

# SCHOOL OF PODIATRIC MEDICINE

In 1985, Barry University created the School of Podiatric Medicine as its first venture into professional medical education. In 1997, the Physician Assistant Program was established to extend Barry University's role in the education of health care providers, and the name of the school was changed to the School of Graduate Medical Sciences to provide the infrastructure necessary to coordinate the academic activities in Podiatric Medicine and Physician Assistant studies into a cohesive unit. The Master of Science in Anatomy program was added in 2000 as the School's first non-clinical degree curriculum. The Professional Master of Public Health, a collaborative program of the Schools of Graduate Medical Sciences and Natural and Health Sciences, was established in the School of Graduate Medical Sciences in 2002. The School of Graduate Medical Sciences was renamed the School of Podiatric Medicine in 2008 at which time the Professional Master of Public Health program was moved to the College of Health Sciences.

In addition to the noted programs, other graduate medical science programs, leading to masters and doctoral level degrees, are anticipated to further utilize the academic resources of the School and Barry University. Students in the School of Podiatric Medicine currently have the opportunity to earn masters degrees in Biomedical Sciences and Public Health through cooperative efforts with the College of Health Sciences and in Business Administration through cooperative efforts with the D. Inez Andreas School of Business.

## DOCTOR OF PODIATRIC MEDICINE (D.P.M.)

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## Podiatric Medicine Mission and Program Objectives

### Purpose Statement

The purpose of the Doctor of Podiatric Medicine program is to graduate competent podiatric physicians qualified to enter post-graduate training. This is accomplished by excellence in podiatric medical education, fostering life-long learning, expressing a commitment to social justice by serving the local and global community through patient care, and encouraging research and innovation that promotes the common good.

### Program Objectives

1. Graduates are able to diagnose, and manage pathology of the lower extremity in a variety of clinical settings with emphasis on preventative medicine.

2. Graduates possess the knowledge of basic medical sciences required to practice as a competent first-year resident.
3. Graduates successfully compete for placement in a post-graduate podiatric residency training program.
4. Graduates practice with professionalism.
5. Graduates effectively communicate with patients and other health care professionals in a multi-disciplinary setting.
6. Graduates are ethnically and culturally diverse.
7. Graduates are able to retrieve and interpret the medical and scientific literature.
8. The program advances scientific knowledge through faculty and student research.
9. The community receives charitable podiatric health-care at school sponsored teaching clinics, humanitarian projects, and health fairs.
10. The Foot and Ankle Institute clinics are pre-eminent centers of excellence for the diagnosis, treatment, and prevention of diseases and disorders of the lower extremity.
11. Continuing medical education programs model life-long learning for students and diversify revenue streams while supporting licensure renewal for practicing podiatrists.

### Basic Medical Sciences Objectives

Upon completion of the basic medical sciences preclinical curriculum, students will be able to

1. Describe the normal structure and function of the human body and its components;
2. Evaluate the contribution of molecular, biochemical and cellular mechanisms to homeostasis;
3. State units of measurement appropriate to a medical or scientific parameter;
4. Analyze altered structure and function of the body in disease conditions;
5. Interpret and analyze scientific data;
6. Articulate, using specific examples, various disease etiologies and suggest appropriate current treatment modalities;
7. Retrieve and present medical and scientific information in various forms;
8. Utilize a wide variety of resources to solve clinical problems;
9. Be eligible for the Basic Medical Sciences Comprehensive Examination;
10. Be eligible for the National Board of Podiatric Medical Examiners' Part I examination;
11. Integrate basic medical science knowledge into clinical applications;
12. Identify test values outside the normal range and suggest a diagnosis, given a patient chart;

13. Make a differential diagnosis and prescribe treatment options, given an observation or test result;
14. Demonstrate moral and ethical behavior in and out of the classroom.

### Clinical Program Objectives

- Provide students with a broad range of clinical experience to serve as a foundation for their career in podiatric medical health care.
- Provide the knowledge, methods and skills for students to effectively interact with patients and members of other health care professions.
- Prepare students morally and ethically to function efficiently within a changing, dynamic health care system.
- Promote recognition of the importance of preventative foot care and health maintenance to students, patients and the community-at-large.
- Extend high quality, cost effective health care, to all patients.
- Promote primary research and the reporting of innovative ideas by students, faculty and the podiatric community.
- Enable students to successfully compete for and meet the standards for consideration into a post-graduate podiatric training program.
- Provide continuing medical education programs for the podiatric community.
- Develop within our students and the podiatric community concern for the needs of the impaired health professional.

### Podiatric Clerkship Objectives

The component of the clerkship combined with didactic background provides the student with the knowledge, skills, and values of podiatric medical practice. The student should develop the philosophy and general skills that would be required of a podiatric resident.

#### A. Interactions (Patients, staff and peers)

1. Demonstrate listening and interviewing skills
2. Demonstrate caring and compassionate patient care
3. Demonstrate appropriate communicative skills with patients, attendings, residents, and peers
4. Demonstrate ability to accept and respond to criticism

#### B. Professionalism and Ethics

1. Demonstrate reliability and dependability
2. Express skillful communication skills with patients and other clinicians

3. Present professional and compassionate rapport with patients and peers
4. Recognize and understand the rationale for accepting criticism
5. Demonstrate motivation to learn and knowledge base
6. Follow instructions and protocols well

#### **C. Clinical: Cognitive, Psychomotor**

1. Perform a complete medical history and lower extremity physical exam and be able to differentiate between normal from abnormal findings.
2. Demonstrate proficiency in palliative foot care and basic podiatric surgical principles, including digital nail, soft tissue and osseous procedures.
3. Analyze and interpret all blood and diagnostic laboratory studies.
4. Assess and evaluate foot and ankle radiographs and recognize pathology.
5. Perform a biomechanical examination and gait analysis, recognizing pathology.
6. Recognize and differentiate signs and symptoms of systemic disease that manifest in the foot.
7. Analyze a patient case, order appropriate diagnostic tests, creating a differential diagnosis, and organize a treatment plan.
8. Apply knowledge of pharmacology and therapeutics in prescription writing
9. Generate appropriate charting including H and P, Px notes, and orders.
10. Demonstrate appropriate patient and colleague rapport, empathy, professionalism, and continuity of care plans.

### **The Profession and Technical Standards for Admission, Enrollment, and Graduation**

Medical education requires that the accumulation of scientific knowledge be accompanied by the simultaneous acquisition of skills and professional attitudes and behavior. The faculty has a responsibility to society to matriculate, educate and graduate the best possible podiatric physicians, and thus admission to medical school is offered to those who present the highest qualifications for the study and practice of podiatric medicine. Technical standards presented below are requisite for admission, continued enrollment, and graduation from Barry University's School of Podiatric Medicine. Students may be dismissed from the School of Podiatric Medicine for noncompliance with any of the technical standards delineated below. Unless otherwise noted, successful completion and passage of examinations in all courses in the curriculum are required in order to develop essential skills required to become a competent podiatric physician.

Graduates of the School of Podiatric Medicine must have the knowledge and skills to function in a variety of clinical situations and to render a wide spectrum of patient care. The School of Podiatric Medicine acknowledges Section 504 of the 1973 Vocational Rehabilitation Act and PL 101-336, the Americans with Disabilities Act (ADA), but ascertains that compliance with certain technical standards must be demonstrated in all prospective candidates.

A candidate for the D.P.M. degree must have aptitude, abilities, and skills in five areas: observation; communication; motor; conceptual, integrative and quantitative; and behavioral and social. Although technological compensation is acceptable for some deficiencies, candidates must be able to perform in the five above areas in a reasonably independent manner. The use of a trained intermediary to perform certain tasks would mean that a candidate's judgment must be integrated with another's power of selection and observation. Therefore, third parties cannot assist students in accomplishing curricular requirements in the five skill areas specified above.

#### **Observation**

The candidate for the D.P.M. degree must be able to observe demonstrations and participate in experiments in the basic sciences, including, but not limited to, physiological and pharmacological demonstrations, microbiological cultures, and microscopic studies of microorganisms and tissues in normal and pathological states. The candidate must be able to observe a patient accurately at a distance and close at hand. Observation necessitates the functional use of the sense of vision and other sensory modalities, especially the functional use of the senses of smell and touch.

#### **Communication**

The candidate for the D.P.M. degree should be able to speak, to hear and to observe patients in order to elicit information, to describe changes in mood, activity and posture, and to perceive nonverbal communications. The candidate must be able to communicate effectively and sensitively with patients. Communication includes not only speech, but also reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team. All courses in the School of Podiatric Medicine are conducted in English; communication skills in the English language are therefore requisite.

