

B.Sc. PROGRAM IN PHYSICIAN Assistance

INTRODUCTION

B.Sc. in Physician Assistance course provides a deep insight into the counsel on preventive health care, diagnose and treat illness, order and interpret test, assist in surgery, etc. The course is also beneficial for further studies such as M.Sc., M. Phil and Ph.D., etc. as it provides a good basic knowledge for the higher studies.

The course is designed to include all the subjects related to the examining and treating patients, order and interpret laboratory x-rays and perform the diagnosis, examining the patients, educate and counsel patients and their families, etc.

The Bachelor of Science in Physician Assistant ensures that the students acquire deep knowledge of the pre-requisites for the physician assistant and the related things. Students can specialize in a wide variety of topics ranging from primary care to emergency services. The main job of the physician assistant is to provide diagnostic, therapeutic and preventive health care services. The importance of the physician assistant is growing continuously over the past decade.

Career opportunities for B.Sc. in Physician Assistant in the field of the medical services sector, Government medical services, colleges and universities, etc. Students are expected to complete 158 credits to be eligible for graduation. The program is designed in such a way that students are exposed to both the theoretical and practical aspects of the training.

COURSE GUIDE

FRESHMAN SEMESTER I:

No.	Code	Course Title	CR/HRS.
1.	ENG 101	Freshman English 1	3
2.	FREN 101	Fundamentals of French I	3
3.	BIOL 101	Introduction to Biology + Lab	4
4.	MATH 107	Pre-Calculus	4
5.	CHEM 101	Introduction to Chemistry + Lab	4
6.	PHED. 101	Kinesiology in Health and Fitness I	1
		TOTAL CREDIT HOURS	19

FRESHMAN SEMESTER II:

No.	Code	Course Title	CR/HRS.
1.	ENG 102	Freshman English II	3
2.	FREN 102	Fundamentals of French II	3
3.	BIOL 102	Microbiology + Lab	3
4.	MATH 108	Calculus	4
5.	CHEM 101	Clinical Chemistry + Lab	3
6.	PSY 102	Principles of Psychology	3
		TOTAL CREDIT HOURS	19

SOPHOMORE SEMESTER I:

No.	Code	Course Title	CR/HR.
	BIOL 201	Parasitology	3
	BIOL 203	Anatomy and Physiology 1 + Lab	3
	PA 201	Medical Science I (Clinical Anatomy, Medical Physiology)	3
	PA 203	Medical Science II (Pathophysiology & Human Genetics)	3
	PA 205	Clinical Prep Science I (Patient Assessment, Radiology Interpretation)	3
	PA 207	Primary Care I and Pharmacotherapeutics	3
		TOTAL CREDIT HOURS	18

SOPHOMORE SEMESTER II:

No.	Code	Course Title	CR/HR.
1.	BIOL 204	Anatomy and Physiology II + Lab	3

2.	CHEM 202	Biochemistry	3
3.	PA 202	Professional Practice	3
4.	PA 204	Emergency and Surgical Medicine	3
5.	PA 206	General Medicine; Interpretation of Lab Data	3
6.	PA 208	Maternal and Child Health	3
		TOTAL CREDIT HOURS	18

JUNIOR SEMESTER I:

No.	Code	Course Title	CR/HRS.
1.	PA 301	Primary Care and Pharmacotherapeutics	3
2.	PA 303	Advanced Health Assessment	3
3.	PA 305	Clinical Practice in Internal Medicine	3
4.	PA 307	Clinical Practice in Primary Care and Family Med	3
5.	PA 309	Clinical Practice in Surgery, General Pra	3
6.	PA 311	Clinical Practice in Pediatrics, Geriatrics	3
7.	PA 313	Clinical Practice in Womb	3
		TOTAL CREDIT HOURS	21

JUNIOR SEMESTER II:

