management adults and elderly patients in Internal medicine. Students will gain the skills necessary to interpret and integrate information obtained through the comprehensive history and physical examination, and laboratory and other diagnostics, to formulate differential diagnoses; to develop effective treatment plans; and to provide patient management and counseling throughout the course of treatment. In addition, the students will learn the indications, limitations and methodology of inpatient diagnostic procedures and therapeutic regimens common to internal medicine. Students are expected to see both adults and elderly adults, in an outpatient and/or in-patient setting(s) during this rotation.

- **Pediatrics SCPE (5 credits)**

- This five-week rotation provides the PA student with clinical experience in diagnosis, evaluation and management of infants, children, and adolescent patients, in an out-patient setting. Emphasis is placed on the recognition of normal as well as abnormal developmental findings, diagnosis and management of common acute, emergent, and chronic childhood illnesses, assessment of developmental milestones, and preventative medicine such as immunizations and well-child care from birth through adolescence. Students should also gain familiarity with the clinical skills necessary to manage behavioral and mental health conditions in the pediatric population. Students should also focus on communication with parents, particularly with anticipatory guidance, preventive medicine, counseling, and communicating the management plan.

Spring Semester 2

- **Emergency Medicine SCPE (5 credits)**

- This 5-week rotation provides the Physician Assistant student with practical clinical experience working in an Emergency Department setting. This enables the student to develop focused and systematic approaches to the diagnosis and treatment of common medical and surgical emergencies. This rotation teaches the student to recognize the acuity level of presenting patients by prioritizing care and management in collaboration with their emergency medicine preceptor and the interprofessional emergency department team. Students will develop the necessary skills when considering the social and/or physical determinants of health, and other patient safety considerations when determining patient dispositions and treatment plans. Students will recognize the indications, limitations, and methodology of emergency room diagnostic procedures and therapeutic regimens. In addition, this rotation provides students with the opportunity to formulate organized and complete emergency room care for patients of all ages (child, adolescent, adult, and elderly) with a host of conditions presenting as acute,

emergent, or chronic. Students will engage with their patients by providing preventative medicine guidance, including health counseling for patients presenting to the emergency department for care.

- **Surgery SCPE (5 credits)**

- This 5-week rotation provides the PA student with practical clinical experience in diagnosis, evaluation, and management of pre-operative, operative, and post-operative adult surgical patients. Students participate in the medical and surgical management of surgical inpatients during the pre-operative phase, intra-operative phase in the operating room, and the post-operative phase while the patient remains admitted as an inpatient. Students are to gain practical clinical experience with surgical patients experiencing emergent, acute, and chronic surgical conditions. Students will engage with their patients by providing preventative medicine guidance, including health counseling in the preoperative and post-operative phases.

- **Women's Health SCPE (5 credits)**

- This 5-week rotation provides the PA student with practical clinical experience in diagnosis, evaluation, and management of normal and abnormal conditions in women's health, including prenatal and gynecological care. In addition, students will learn to provide pre-natal, peri-partum and postpartum care, family planning, preventative medicine, health education, and counseling in the out-patient setting. Students will learn to provide care for women presenting with emergent, acute, and chronic gynecological and obstetrical conditions, including those conditions surrounding prenatal, perinatal, and postnatal care.

Summer Semester 2

- **Behavioral Health SCPE (5 credits)**

- This 5-week rotation provides the PA student with practical clinical experience in diagnosis, evaluation, and management of behavioral and mental health conditions in an outpatient setting. The student will be provided with practical clinical experience in identification, evaluation, management, and referral of patients presenting with emergent, acute, and chronic psychiatric, behavioral, and/or mental health conditions. Students will engage with their patients by providing preventative medicine, including health counseling. Students will learn to recognize and treat behavioral and mental health disorders, throughout the lifespan (specifically: adolescent, adult, and elderly) patients.

- **Elective 1 SCPE (5 credits)**

- This five-week rotation provides the PA student with practical clinical experience by working in a medical setting of their choice. This enables the student to develop a focused and systematic approach to the diagnosis and treatment of common medical issues in that specialty. In addition, this rotation provides students with the opportunity to formulate organized and complete medical records, problem lists, and management plans. Each student will research and present a medically interesting case that they were directly involved in, via the evaluation and management of the patient.

- **Elective 2 SCPE (5 credits)**

- This five-week rotation provides the PA student with practical clinical experience by working in a medical setting of their choice. This enables the student to develop a focused and systematic approach to the diagnosis and treatment of common medical issues in that specialty. In addition, this rotation provides students with the opportunity to formulate organized and complete medical records, problem lists, and management

plans. Each student will research and present a medically interesting case that they were directly involved in, via the evaluation and management of the patient.

- **PA Capstone Course (5 credits)**

- This 5-credit course encompasses four integrative elements. The first element outlines study skills and board preparation that aid the student in preparing for the PANCE Exam, culminating in a summative written End-of-Curriculum exam. The second element includes a summative two-station OSCE, with note-writing and oral presentation skills evaluated. The third element includes the summative demonstration of clinical skills, previously learned in the didactic year and practiced throughout the clinical year. The fourth integrative element will provide the student with the opportunity to complete and share their capstone research projects with colleagues, faculty, and the University at large. Students will also learn professional skills including licensing, maintaining certification, CV writing, interview skills, and other components of the employment and onboarding process.