## Motor Coordination or Function

The candidate for the D.P.M. degree should have sufficient motor function to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers. The candidate should be able to do basic laboratory tests (urinalysis, CBC, etc.), carry out diagnostic procedures (phlebotomy, paracentesis, etc.) and read EKGs and X-rays. The candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients. Examples of emergency treatment reasonably required of podiatric physicians are cardiopulmonary resuscitation, administration of intravenous medication, application of pressure to stop bleeding, opening of obstructed airways, suturing of simple wounds, and performance of simple obstetrical maneuvers. Such actions require coordination of both gross and fine muscular movements, equilibrium and coordinated use of the senses of touch and vision.

## Intellectual-Conceptual, Integrative and Quantitative Abilities

Intellectual-conceptual, integrative and quantitative abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem-solving, the critical skill demanded of physicians, requires all of these intellectual abilities. In addition, the candidate for the D.P.M. degree should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures.

## Behavioral and Social Attributes

The candidate for the D.P.M. degree must possess emotional health required for full use of their intellectual abilities, exercise of good judgment, prompt completion of all responsibilities attendant to the diagnosis and care of patients, and development of mature, sensitive and effective therapeutic relationships with patients. The candidate must be able to tolerate physically taxing workloads and to function effectively when stressed. The candidate must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Empathy, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that are assessed at all stages during the admission and educational processes.

The candidate for the D.P.M. degree must have somatic sensation and the functional use of the senses of vision and hearing as well as equilibrium, smell and taste. Additionally, the candidate must have sufficient exteroceptive sense (touch, pain and temperature), sufficient proprioceptive sense (position, pressure,

movement, stereognosis and vibratory) and sufficient motor function to permit them to carry out the activities described in the section above. The candidate must be able to consistently, quickly, and accurately integrate all information received by all sense(s) employed and must have the intellectual ability to learn, integrate, analyze and synthesize data.

The Barry University School of Podiatric Medicine will consider for admission an applicant who demonstrates the ability to perform or demonstrates the aptitude to learn to perform the skills listed above. Students are evaluated not only on their scholastic accomplishments, but also on their physical and emotional stability and capacities to meet all requirements of the program's curriculum. Candidates for the D.P.M. degree graduate as skilled and effective practitioners of podiatric medicine.

The following technical queries are relevant to the admissions and student evaluation processes:

1. Is the candidate able to observe demonstrations and participate in experiments in the basic sciences?
2. Is the candidate able to analyze, synthesize, extrapolate, solve problems, and reach medically sound diagnostic and therapeutic judgments?
3. Does the candidate have sufficient use of the senses of vision and hearing and the somatic sensation necessary to perform a physical examination? Can the candidate be trained to perform palpation, auscultation, and percussion?
4. Can the candidate reasonably be expected to relate to patients and establish sensitive, professional relationships with patients?
5. Can the candidate reasonably be expected to communicate the results of an examination to the patient and to the candidate's colleagues with accuracy, clarity and efficiency?
6. Can the candidate reasonably be expected to learn and perform routine laboratory tests and diagnostic procedures?
7. Can the candidate reasonably be expected to perform with precise, quick and appropriate actions in emergency situations?
8. Can the candidate reasonably be expected to display good judgment in the assessment and treatment of patients?
9. Can the candidate reasonably be expected to possess the perseverance, diligence, and consistency to complete the medical program curriculum and enter podiatric residency and the independent practice of podiatric medicine and surgery?
10. Can the candidate reasonably be expected to accept criticism and respond by appropriate modification of behavior?

## Student Honor Code of Conduct

Students in the School of Podiatric Medicine are entering a profession that prides itself on maintaining high standards of honor, trust and professional conduct. It is expected that during the course of their education at Barry University, podiatric medical students will conduct themselves in a manner becoming a podiatric physician. The School of Podiatric Medicine has developed a Honor Code to insure that all students are familiar with and committed to the highest principles of conduct from the start of their podiatric medical education.

Students are required to affirm their compliance with the following statement upon initial enrollment in the School of Podiatric Medicine:

I agree to abide by the Honor Code of the School of Podiatric Medicine. I agree that I will conduct myself in an honest and ethical manner during all activities during the course of my enrollment, including, but not limited to my academic work, as well as my interactions with fellow students, faculty and staff.

## DUAL DEGREE OPTIONS

### D.P.M./M.B.A.

Academically qualified students entering the School of Podiatric Medicine may have the option of obtaining a dual Master of Business Administration (M.B.A.) degree from Barry University's D. Inez Andreas School of Business. If accepted into the dual degree program, in addition to the podiatric medical curriculum, eligible students must complete 24 semester hours of required graduate business core courses (6 semester credit hours in the podiatric medicine curriculum will serve as additional electives to complete the general M.B.A. program requirements).

The required MBA core courses are listed in the Andreas School of Business section of this catalog. Immediately upon acceptance to the School of Podiatric Medicine, students must indicate their interest in obtaining the dual degree. MBA candidates may have to take up to eight business workshops, depending on previous academic preparation. The workshops are offered periodically throughout the year. For a complete list of the workshops and their descriptions, please refer to the Andreas School of Business section of this catalog.

Applicants to the dual D.P.M./M.B.A. program:

- must have completed their baccalaureate degree at a regionally accredited or internationally recognized institution. (An unofficial transcript will be accepted for admission, but applicants must present an official transcript indicating awarding of the undergraduate degree prior to the end of the initial semester.)

- must have a minimum undergraduate grade point average (GPA) of 3.25 on a 4.0 scale. (If a student has attended multiple undergraduate institutions, the minimum 3.25 GPA applies to the last 30 semester hours or credits completed by the student.)
- must have earned a score of 400 or higher in the Graduate Management Admission Test (GMAT) or a comparable score on the MCAT or GRE, as evaluated by the Director of Graduate Business Programs.

The Deans of the Schools of Business and Graduate Medical Sciences will determine student eligibility to enroll for the additional degree. Podiatric medical students who fail to maintain a cumulative 3.0 GPA in either podiatric medicine or business courses and students who earn a "D" or "F" grade in any course will be dropped from the program. Under no circumstances will students on probation or in programs in excess of four years be allowed to continue with the M.B.A. degree option. The Deans' decision to remove a student from the dual degree program may not be contested by the student.

The M.B.A. program is not a cohort program and considerable flexibility exists in the scheduling of business courses to fit into the cohort D.P.M. degree program.

The following is a representative sample of the MBA curriculum required, in addition to the podiatric medical curriculum, to complete the dual degree option:

#### First Year:

Business Workshops (if required)

#### Fall

MBA 682 Competitive Environment & Strategy Formulation (3)

#### Spring

MBA 617 Technology & Information Systems (3)

#### Second Year:

Business Workshops (if required)

#### Summer

MBA 660 Managerial Accounting (3)

#### Fall

MBA 621 Managerial Finance (3)

#### Spring

MBA 681 Economics for Strategic Decisions (3)

#### Third Year:

#### Summer

(No MBA Course)

#### Fall

MBA 646 Marketing in a Dynamic Environment (3)

**Spring**

MBA 603 International Business (3)

**Fourth Year:****Summer**

(No MBA Course)

**Fall**

(No MBA Course)

**Spring**MBA 683 Leadership & Strategy  
Implementation (3)

In the podiatric medical curriculum, GMS 536 – Research Methodology, Epidemiology & Statistics (3) and GMS 825 – Practice Management (3) will serve as electives to complete the general M.B.A. program requirements.

**D.P.M./M.P.H.**

Academically qualified podiatric medical students have the option of enrolling in the Professional Master of Public Health (M.P.H.) program upon successful completion of the first three terms of the podiatric medical curriculum. Enrollment in the dual degree program requires the student to take the M.P.H. course curriculum in addition to all podiatric courses. Dually enrolled students will be able to apply the credit in the Research Methodology course (GMS 536) taken in the first semester of the podiatric medicine curriculum toward their M.P.H. degree, providing that they earned a grade of B or higher in that course. Optimally, the M.P.H. degree requirements may be completed by the student by the end of the third year of his or her podiatric medical education, but students who do so will not be awarded the degree until completion of the D.P.M. The academic completion requirements for the M.P.H. degree are listed under the “Professional Master of Public Health” section of the catalog (see College of Health Sciences).

Students wishing to be considered for this option must be enrolled full-time and have maintained a minimum grade point average (GPA) of 3.0 during the first three semesters of podiatric medical education, with no more than six (6) credits of C grades. In addition, a separate cost-free graduate program application must be completed and submitted to the School of Podiatric Medicine Office of Admissions. After initial review and approval of the application by the Associate Academic Dean, the application will be forwarded to the College of Health Sciences Office of Admissions for further vetting. Students may apply after the second semester of podiatric medical education, but admission into the D.P.M./M.P.H. option will not be finalized until summer term grades are posted. Students in extended programs of study are ineligible for dual degree status and will

not be considered for candidacy in the D.P.M./M.P.H. option.