No.	Code	Course Title	CR/HRS.
1.	PA 302	Clinical Practice in Psychiatry/Behavioral Medicine	3
2.	PA 304	Clinical Practice in Primary Care and Community Health	3
3.	PA 306	Clinical Practice in Primary Care and Adolescent Medicine	3
4.	PA 308	Art and Practice of Health Education	3
5.	PA 310	The Challenges of Medical Ethics	3
6.	PA 312	Leadership Development and Professionalism	3
7.	PA 314	Medical Literature Review and Analysis	3
		TOTAL CREDIT HOURS	21

SENIOR SEMESTER I:

No.	Code	Course Title	CR/HRS.
1.	PA 401	Clinical Practice in Advanced Medicine	3
2.	PA 403	Clinical Practice in Medicine and Long Term Care	3
3.	PA 405	Clinical Practice in Emergency Medicine, Urgent Care	3
4.	PA 407	Clinical Practice in Emergency Medicine, Main ED	3
5.	PA 409	Clinical Practice in Pediatrics, Advanced Practice	3
6.	PA 411	Clinical Practice in Surgery, Advanced Practice	3
7.	PA 413	Research Design	3
		TOTAL CREDIT HOURS	21

SENIOR SEMESTER II:

No.	Code	Course Title	CR/HRS.
1.	PA 40	Clinical Practice in Simulated Interactive Medicine	3
2.	PA 404	Critical Thinking in Medicine I	3
3.	PA 406	Critical Thinking in Medicine II	3
4.	PA 408	Clerkship – Developing Community Health	3
5.	PA 410	Clerkship – Advanced Procedures and Skills	3
6.	PA 41	Health Care Management Theory and Evaluation	3
7.	PA 416	Thesis	3
		TOTAL	21

COURSE DESCRIPTIONS

PA 201 Medical Sciences I

The purpose of this course is to integrate the principles of clinical anatomy and medical physiology into the study of medicine. Instruction is provided regarding human anatomical structures and their intercommunication and relevance to the various systems. Physiologic principles, concepts, and formulas are related to the changes of disease processes. The course outlines are reflective of the systems of the human body, and the content serves as the foundation for an understanding of the effects of disease and disease prevention.

PA 203 Medical Sciences II

This course provides an in-depth understanding of disease states through the integration of principles of pathophysiology and human genetics. These principles are presented with an emphasis on developing an understanding of disease processes. Case studies are incorporated to emphasize the clinical relevance of the medical sciences. Pathologic findings are emphasized for their clinical relevance. Discussions focus on characteristic or pathognomonic findings as well as findings that direct work-up, therapy, or follow-up.

PA205 Clinical Pre Sciences I

The purpose of this course is to promote the skills of clinical assessment and diagnosis. The knowledge gained in the medical sciences is utilized to promote the assessment of clinical scenarios.

The student develops interview skills, examination techniques, and integrates knowledge of various disciplines to construct differential diagnoses. The student learns appropriate clinical work-up; learning when to order tests, to interpret radiologic and other test results and to correlate findings to clinical management.

PA207 Primary Care and Pharmacotherapeutics I

The purpose of this course is to serve as an introduction to clinical medicine, focusing on the commonly encountered problems in primary care and family medicine. The student reviews disease processes from a clinical perspective and learns to approach the evaluation of the patient in a comprehensive manner. Through lectures and discussions, the student formulates a knowledge base of signs and symptoms, etiologies, and management options. Drug therapies are reviewed by classes and in relation to their applicability to systems. Information is provided regarding indications, mechanisms of action, contraindications, and adverse effects. The

knowledge gained is enhanced through case studies and is integrated into the practice of primary care medicine.

PA 202-Professional Practice : Three Credits

The purpose of this course is to integrate the principles of professionalism, human behavior, cultural diversity, and ethics into the clinical practice of the physician assistant. The general overview of the role of the PA and the introduction to the history of the profession lead to discussions into issues such as new healthcare initiatives, documentation, quality improvement, billing and coding. The student also learns to integrate the concepts of health promotion and preventive measures mindful of cultural diversity into professional practice.