The School of Podiatric Medicine’s Associate Academic Dean and College of Health Sciences’ Public Health Program Director will review applications and determine final student eligibility to enroll for the additional degree after completion of second year summer term courses.

Podiatric medical students who fail to maintain a cumulative 3.0 GPA in either podiatric medicine or public health courses, and students who earn a “D” or “F” grade in any course will be dropped from the dual degree program. Under no circumstances will podiatric medical students on probation or in programs in excess of four years be allowed to continue with the M.P.H. degree option. Students may not contest the decision of the Dean or Associate Dean or Public Health Program Director to remove a student from the dual degree program.

Individuals interested in this option should contact the School of Podiatric Medicine Office of Admissions or the Director of the Public Health Program for additional information.

**D.P.M./M.S. DEGREE OPTION**

Students have the option of obtaining a Master of Science in Biomedical Sciences degree at the conclusion of their second year of basic science study. The graduation requirements include 36 semester hours with a minimum grade point average of 3.0 (B) with no more than 8 semester hours of C grade. Students must apply to take and subsequently pass a qualifying examination administered by the College of Health Sciences. A student will be allowed no more than a seven-year maximum time period to complete the requirements for the M.S. Program.

**B.S. DEGREE OPTION**

Students who enter the D.P.M. program without a bachelor’s degree but with the minimum 90 semester hours of undergraduate credit have the option of obtaining a Bachelor of Science in Biology degree at the conclusion of their basic science study. They must satisfy distribution course requirements for the Bachelor of Science degree.

**NON-DEGREE OPTION**

For those interested in taking courses for enrichment or self-improvement, a maximum of 16 graduate credits may be taken as a non-degree-seeking student. Non-degree-seeking students are not eligible for standard financial aid and must pay in advance for courses on a per credit basis at the doctoral rate for the School of Podiatric Medicine. Registration for this option requires permission from the Dean.

## ADMISSION REQUIREMENTS

A minimum of 90 semester hours of undergraduate study at a regionally accredited or internationally recognized undergraduate institution is required for admission to the School of Podiatric Medicine. The most satisfactory preparation for admission is the successful completion of a baccalaureate degree from a regionally accredited college or school of arts and sciences in the United States.

Each student's academic credentials must include:

- biology (8 semester hours)
- general or inorganic chemistry (8 semester hours)
- organic chemistry (8 semester hours)
- physics (8 semester hours)
- English (6 semester hours).

It is further recommended that all candidates complete courses in cell and molecular biology, genetics, anatomy, physiology, and biochemistry to strengthen their premedical background.

In addition to the standard AACPMAS application forms (see below), each candidate must also submit three letters of recommendation or one Health Professions Advisory Report, as well as current scores of the Medical College Admissions Test (MCAT). The Admissions Committee may, at its discretion, consider scores from the Dental Admissions Test (DAT), although the MCAT is preferred. The date of the most recent MCAT or other standardized test must be within three (3) years of the time of application.

All applicants who do not give evidence of being native English speakers or who have not graduated from an institution where English is the primary language of instruction are required to submit scores of the Test of English as a Foreign Language (TOEFL). Generally, a minimum TOEFL paper-based test total score of 600 OR a minimum computer-based test total score of 250 OR a minimum internet-based test total score of 100 is required for admission.

A personal interview is required and arranged only by invitation of the Admissions Committee. Prior to the interview, applicants should visit the office of at least one practicing Doctor of Podiatric Medicine to discuss and observe the practice of modern podiatric care. A letter confirming that visit is required by the Admissions Committee and should be included in the candidate folder before the time of interview. The Admissions Committee strongly recommends that the candidate folder be as complete as possible, including AACPMAS application forms, letters of recommendation, podiatrist visitation confirmation, and MCAT (or appropriate alternative test) scores, to facilitate the interview and avoid unnecessary delays in the admissions process.

In addition to the education requirements, all candidates and students must display the mental, psychological and moral character that will enable them to successfully complete the educational program and will prepare them for the professional responsibilities and privileges of a licensed Doctor of Podiatric Medicine. Applicants should refer to the earlier topic, "The Profession and Technical Standards for Admission, Enrollment, and Graduation", for a comprehensive description of program requirements.

## Application Procedure

The Barry University School of Podiatric Medicine and other institutions offering programs in podiatric medicine are participants in the American Association of Colleges of Podiatric Medicine Application Service (AACPMAS). This service allows a student to complete a single set of AACPMAS forms for any of the colleges of podiatric medicine. The service collects and collates data, computes grade point averages, and transmits copies of the application to the college/school selected on the application. Applications are secured by contacting:

American Association of Colleges of Podiatric  
Medicine  
15850 Crabbs Branch Way, Suite 320  
Rockville, MD 20855  
Phone: (301) 948-1928 or  
toll-free 1-800-922-9266 (outside Maryland)

To download an application or apply online, visit <http://www.aacpm.org/>.

To request an information brochure, send e-mail to [aacpmas@aacpm.org](mailto:aacpmas@aacpm.org).

All inquiries or communications concerning admissions should be addressed to the Office of Podiatric Admissions, Barry University, 11300 N.E. Second Avenue, Miami Shores, Florida 33161. Telephone numbers are listed prominently elsewhere in this catalog.

## ADMINISTRATIVE POLICIES AND PROCEDURES

Students are responsible for compliance with the policies of Barry University and the School of Podiatric Medicine. Since these policies are under constant scrutiny, the School of Podiatric Medicine reserves the right to change any provisions or requirements in this document at any time within a student's term of enrollment.

### International Students

International students must comply with all policies and procedures of the Inter-Cultural Center (ICC), including, but not limited to presentation, in person,

of appropriate documentation prior to the start of each semester. International students must register for no less than 9 semester hours of credit during the Fall and Spring terms. Registration materials will not be processed by the University until international students' documentation has been verified by the ICC.

## Registration

Students are advised prior to registration. All students must complete appropriate registration forms during times designated by the School of Podiatric Medicine. All registration forms must be approved by faculty advisors. Completed registration forms are processed by School of Podiatric Medicine personnel and forwarded to Cashier/Business Office and the Registrar.

Registration in any and all elective courses must be approved by the Dean or Associate Academic Dean before the registration form is submitted to the Cashier/Business Office and the Registrar. Prior to seeking approval of the Dean or Associate Dean, students registering for Research or Independent Studies courses must secure a faculty sponsor who will be responsible for evaluating the student's performance in the course. Students registering for Research must also submit a sponsor-approved research proposal to the Dean or Associate Dean.

Students who fail to complete registration requirements, including appropriate financial arrangements with the Cashier/Business Office, within 10 working days of the first day of class of any semester will **not** be permitted to attend classes, laboratories or clinical rotations/programs, take examinations or participate in any other activities of the School. The School of Podiatric Medicine will notify Financial Aid, which will subsequently notify scholarship programs, banks providing government-subsidized loans, etc., when students cease to be appropriately registered.

## Tuition

Tuition for Podiatric Medicine and Surgery is subject to annual review and revision. Students in standard, four-year programs of study will be billed one-half of the annualized tuition fee per semester for the first year and one-third of the annualized tuition fee per semester for years two through four. Students whose programs exceed four years will be billed as above for the first four years and at one-half of the annualized tuition for years in excess of four years, divided over three semesters per year.

## Drop-Add And Course Withdrawal

A period of registration adjustment (i.e., drop-add) is provided to students during the first week of each semester. During this time, students may change their

schedules with the written approval of their advisor. Students should realize that the podiatric medical curriculum is intense, structured, and allows only minor modifications to be made. Addition of elective courses requires permission of the Dean or Associate Academic Dean.

The withdrawal deadlines for the School of Podiatric Medicine are Friday of the tenth week of the Fall and Spring semesters and Friday of the sixth week of the Summer semester; if the deadline falls on a University holiday, it will be extended to the next business day. The dates are found on the School of Podiatric Medicine calendar and are posted prominently near School of Podiatric Medicine classrooms, offices, and lounges. Students may withdraw from a course until the term deadline without penalty. The student's transcript will show a "W" beside the course from which he/she has withdrawn. Consultation with the student's advisor and approval of the Dean or Associate Academic Dean is required for withdrawal. Withdrawal from a course may severely limit the number of courses a student may take in future semesters as many courses require "prerequisites."

Students withdrawing from Gross Anatomy (GMS 590) will not be permitted to continue their studies until Gross Anatomy is satisfactorily completed. A student who fails a prerequisite course will be withdrawn from subsequent courses that require its successful completion; this will be effected by administrative action shortly after the end of the term. A student who withdraws from a class after the withdrawal deadline receives a failing "F" grade. Advisor's and Dean's approval and signature are required in any case of schedule modification. Students in extended programs are not permitted to drop or withdraw from courses once the courses have begun.

Students may not withdraw from clinical rotations, hospital rotations or clerkships due to failing or otherwise unsatisfactory grades. Refer to "Podiatric Clinical Rotations" at the end of this catalog section for further policies specific to clinical experiences.

## Transcripts

Official transcripts are prepared by the Office of the Registrar. Transcript request forms must be completed and signed by the student. Transcript requests from anyone other than the student are not honored. Students should note that transcript requests take 3-5 business days to be processed after approval by the Cashier/Business Office. At the request of the Cashier/Business Office, official transcripts will not be released to students (or other institutions), if the students have outstanding balances owed to the University (i.e., a "hold" will be placed on transcripts/grades).

Copies of student transcripts are never released without written authorization from the student or, in the case of a governmental investigative agency, without a court order or subpoena. The Office of the Registrar will inform students should this occur. For additional details see "Academic Information" in this catalog or refer to <http://www.barry.edu/registrar/transcript/Default.htm>.

### **Incomplete ("I") Grades**

A grade of Incomplete ("I") indicates a failure to complete required work within the semester and implies the instructor's consent that the student may make up work that is deficient. The Dean or Associate Academic Dean must be informed in writing by the instructor when an "I" grade is issued. When the work is completed to the satisfaction of the instructor, the "I" grade will be changed to a letter grade. The instructor will forward a completed Grade Adjustment form for the grade change to the Dean or Associate Academic Dean for signature and then to the Registrar. Students, under special extenuating circumstances, (e.g., illness, leave of absence, etc.) may be granted an "Incomplete" in a course.

If a student has an "I" grade, all written examinations and/or other evaluation criteria must be completed by the end of Wednesday of the first week of the following semester. Laboratory examinations to complete missed work may be administered at a later time at the discretion of the faculty (with approval of the Dean or Associate Dean), based upon availability of necessary laboratory materials. A grade not reported as completed within the time required by the school becomes an F. Failure in any course in which an incomplete was issued will (1) reflect in a grade of "F" for the semester in which the course originally took place, and (2) result in academic probation or suspension retroactive to the beginning of the semester in which the course work should have been completed. In addition, achieving a failing grade in a completed course may result in failure to meet published prerequisites for another course, and may therefore require a schedule adjustment (drop) in the semester in which the incomplete was unsatisfactorily concluded.

### **Reporting and Recording of Grades**

The Office of the Registrar mails semester grade reports to the most current mailing address provided by the student on personal data forms. Change of address notification is the responsibility of the student. Appropriate change of address forms are available from the Office of the Registrar. A "hold" will be placed on the release of the grade report of any student who has an outstanding balance owed to the University, as indicated by the Cashier/Business Office. No grades or

transcripts will be released by the School of Podiatric Medicine until such balances have been paid. If in good standing with the Cashier/Business Office, students may access their grades online with WebAdvisor (<http://webadvisor.barry.edu>).

The Office of the Registrar does not record percentage scores for any course or test; it does, however, permanently record the letter grade earned by the student in every course he/she takes while in the School of Podiatric Medicine. Individual instructors must be contacted to obtain percentage scores earned in any particular course.

### **Technology Competency and Computer Requirements**

The School of Podiatric Medicine requires all students to own and be competent in the use of a laptop computer. Students' computers should be configured to meet or exceed technological standards set by the program. Minimum standard laptop computer specifications are found at <http://www.barry.edu/podiatry/adFin/laptop.htm>.

Information technology resources are integral to the education of the medical student. Barry University provides a number of information technology resources to students, including e-mail, internet and intranet services, WebAdvisor, library services and access to computer laboratories (see catalog section for Division of Information Technology). Many course instructors provide student access to course materials on the Blackboard Learning System and communicate with students through e-mail.

Email is considered the standard and official means of communication between the faculty, staff, and students of the School of Podiatric Medicine. For that reason, students must monitor and maintain their Barry University ([mymail.barry.edu](mailto:mymail.barry.edu)) email accounts. Due to identity and privacy concerns, administration, faculty and staff of the School of Podiatric Medicine may refuse to respond to email messages from students who use external email providers.

### **Student Health**

Every student in a clinical program must secure and retain primary care health insurance coverage that meets the Barry University requirements upon entry into the School of Podiatric Medicine. Coverage must remain in effect at all times while registered in the School. There is an insurance plan offered through the University that covers all charges at the Student Health Center and will also cover services to off-campus United Health Care providers. As a graduate student taking six or more credits you are eligible for the Barry University Health Plan (see [www.uhcsr.com](http://www.uhcsr.com)).

At the beginning of each year of enrollment, all students must maintain with the health compliance office, proof of adequate health insurance by providing a copy of the enrollment form for the student insurance. If the student is covered by an insurance plan other than the Barry student insurance he/she must complete a waiver online at <https://www.srstudentcenter.com/> or in hard copy and provide a copy of a current insurance card. If the student has a change in insurance coverage, proof of new insurance plan is required. Failure to waive out or supply proof of Barry student insurance will result in withdrawal from all clinical activities, and potential delays in progression through the curriculum of the podiatric medical programs.

Upon entry into the School of Podiatric Medicine program, every student must provide to the Compliance Office proof of:

- Physical examination (statement of good health) within 6 months of date of entry;
- Measles, mumps, and rubella (MMR) vaccination and booster (or adequate titer);
- Tetanus/diphtheria booster within the past 10 years;
- Hepatitis B vaccination series;
- Varicella (chickenpox) immunity by titer or evidence of vaccination;
- PPD screening for tuberculosis or chest x-ray if PPD is positive;
- Proof of health insurance coverage effective in the state of Florida. (Coverage must include doctor's office visits).

Each student must update their PPD status every 12 months, or more frequently if required by a clinical site to which the student is assigned. Students must maintain a personal pocket file of current immunization status and CPR certification that may be easily accessed, if requested while participating in hospital ward visits and/or clinical rotations.

### **Criminal Background Checks and Drug Screening**

Upon matriculation to the School of Podiatric Medicine, all students whose education and training will involve participation in clinical settings are required to undergo a criminal background check specified by their program director. Clinical rotation sites may require a criminal background check and may refuse to accept students with documented criminal histories. In the event of a reported incident, a determination about the applicant's/student's continued progress in the academic program will be made by Barry University in accordance with School and University procedures.

Many clinical rotation sites also require drug screening of students prior to, and, in some cases, during the course of clinical training. The School of Podiatric

Medicine may therefore require students to undergo background checks and drug screening and exclude or dismiss students who are unwilling to comply with these policies.

## **ACADEMIC POLICIES AND PROCEDURES**

### **Attendance**

Attendance is required (i.e., mandatory) in all School of Podiatric Medicine courses, including lectures, laboratory sessions, clinical rotations, and demonstrations. An instructor may, at his/her discretion, include attendance as part of the grade that a student earns or reduce a grade for absences while enrolled in a course. Students are responsible for all material and assignments covered in every course and all examinations, including unannounced quizzes. Students who have been absent without an acceptable excuse from 10% or more of a course's meetings are subject to failure upon documentation of absence by the instructor.

Attendance at scheduled examinations is mandatory. Examinations may be given outside of normal class hours due to space or time limitations. Examinations will be rescheduled, if approved by the course instructor, only with unanimous consent of the students in the course at the time that the change is proposed. Missed examinations, quizzes, and other evaluations will be graded 0% unless the absence is excused. Acceptance of excuses for absences and administration of make up evaluations (including scheduling and format) are solely at the discretion of the instructor.

Attendance is mandatory for stated clinic hours when applicable. No student will be permitted to leave the clinic or hospital early or arrive late. Attendance at all clinical rotations is mandatory and all excused absences must be made up (see Clinical Rotations). Requests for absences from a clinical rotation must be presented at least two weeks prior to the requested dates of the absence, and it is the responsibility of the student to find someone willing to "cover" for him/her during the absence. Last minute requests will likely not be honored. Students may be required to repeat one or more entire rotations as a result of excessive absence.