PA 204-Emergency and Surgical Medicine

The purpose of this course is to provide students with instruction regarding recognition and management of the surgical patient, and rapid and efficient management of the trauma or emergent patient. Review of surgical cases includes the breakdown of disease states by presentation, history, physical examination, work-up, intervention, surgical, and pre/post-surgical management. Students learn to design personal methods of rapid assessment and management for the critical patient in the emergency department and surgical setting.

PA 206-General Medicine

The purpose of this course is to provide the PA with a broad-based fund of knowledge of general medicine. The unit encompasses an overview of internal medicine and its various subtopics with the course outlines reflective of a systems approach. Its intent is to enable the student to transition from the acquisition of didactic scientific knowledge to its incorporation into the clinical setting.

PA 208 Maternal and Child Health

This course familiarizes the student with conditions specific to maternal and child medicine. Lectures and case studies are provided on the diagnostic, therapeutic, and counseling techniques aimed at managing the sensitive issues in both the obstetrical and gynecological patients and familiarizing students with conditions specific to pediatric patients. Students recognize the need to counsel both parent and child, and to integrate special techniques, including monitoring confidentiality and anticipatory guidance.

PA 301 Primary Care and Pharmacotherapeutics II

The purpose of this course is to focus on the commonly encountered problems in primary care medicine and family medicine. The PA student reviews disease processes from a clinical perspective, learns to approach the evaluation of the patient in a comprehensive manner. Through lectures and discussions the student formulates a knowledge base of signs and symptoms, etiologies and management options. Drug therapies are reviewed by classes and in relation to their applicability to major systems, with information provided regarding indications, mechanisms of actions, contraindications, and adverse events.

PA 303-Clinical Practice in Internal Medicine

This course is a supervised clinical experience dedicated to internal medicine. Clinical interactions take place in inpatient hospital settings. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in internal medicine.

PA 305-Clinical Practice in Primary Care and Family Medicine

This course is a supervised clinical experience dedicated to Primary Care and Family Medicine. Clinical interactions take place in the outpatient ambulatory setting. The supervised, clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical

areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in primary care and family medicine.

PA 307-Clinical Practice in Surgery, General Practice

This course is a supervised clinical experience dedicated to General Surgery. Clinical interactions take place in the inpatient hospital setting. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in the surgical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in surgery in a general surgery practice environment.

PA 309-Clinical Practice in Pediatrics, General Practice

This course is a supervised clinical experience dedicated to the general practice of pediatrics. Clinical interactions take place in the outpatient ambulatory in an inpatient setting. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. The clinical experience is dedicated to clinical practice in pediatrics in a general pediatric practice environment.

PA 311 Clinical Practice in Women's Health

This course is a supervised clinical experience dedicated to Women's Health. Clinical interactions take place in the outpatient and inpatient hospital settings. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in women's health;

emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. The clinical experience is dedicated to clinical practice in the field of women's health.

PA 313 Clinical Practice in Psychiatry/Behavioral Medicine

This course is a supervised clinical experience dedicated to Psychiatry/Behavioral Health.

Clinical interactions take place in the outpatient and inpatient hospital settings. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. The clinical experience is dedicated to clinical practice in the field of psychiatry and behavioral medicine.

PA 302-Clinical Practice in Primary Care and Community Health

This course is a supervised clinical experience dedicated to Primary Care & Community Health.

Clinical interactions take place in the community health related settings. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. The clinical experience is dedicated to clinical practice in the field of primary care, in a community health setting. Clinical relevance is enhanced during the development of and participation in health related civic engagement and community outreach events. Course also includes SIM learning experiences.

PA 304-Clinical Practice in Primary Care and Adolescent Medicine

This course is a supervised clinical experience dedicated to Primary Care and Adolescent

Medicine. Clinical interactions take place in the outpatient ambulatory and community health settings. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in primary care and adolescent medicine; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. The clinical experience is

dedicated to clinical practice in the field of primary care with emphasis on adolescent medicine. Course also includes SIM learning experiences.

PA 306 The Art and Practice of Health Education - One unit or three graduate credits.