### **Academic Integrity and Behavior**

Promotion of academic integrity and ethical professional behavior are objectives of the School of Podiatric Medicine. Cheating or plagiarism will not be tolerated within the School of Podiatric Medicine. Refer to the "Policies and Procedures" section of this catalog and the Barry University Student Handbook for definitions of cheating and plagiarism. A student who gives or receives information or assistance during a testing session

will automatically fail and earn 0% as an exam or quiz grade. The same consequence will apply to any proven case of plagiarism. Further, the individual(s) will be referred to the Dean for appropriate disciplinary action and the incident will be documented in the student's file. Any student who is referred to the Dean for violation of the cheating and plagiarism policies on two occasions will be dismissed from the University. For a detailed description of what constitutes plagiarism students can consult any number of online resources and hardcopy texts. One such text is *Writing papers in the biological sciences* (4th ed) by Victoria E. McMillan, Bedford/St. Martin's Publishing, New York, (2006).

### Professional Conduct Code

As students in the most advanced degree program in the School of Podiatric Medicine, podiatric medical students must set the example for all other students at Barry University. Students must behave professionally, morally, ethically and honorably at all times, whether in lecture rooms, laboratories, other campus facilities, or off campus. Standards for conduct are delineated in the Graduate Catalog, Student Handbook, Manual of Clinical Protocol, course syllabi and other documents that may be distributed by faculty and staff.

Disruptive behavior such as violence, shouting, profanity and other behavior that is disrespectful of the rights and sensitivities of the public will not be condoned. The use of cell phones, pagers, and similar electronic devices during lectures, laboratory sessions, examinations, and other University events is disruptive and may be grounds for course failure and/or judicial action. Such activities should be conducted with consideration for the rights and sensitivities of others. Students who are noncompliant with these standards will be referred to the Dean or Associate Academic Dean for disciplinary action or dismissal.

### Transfer Policy

Students who enroll in the Barry University School of Podiatric Medicine (BUSPM) may qualify to transfer credit in an analogous graduate-level course that they have completed outside BUSPM. However, curricula, course requirements, and grading policies vary greatly among courses taught by different instructors in different Barry University schools and/or different institutions. Consequently, a grade of A or B in a course completed in another department or at another institution does not automatically guarantee or entitle the student to receive credit for the same subject in the Barry University School of Podiatric Medicine. All requests for transfer credit must be submitted in writing to the Associate Academic Dean before matriculating into the program.

To request credit for a course in a BUSPM course, a student must:

- Present official documentation (syllabi, official transcripts) from the previous institution that he/she obtained a grade of B or higher in the course. The Associate Academic Dean will consult with the relevant BUSPM course instructor(s) as to the equivalence of the completed course(s) based on syllabi and other resources (for example, information obtained from the previous instructor and/or department/school). The BUSPM instructor will determine the equivalence the previous course to the one given at BUSPM and inform the Associate Academic Dean of his/her decision. The final determination of the equivalence of the two courses rests with the BUSPM course instructor.
- If equivalency is determined to exist, the Associate Academic Dean will inform the student and the BU registrar regarding the assigning of credit and waiving further attendance of classes and taking of tests and quizzes in the course. Transfer coursework will not be used to compute the BUSPM GPA of the student.
- If equivalency is determined not to exist, students are strongly recommended to take the BUSPM course in its entirety and fulfill all requirements for successful completion of that course.
- However, students have the option of taking a Comprehensive examination(s) in the course administered by the BUSPM instructor for the course in question. Students must take the Comprehensive examinations within the first three days of the start of the semester in which the course in question is taught.
  - A student who takes the Comprehensive examination and achieves a score of 80.0% or more will receive full credit for the course. A grade of "CR" will be registered on the student record.
  - A student who takes the Comprehensive examination and achieves a score of less than 80.0% will take the BUSPM course in its entirety and fulfill all requirements for successful completion of that course.

### Financial Aid

Information about loans, scholarships and other financial aid is available through the Office of Financial Aid. Students bear the responsibility to seek out financial aid information.

### Academic Advisement

Every student matriculating at School of Podiatric Medicine is assigned an academic advisor by the Dean or Associate Academic Dean. Full-time faculty members assume academic advising responsibilities.

Advising assignments may be changed by the Dean or Associate Academic Dean at the request of the student or advisor. In the advising process, School of Podiatric Medicine students must:

- be aware of the educational objectives of the institution and observe them.
- comprehend the institution’s criteria for evaluating student progress in academic programs.
- comply with the institution’s standards for academic success and continuance in programs for graduation. The institution is under no obligation to grant a degree or keep the student enrolled in the program if he/she fails to maintain satisfactory academic progress.
- understand and complete all degree requirements for graduation.
- make his/her own academic decisions after consultation with the advisor. The advisor’s role is to advise the student, but the final decision must be made by the student.

## GRADING SCALE AND EXAMINATION POLICY

The official grading policy of School of Podiatric Medicine (exclusive of clinical rotations/externships) is as follows:

|   |            |
|---|------------|
| A | 90%-100%   |
| B | 80%-89.99% |
| C | 70%-79.99% |
| D | 66%-69.99% |
| F | below 66%  |

Additionally, all students in extended academic programs and all students re-admitted following suspension will be graded as follows:

|   |            |
|---|------------|
| A | 90%-100%   |
| B | 80%-89.99% |
| C | 70%-79.99% |
| F | below 70%  |

Clinical rotations for all students will be graded according to the following scale:

|   |               |
|---|---------------|
| A | 3.5 and above |
| B | 2.5 to 3.4    |
| C | 1.0 to 2.4    |
| F | below 1.0     |

The School of Podiatric Medicine does not use plus or minus letter grades. The grade/honor point associated with each of the letter grades is noted in the Barry University “Academic Information” section of this catalog.

A grade of credit (CR) or no credit (NC) may be assigned to a course if specified in the course syllabus and approved by the Dean or Associate Academic Dean. In such cases, the requirements for achieving a CR grade will be stated in the syllabus.

The type, content, and frequency of examinations will be determined prior to the beginning of each course by the faculty member directing the course. This information will be presented in writing in the course syllabus to the students at the beginning of the course. In keeping with the policy of academic freedom, each faculty member reserves the right to determine the percentage of the final grade that is associated with attendance, dress, attitude, professional behavior, examinations, quizzes, laboratory assignments, and other criteria of evaluation. These requirements must be specified in the course syllabus; however, the course instructor may administer additional evaluations at his or her discretion. The final grade in a course is ultimately determined by the course instructor.

A test may be administered outside the scheduled examination period only when extenuating circumstances warrant it and at the discretion of the faculty member. The student must make every possible effort to notify the instructor prior to an examination for permission to reschedule the test. Noncompliance with this policy will result in a failing grade being assigned to the examination.

## Academic Good Standing

For a podiatric student to be considered to be in good standing academically, he/she must maintain both a semester average and a cumulative GPA of at least 2.00, have no unresolved F grades, have no more than two unresolved D grades, and have no outstanding financial obligations to the School of Podiatric Medicine or Barry University.

Once final grades are determined, the School of Podiatric Medicine does **not** provide any remediation mechanisms on either an examination or an entire course. Failed courses must be repeated in their entirety. The final transcript of a student must reflect no more than two unresolved D grades. If a student earns more than two D grades, the student must repeat courses to reconcile the academic deficiency; the course to be repeated (to reduce the number of D grades) will be determined by the Faculty Student Evaluation Committee. Unsatisfactory resolution of an F or D grade or withdrawal from any course that is repeated will lead to automatic suspension from the University. Repeated courses will usually result in extending a student’s education beyond four years.

## Academic Disciplinary Actions

A podiatric medical student will be placed on academic **probation** if he/she:

- 1) achieves a cumulative or semester GPA less than 2.00 but at least 1.00
- OR

- 2) earns one F grade in any semester  
OR
- 3) earns two D grades in any semester  
OR
- 4) earns one D grade in each of two consecutive semesters  
OR
- 5) earns a third D grade when two unresolved D grades already exist on his/her transcript from previous semesters.

Students who are not in good standing will be periodically reviewed by the Faculty Student Evaluation Committee to determine eligibility to remain in the program. The Dean or Associate Academic Dean of the School of Podiatric Medicine may require a student on probation to register for a limited course load, resulting in extending a student's education beyond four years.

Probation will be lifted after completion of the next semester of active registration if the student achieves a cumulative GPA of 2.00 or higher with no new F or D grades. However, a student will not be in good standing until he/she has no unresolved F grades and no more than two unresolved D grades on his/her most current transcript.

A podiatric medical student will be **suspended** if he/she:

- 1) achieves a GPA of less than 1.00 in any semester  
OR
- 2) qualifies for academic probation for two consecutive semesters  
OR
- 3) earns more than one F or any combination of F and D grades in any semester, regardless of GPA  
OR
- 4) earns three or more D grades in any semester regardless of GPA  
OR
- 5) earns a grade less than C in the first semester of extended academic coursework.

A student who earns more than two D grades must repeat one or more courses in which that grade was earned. The Faculty Student Evaluations Committee may require that the student repeat one or more specific courses in which the student has earned a D grade. A maximum of two unresolved D grades will be allowed at the time of graduation.

Any student on probation or with unresolved grade deficiencies, as previously stated, will not proceed into the clinical rotations of the third year. If a student is repeating a course, a minimum C grade must be earned in the repeated course. An F or D grade in or withdrawal from any course that is repeated will lead to suspension from the University.

A student who has been suspended for academic reasons generally may petition for readmission. A suspended student generally is ineligible to take classes with degree-seeking status in the School of Podiatric Medicine for at least two semesters following suspension. The suspended student must petition the Dean for readmission at least one month before the beginning of the semester in which the student intends to resume course work. The Dean may permit the student to resume course work with degree-seeking or non-degree-seeking status, or may decline readmission. The decision of the Dean is final. The Office of the Registrar must have the approval of the Dean of the School of Podiatric Medicine to readmit a student following suspension.

Any student who withdraws from one or more courses in a semester must register for the withdrawn course(s) in the next semester the course(s) is (are) offered. The student may not register for any advanced course that explicitly requires the withdrawn course as a prerequisite.

Students who achieve three (3) F grades during the course of their podiatric medical studies may be dismissed from the School of Podiatric Medicine and the University.

### **Academic Programs in Excess of 4 Years (Extended Programs)**

Withdrawal and/or repeating of courses will usually result in extending a student's education beyond the minimum of four years. Students in extended programs will be assigned a special academic advisor. Students in academic programs in excess of four years generally take a reduced course load during the preclinical phase of their education, but they must enroll in at least 5 semester hours per term to maintain full-time status for the purpose of financial aid eligibility. Overload course registrations are generally not allowed due to the intensity of the podiatric medical curriculum. Students in extended programs are not eligible for D grades (A, B, C, F scale applies), nor will such students be able to drop or withdraw from courses once the courses have begun. Students may not earn a grade less than C in their first semester of extended academic course work (i.e., the first term in which they do not complete all of the required courses); such students will be suspended. All first and second year course work must be completed within three years of matriculation. Extended programs will be limited to five years unless specifically approved by the Dean.

Students in extended programs will be billed for full tuition until they have paid for four (4) complete years. Such students will be billed for one-half the annual tuition for each year in excess of four years.

## Interim Requirements

All first and second year course work must be successfully completed before taking Part I of the examination of the National Board of Podiatric Medical Examiners and before entering the third year clinical rotations.

Students must take a basic medical sciences competency examination (BMSCE) in the Summer term immediately before taking the Part I examination of the National Board of Podiatric Medical Examiners and before beginning clinical orientation and/or clinical rotations. The content of the BMSCE will include Gross Anatomy, Histology, Biochemistry, Neuroanatomy, Physiology, Lower Extremity Anatomy, Medical Microbiology (with Immunology), Pathology (Pathology I content only), and Medical Pharmacology. Students who pass the BMSCE will be awarded credit (CR) for GMS CMP1 and will be permitted to commence clinical rotations if they have met all other requirements. Students who do not sit for or fail the BMSCE will receive a grade of no credit (NC) for GMS CMP1 and will not be allowed to commence clinical rotations. Such students will receive remedial instruction in subject areas in which they are deficient until competency has been demonstrated.

All students must complete a practical clinical skills and knowledge competency examination during the last (Spring) term of the third year. The content of the examination will include, but no be limited to, biomechanics, radiology, suturing, injections, venipuncture and other clinical matters, Oral clinical case questions also may be part of this examination. Students must successfully complete the clinical competency examination to graduate. Students who successfully complete the examination will receive a grade of credit (CR) in GMS CMP2. Students who fail the examination will receive a grade of no credit (NC) and will receive remedial instruction until competency has been demonstrated. Students will be permitted to complete senior externships regardless of examination outcome.

## Graduation Requirements

All candidates for the degree of Doctor of Podiatric Medicine shall have:

- 1) satisfactorily completed **all** basic science courses, clinical rotations/requirements, and externships/clerkship program requirements.
- 2) a GPA of 2.00 or greater with no outstanding F grades and no more than two unresolved D grades.
- 3) satisfactorily completed the competency examinations at the end of the second and third years of the curriculum.

- 4) completed the National Board of Podiatric Medical Examiners' Part I and Part II examinations and will have authorized the release of test results to the School of Podiatric Medicine.
- 5) maintained acceptable professional standards (see Professional Conduct Code).
- 6) fulfilled all responsibilities and financial obligations to Barry University and the School of Podiatric Medicine.
- 7) been recommended for graduation by the faculty to the Board of Trustees.

Recommendation for the D.P.M. degree is a discretionary right residing with the faculty/administration, but shall not be withheld arbitrarily. There is no contract, stated or implied, between the School of Podiatric Medicine and the students, guaranteeing that a degree will be conferred at any stated time, or at all.

## ACADEMIC APPEALS AND GRIEVANCE

Students have the right to appeal any grade which they feel was inappropriately assigned. Students will be allowed a maximum of 10 business days after the grade for a quiz or examination is made available to challenge that grade with the course instructor, unless otherwise specified in the course syllabus. If informal discussions with the faculty member do not resolve the appeal, the student must present, within 15 business days of receipt of the grade in question, an appeal in writing to the Associate Academic Dean of School of Podiatric Medicine, who will respond within 5 business days. If the response of the Associate Academic Dean does not satisfy the student, the student may appeal in writing, within 2 business days of receipt of the Associate Academic Dean's response, to the Dean of School of Podiatric Medicine. The Dean will respond within 5 business days of receipt of the appeal. The decision of the Dean regarding the appeal is final. Students who do not challenge or appeal a particular grade within the appropriate time periods as described waive all future rights to appeal/challenge of that grade. Nonacademic grievance and appeal procedures are outlined in the Barry University Student Handbook and bylaws of the Florida Podiatric Medical Students Association.

## ACADEMIC CURRICULUM

The curriculum of the School of Podiatric Medicine leading to the D.P.M. degree normally takes four years to complete. The first two years mostly involve didactic basic sciences courses (many with laboratories, see below). The third and fourth years involve primarily, but not exclusively, clinical didactic courses and clinical

rotations through several local hospitals and the Barry University clinics (see clinical rotations). All courses in the curriculum, unless noted as electives, are required; with the exception of courses approved for advanced standing, no course substitutions are allowed.

Students must complete all requirements for the D.P.M. degree within five (5) years of initial matriculation into the School of Podiatric Medicine; deviations from this time limit require the expressed approval of the Dean. All non-elective courses must be completed prior to graduation. Podiatric medical students may be required by the Dean or Associate Academic Dean to take a reduced number of courses (due to withdrawals, course failures in their first or second year, or other extenuating circumstances). This will extend the total program beyond four years.

The following curriculum is continuously reviewed and is therefore subject to change.

**DOCTOR OF PODIATRIC MEDICINE D.P.M. CURRICULUM**

**FIRST YEAR semester hours**

**Fall**

|         |   |   |
|---------|---|---|
| GMS 525 | Introduction to Podiatric Medicine              | 2 |
| GMS 527 | Biochemistry I                                  | 3 |
| GMS 536 | Research Methodology, Epidemiology & Statistics | 3 |
| GMS 550 | Histology and Cell Biology w/lab                | 5 |
| GMS 590 | Gross Anatomy w/lab                             | 6 |

**Spring**

|          |                                       |   |
|----------|---------------------------------------|---|
| GMS 528  | Biochemistry II/Nutrition             | 3 |
| GMS 547  | Neuroanatomy w/lab                    | 3 |
| GMS 549  | Medical Psychiatry                    | 1 |
| GMS 553  | Biomedical Ethics                     | 1 |
| GMS 595A | Physiology I                          | 4 |
| GMS 625  | Applied Lower Extremity Anatomy w/lab | 4 |

**SECOND YEAR semester hours**

**Summer**

|           |  |      |
|-----------|--|------|
| GMS 595B  | Physiology w/lab                               | 2    |
| GMS 610   | Clinical Neurology                             | 2    |
| GMS 623   | Medical Microbiology I                         | 2    |
| GMS 649   | General Radiology                              | 3    |
| GMS 717   | Biomechanics of Foot Function                  | 2    |
| *GMS 665  | Independent Study                              | 1-3  |
| *GMS 675  | Research                                       | 1-12 |
| *Elective | (May be taken during any second year semester) |      |