This course introduces the healthcare practitioner to the philosophies of health education. It identifies the key elements needed to construct an effective healthcare curriculum and provides the foundation for developing teaching approaches and evaluative tools. Each student is guided through the design a community health educational programs for practitioners or patients reflective of that student's interest. Clinical relevance is optimized through experiential learning during the development of and participation in patient education events.

PA 308 The Challenges of Medical Ethics - One unit or three graduate credits.

This course provides a forum for the exploration of ethical dilemmas encountered in medical practice. Historical medical case scenarios and current ethical guidelines are reviewed. The opportunity is provided to address ethical dilemmas in relation to cultural beliefs, socioeconomic factors and medical legal issues.

PA 310-Leadership Development and Professionalism :One unit or three graduate credits.

This course explores the opportunities for leadership in the healthcare delivery system. The course reviews legal foundations for scopes of practice, legislative agendas, professional practice opportunities, performance improvement principles, and the administrative systems providing the framework for the modern healthcare delivery system. The most current issues in health care, such as patient safety, form a foundation for analyzing the successes and failures of the healthcare delivery model. An interactive approach to exploring the material is supplemented by guest lecturers from the field, and includes peer-reviewed journal research.

PA 312 Medical Literature Review and Analysis - One unit or three graduate credits

This course provides the skills for effective review and analysis of the expanse of medical literature. Students presented with various research problems are taught to analyze applicability, appropriately select corresponding literature, and develop a systematic critique of the findings. Statistical methods are introduced and the ability to analyze data and draw inferences is developed. The selection of the medical literature for review and analysis is reflective of each student's area of interest for future research. Experiential learning is emphasized through the designing of a research study and culminates with a presentation of the proposal and research at the medical literature symposium event.

PA 314 Advanced Health Assessment

The purpose of this course is to develop and enhance clinical judgment and assessment skills for patient populations across the life span. The intent is for the student to improve his/her decision-making ability and develop appropriate management protocols. Problem solving sessions are utilized for the assessment of case scenarios. Diagnoses are discussed within the framework of preventive medicine, epidemiology, and subsequent improvements in the delivery of clinical medicine. Clinical relevance is enhanced during the development of and participation in community outreach events. Course includes SIM learning experiences.

PA 401 Clinical Practice in Advanced Medicine - Three Graduate Credits

This course is a supervised clinical experience dedicated to advanced practice of Internal Medicine. Clinical interactions take place in the inpatient hospital setting on the internal medicine floor and the intensive care units. The supervised clinical practice experiences intensive, supervised, and hands-on learning experiences in various medical areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in the subspecialties and acute care areas of internal medicine.

PA 403 Clinical Practice in Medicine and Long Term Care - Three Graduate Credits

This course is a supervised clinical experience dedicated to Internal Medicine and Long Term Care. Clinical interactions take place in medical/long-term care facilities. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in various medical

areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in medicine and long-term care with emphasis on the teamwork of the interdisciplinary health care team. Clinical relevance is enhanced during the development of and participation in health related civic engagement and community outreach events.

PA 405 Clinical Practice in Emergency Medicine, Urgent Care -Three Graduate Credits.

This course is a supervised clinical experience dedicated to emergency medicine, urgent care.

Clinical interactions take place in the emergency room setting. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in emergency medicine settings; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This supervised clinical practice experience is dedicated to clinical practice in the field of emergency medicine, focusing on the urgent care of non-life-threatening conditions.

PA 407 Clinical Practice in Emergency Medicine, Main Emergency Department -Three Graduate Credits.

This course is a supervised clinical experience dedicated to emergency medicine-main emergency department. Clinical interactions take place in the emergency department of a hospital. The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences involving emergency clinical scenarios emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This supervised clinical experience is dedicated to clinical practice in the field of emergency medicine, and the care of acute and life threatening conditions.

PA 409 Clinical Practice in Pediatrics, Advanced Practice - Three Credits.