**Fall**

|          |                                     |   |
|----------|-------------------------------------|---|
| GMS 600  | Pathology I w/lab                   | 4 |
| GMS 620  | Medical Pharmacology                | 3 |
| GMS 624  | Medical Microbiology II w/lab       | 5 |
| GMS 632  | Podiatric Medicine I                | 2 |
| GMS 644  | Dermatology                         | 2 |
| GMS 711  | Podiatric Radiology                 | 2 |
| GMS 717L | Biomechanics Clinical Practicum Lab | 1 |

**Spring**

|          |                                    |   |
|----------|------------------------------------|---|
| GMS 557  | Conceptual Lower Extremity Anatomy | 3 |
| GMS 601  | Pathology II                       | 2 |
| GMS 605A | Physical Diagnosis                 | 2 |
| GMS 621  | Clinical Pharmacology              | 3 |
| GMS 634  | Podiatric Medicine II              | 2 |
| GMS 634L | Podiatric Medicine II Lab          | 1 |
| GMS 640  | Surgical Principles                | 2 |
| GMS 650  | Internal Medicine I                | 2 |
| GMS 652  | Peripheral Vascular Disease        | 2 |
| GMS 711L | Radiology Lab                      | 1 |

**THIRD YEAR semester hours**

**Summer**

|           |   |      |
|-----------|---|------|
| GMS CMP1  | Basic Medical Sciences Competency Examination | 0    |
| GMS 605B  | Physical Diagnosis (Lab)                      | 2    |
| GMS 705   | Emergency & Traumatology I                    | 2    |
| GMS 706   | Emergency & Traumatology II                   | 3    |
| GMS 708   | O.R. Protocol                                 | 1    |
| GMS 712   | Clinical Orientation and Skills Workshop      | 1    |
| GMS 718   | Podiatric Rotating Clinical Clerkship I       | 4    |
| GMS 750   | Internal Medicine II                          | 2    |
| *GMS 765  | Independent Study                             | 1-3  |
| *GMS 775  | Research                                      | 1-12 |
| *Elective | (May be taken during any third year semester) |      |

**Fall**

|         |  |   |
|---------|--|---|
| GMS 700 | Physical Medicine                        | 1 |
| GMS 703 | Anesthesiology                           | 1 |
| GMS 713 | Podiatric Surgery I                      | 4 |
| GMS 715 | Podiatric Medicine III                   | 2 |
| GMS 719 | Podiatric Rotating Clinical Clerkship II | 7 |
| GMS 738 | Podopediatrics                           | 3 |

**Spring**

|          |  |   |
|----------|--|---|
| GMS 707  | Emergency & Traumatology III                         | 2 |
| GMS 714  | Podiatric Surgery II                                 | 4 |
| GMS 716  | Podiatric Medicine IV                                | 2 |
| GMS 720  | Podiatric Rotating Clinical Clerkship III            | 7 |
| GMS 722  | Cadaver Surgery Lab                                  | 1 |
| GMS CMP2 | Clinical Skills and Knowledge Competency Examination | 0 |

**FOURTH YEAR****semester hours****Summer**

|         |                               |   |
|---------|-------------------------------|---|
| GMS 820 | Hospital Rotation I           | 4 |
| GMS 821 | Hospital Rotation II          | 4 |
| GMS 832 | Podiatric Clerkship Program I | 4 |

**Fall**

|           |   |      |
|-----------|---|------|
| GMS 833   | Podiatric Clerkship Program II              | 4    |
| GMS 834   | Podiatric Clerkship Program III             | 4    |
| GMS 835   | Podiatric Clerkship Program IV              | 4    |
| GMS 836   | Podiatric Clerkship Program V               | 4    |
| *GMS 865  | Independent Study                           | 1-3  |
| *GMS 875  | Research                                    | 1-12 |
| *GMS 819  | Communication Skills                        | 1    |
| *Elective | (May be taken during any fourth year block) |      |

**Spring**

|         |                                 |   |
|---------|---------------------------------|---|
| GMS 802 | Podiatric Medicine Seminar      | 1 |
| GMS 806 | Library Research Paper          | 1 |
| GMS 809 | Senior Clinical Rotations       | 7 |
| GMS 813 | Risk Management                 | 1 |
| GMS 815 | Orthopedic Seminar              | 1 |
| GMS 823 | Surgical Seminar                | 1 |
| GMS 825 | Practice Management             | 3 |
| GMS 826 | Sports Medicine                 | 2 |
| GMS 831 | Community and Minority Medicine | 1 |

\* Elective

**PODIATRIC CLINICAL ROTATIONS**

Participation in the clinical rotations is contingent upon successful completion of all the course work in the first and second years.

Treating patients in clinical settings is a privilege. All students must have successfully completed the Clinical Orientation and Skills Workshop prior to beginning clinical rotations. Clinical rotations generally consist of two or four-week educational experiences in hospital-based medical, surgical, and podiatric services. Students will actively participate in various rotations such as the emergency room, operating room, physical therapy, vascular lab, radiology, pathology, internal medicine, podiatric clinics. Faculty, educational objectives, and specific rules and regulations are delineated

in the Manual of Clinical Protocol, which serves as the syllabus for all clinical rotations. Each student's clinical rotation schedule will be posted prior to the beginning of each semester. Students may not change, alter, or rearrange their clinical schedule without prior approval of the Associate Dean of Clinics. Attendance at each rotation site is mandatory. All absences must be made up. Unexcused absences will result in a significant punitive reduction in the clinical course grade as stipulated in the Manual of Clinical Protocol.

The dress code is absolute; cleaned and pressed white jackets for all students; tailored slacks, shirt and tie for men; tailored slacks or skirts (knee length) and collared blouse for women. Appropriate shoe gear is required.

Any student who is removed from a clinical or hospital rotation due to improper dress, behavior, or other violation of the Manual of Clinical Protocol may be placed on probation. If the violation recurs, action may be taken by the Dean resulting in failure of the rotation and/or possible suspension from the School of Podiatric Medicine.

Professional attitude, motivation, maturity, poise, and capacity to accept and respond to criticism of faculty and peers are evaluated. Additionally, manual dexterity, diagnostic acumen, completeness and accuracy of charting and documentation are graded.

The externs at the completion of their rotation should be familiar with:

- eliciting an appropriate podiatric history.
- performing an appropriate podiatric physical examination.
- identifying, comprehending and applying therapeutic regimens for those disorders/diseases that are intrinsic to the foot.
- comprehending and applying peri-operative podiatric care.
- comprehending and applying basic surgical techniques.
- comprehending the complications in foot surgery and applying therapeutic principles in their prevention and management.
- comprehending the problems of aging and applying the appropriate therapeutic regime.
- comprehending the levels of podiatric problems (primary, secondary and tertiary) and offering the appropriate therapeutic regime.
- recognizing the team concept of care and comprehending the podiatrist's role in the total health care of the patient.

At the end of the rotation each extern will be evaluated by mechanisms established by the School of Podiatric Medicine. Failure to successfully complete third-year clinical rotations and exit examinations will prevent advancement into the fourth year. Additionally,

failure of any didactic classroom course work of the third year may preclude passage into the senior year. Failed courses, as well as failed rotations must be repeated in their entirety. No make-up exams will be given in cases of failure.

## **Podiatric Medicine and Surgery Course Descriptions— Prefix: GMS**

### **525 Introduction to Podiatric Medicine (2)**

Introduction to the entire field of Podiatric Medicine with emphasis on history, didactics, and clinical features as it relates to basic operative Podiatric Medicine and the art of doctoring.

### **527 Biochemistry I (3)**

Biochemistry I provides an introduction to the fundamental aspects of biochemistry. It gives an overview of the structure, function and metabolism of biologically important molecules; carbohydrates, fatty acids, proteins and nucleic acids. The course concludes with a review of amino acid metabolism. Enzyme kinetics, allostery, enzyme inhibition and control are considered in detail. Throughout, the emphasis is placed on the regulation of metabolic pathways and on their interrelationships in health and disease.

### **528 Biochemistry II/Nutrition (3)**

Biochemistry II considers the application of biochemistry to disease etiology, diagnosis and treatment. Cell membranes and the structure, function and replication of the cell's genetic material are described. The digestion and absorption of nutrients is reviewed and the consequences of malfunction considered. A number of disease states are used to illustrate selected principles including the relationship between nutrition and disease; atherosclerosis, hyperlipidemia, obesity and diabetes. The application of clinical biochemistry techniques to disease diagnosis is described and the biochemistry of exercise and aging visited. Prerequisite: GMS 527.

### **536 Research Methodology, Epidemiology and Statistics (3)**

Introduction to experimental design, biostatistical methods, and theoretical and statistical analysis of data. Epidemiological concepts will include population dynamics, trends in diseases and disorders, rates, screening, and public health programs.