This course is a supervised clinical experience dedicated to the advanced practice of pediatrics. Clinical interactions take place in the inpatient hospital setting on the pediatric floor, pediatric intensive care unit (PICU), neonatal intensive care unit (NICU) or the children's emergency center (CEC). The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in pediatric areas; emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in pediatrics in an advanced practice environment.

PA 411 Simulated Interactive Medicine - Three Credits.

This course is dedicated to clinical learning in a simulated interactive medical setting. Clinical interactions take place in a simulation lab setting at the program site. This experience is dedicated to simulated practice in non-emergency and emergent medical cases. During this experience students work on cases from inpatient and outpatient clinical settings with patients across the life span presenting with a variety of medical conditions. The focus is on critical thinking, the development of appropriate differential diagnoses and the implementation of medical treatments.

PA 413 Research Design

The purpose of this course is to establish the groundwork for a research thesis. The student is provided the opportunity to construct a research project beginning with the framing of the research problem and hypothesis, and progressing to design selection and data analysis. The

course offers students the knowledge and skills needed for instrument design and development. Seminar sessions are dedicated to the scoring and interpretation of data from the individual measurement tools.

PA 402 Clinical Practice in Surgery, Advanced Practice

This course is a supervised clinical experience dedicated to the advanced practice of surgery. Clinical interactions take place in surgical settings in the operating room (OR), surgical floor, surgical subspecialties and/or surgical intensive care unit (SICU). The supervised clinical practice experiences are intensive, supervised, hands-on learning experiences in the surgical subspecialties, emphasizing the provision of diagnostic, therapeutic, preventive, and health maintenance services. This clinical experience is dedicated to clinical practice in the surgical subspecialties and advanced surgical practice.

PA 404 Critical Thinking in Medicine I

The purpose of this course is to review and expand upon knowledge of disease pathology and therapeutic interventions. The emphasis is on critical thinking and its applicability to the identification of the pathogenesis of disease processes and the development of algorithms and flow charts, and the review of evidence based medicine. Through critical analysis, the student develops appropriate management plans, based on the needs of specific individuals and communities.

PA 406 Critical Thinking in Medicine II

The purpose of this course is to review and expand upon the knowledge of disease pathology and therapeutic interventions. The emphasis is on critical thinking and its applicability to the identification of the pathogenesis of disease processes and the development of algorithms and flow charts and the review of evidence-based medicine. Through critical analysis, the student

develops appropriate management plans, based on the needs of specific individuals and communities. This course serves as a summative overview of clinical knowledge in preparation for advanced clinical practice.

PA 408 Clerkship I: Developing Community Health

The focus of this clerkship is to precept students in their transition toward becoming professional health care providers. Each student identifies a component or area of health care interest that impacts the community and affords exposure to specific clinical experiences determined during the pre-clerkship advisement sessions. Through clinical involvement, the student learns to discern specific health needs and is guided through the development of a medically related health project and the acquisition of the medical knowledge reflective of the assessment needs. Relevance is enhanced during the development of and participation in health related civic engagement and community outreach events.

PA 410 Clerkship II: Advanced Procedures and Skills

The focus of this clerkship is to precept students through the acquisition of advanced skills for clinical practice in primary care or a specialty area of interest. The student is provided with an opportunity for an in-depth analysis of clinical practice in his/her specific area of interest. Skill development focuses on the areas identified during the pre-clerkship advisement session. The student learns through the development of a clinical project reflective of the unique characteristics of the clerkship.

PA 412 Health Care Management Theory & Evaluation

This course introduces the student to principles of leadership and management theories in relation to health care practice. Evaluation of theories is based on clinical case studies, discussions of readings and review of medical literature. Experiential learning is emphasized through development of interview skills, assessment of scenarios in healthcare settings, and incorporation of leadership skills and professional behaviors.

PA 414 Thesis

The focus of this course is the implementation of the research design proposed. The parameters of the scientific process are utilized to investigate health-related research problems. Each student is guided through a research project. Seminar and individual conferences are dedicated to the analysis and interpretation of data. The thesis is developed and the thesis defense occurs at the Annual Research Forum.