### **547 Neuroanatomy w/lab (3)**

Presentation of the morphologic and physiologic aspects of the nervous system. Clinical correlations are incorporated to emphasize the important anatomic structures and pathways. Lecture and lab. Same as BMS 547.

### **549 Medical Psychiatry (1)**

This course will focus on the signs, symptoms, and therapies of the major mental disorders, emphasizing those most commonly seen and managed in primary care medical practice. Thus, anxiety disorders, depression, alcohol and drug abuse, and the organic brain syndromes will be considered in detail.

### **550 Histology and Cell Biology w/lab (5)**

Presentation of the normal microscopic structure of the human body. Emphasis will be placed on the integration of the morphology with the biochemical and physiologic process of the body. Lecture and Laboratory.

### **553 Biomedical Ethics (1)**

An introduction to bioethics relevant to podiatric medical practice: valid consent, confidentiality and privacy, issues in death and dying, and the podiatric code of ethics.

### **557, 625 Conceptual Lower Extremity Anatomy, Applied Lower Extremity Anatomy w/lab (4,3)**

Provides a thorough knowledge of the anatomical structures of the lower limb, using standard anatomical terminology. Information of clinical interest included where relevant. Prerequisite: GMS 590 for GMS 625; GMS 625 for GMS 557.

### **590 Gross Anatomy w/lab (6)**

Study designed to expose the student to the macroscopic aspects of human morphology. Complete dissection of a cadaver will be correlated with surface anatomy, radiology and other clinical information. Lecture and lab.

### **595A, 595B Physiology I, Physiology II w/lab (4,2)**

Physiology is a lecture-laboratory course that spans two semesters and incorporates concepts from histology, biochemistry and anatomy and applies these concepts to the students' understanding of the normal functioning of the major organ-systems of the human body. The first module, GMS 595A, covers the following major organ-systems: neuronal, muscular, neuroendocrine, reproductive, cardiovascular, and renal, while the second module GMS 595B covers the respiratory & gastrointestinal systems in addition to a laboratory component. GMS 550 Histology, GMS 527/528 Biochemistry. Note: GMS 595A Physiology I is a prerequisite for GMS 595B Physiology II.

### **600, 601 Pathology I w/lab, Pathology II (4,2)**

Fundamental principles of disease processes such as tissue injury and repair, inflammation, the immune response, and neoplasia, as well as mechanisms of hemodynamic and metabolic derangement; illustrated in laboratory by means of clinical material and case studies. Lecture and lab. Prerequisite: GMS 550 for GMS 600; and GMS 600 for GMS 601.

**605A, 605B Physical Diagnosis (2,2)**

Introduction to and development of techniques in the common and basic components of physical and laboratory examinations, techniques of interviewing and history taking, and the care of the patient in all fields of medicine. Lecture (GMS 605A) and lab (GMS 605B). Prerequisites: GMS 595A, 595B. GMS 605A must be taken before or at the same time as GMS 605B.

**610 Clinical Neurology (2)**

Emphasis on clinical presentation of disorders commonly involving the nervous system with particular emphasis on neuromuscular disorders and peripheral neuropathies. Problems of the nervous system such as muscular dystrophies, tumors, strokes, trauma, and seizures are described. Prerequisite: 547.

**620 Pharmacology (3)**

Course encompasses basic pharmacological principles and classes of drugs. Same as BMS 620. Prerequisites: GMS 527, 528, 595A and 595B.

**621 Clinical Pharmacology (53)**

This course is devoted to the study of the commonly prescribed pharmaceutical preparations in the hospital and office medical practice. Hospital orders, prescription writing, as well as the indications, contraindications, adverse reactions and the significant pharmacology of all relevant classes of drugs in general medicine will be discussed. Emphasis is placed not upon the principles of pharmacology but rather on the actual clinical use and adverse reactions associated with all drugs in the typical hospital formulary. Prerequisite: GMS 620.

**623, 624 Medical Microbiology I, Medical Microbiology II w/lab (2,5)**

Comprehensive study of medical immunology, medical bacteriology, medical mycology, medical virology and medical parasitology. The courses survey the interaction between the human host and the pathogens, characteristics of pathogens, epidemiology, pathogenesis of disease, and treatment. Anti-infective agents are also discussed, including modes of action, spectra of activity, and specific mechanisms of resistance. GMS 624 has lecture and laboratory/case presentation meetings. Prerequisites for GMS 623: GMS 527, 528, 550, 590. Prerequisites for GMS 624: GMS 623.

**632 Podiatric Medicine I (2)**

This course provides the foundation for basic podiatric medicine from a clinical standpoint. Common podiatric pathology will be discussed along with current therapy regimens. Prerequisite-Corequisites: GMS 557, 600, 610, 620, 623, and 625.

**634 Podiatric Medicine II (2)**

The pathophysiology as well as diagnosis and treatment of nail disorders (onychopathy) will be discussed.

Evaluation, diagnosis, and treatment of rheumatologic disorders as it applies to the lower extremity will be discussed. Lecture and lab. Prerequisite: GMS 632.

**634L Podiatric Medicine II Lab (1)**

This course prepares students for the technical skills associated with medical and surgical podiatric care. The course is presented in a workshop format with a short lecture followed by practical demonstration and individual practice sessions to learn the particular skill. Sample technical skills include, but are not limited to, handling and use of instrumentation, injections, venipuncture, starting intravenous lines, suturing and hand ties, casting, and bandaging. Additionally, podiatric palliative practices such as the nail procedures, removal of corns, calluses, padding and strapping are emphasized. Prerequisite- Corequisite: GMS 632, 634.

**640 Surgical Principles (2)**

Introduces the student to the evaluation and management of selected surgical conditions likely to be encountered in primary care. Emphasis is placed on the integration of anatomy and physiology, history and physical skills, pathophysiology and diagnostic studies. Pre- and post-operative patient management, including appropriate referral practices, are included. Prerequisite: GMS 590.

**644 Dermatology (2)**

Introduction to general dermatoses especially those affecting feet and lower extremities. Prerequisite: GMS 550.

**649 General Radiology (3)**

Radiation physics, image production, and safety are covered. Evaluation of radiographic changes as they relate to systemic and local pathology. Prerequisite: GMS 590.

**650, 750 Internal Medicine I, Internal Medicine II (2,2)**

Presentation of basic principles of medicine. Prerequisites: GMS 590, 595A/B, 600, 605, and 620.

**652 Peripheral Vascular Disease (2)**

The pathophysiology as well as diagnosis and treatment of peripheral vascular disease will be discussed. Prerequisite: GMS 595A/B, 632.

**665, 765 Independent Study (1-3)**

Opportunity for extensive study in areas of special interest to the student. Prerequisite: permission of the Dean or Associate Academic Dean.

**675, 775 Research (credit not to exceed 12 s.h.)**

Research under guidance of faculty advisor. Prerequisite: permission of the Dean or Associate Academic Dean.

**700 Physical Medicine (1)**

The various modalities of Physical Medicine will be presented with special emphasis on lower extremity palliative and therapeutic care.

**703 Anesthesiology (1)**

The types, techniques, methods, and complications of regional, local, and general anesthesia will be explored. The student will be introduced to related patient problems in the perioperative period as well as preoperative considerations for surgery. Prerequisite: GMS 620 and 621.

**705 Emergency & Traumatology I (2)**

General concepts of non-cardiac emergency and traumatology from a systems perspective. Prerequisites: GMS 632, 634, 650.

**706 Emergency & Traumatology II (3)**

Basic and Advanced Cardiac Life Support mechanisms as defined by the American Heart Association will be presented. Prerequisite: GMS 705.

**707 Emergency & Traumatology III (2)**

Lower extremity traumatology will be discussed. Basic principles of wound healing, prevention and management of infection, and specific applications for forefoot trauma are stressed. Prerequisite: GMS 706.

**708 O.R. Protocol (1)**

An introduction to the basic principles of operating room technique. Surgical instrumentation, methods of sterilization, principles of sterile technique, and charting and documentation will be emphasized. Prerequisites: GMS 632, 634, 640.

**711 Podiatric Radiology (2)**

Class instruction in diagnostic findings in the foot. Pathophysiology will be discussed to support the radiographic changes seen in the foot as it relates to certain disease entities. Prerequisite: GMS 649.

**711L Radiology Lab (1)**

Provides students with practical opportunities to apply knowledge and understanding acquired in General Radiology and Podiatric Radiology courses to the actual reading of the films or images. Each class section is divided into small groups which work at stations with a radiological view box. Emphasis is on the hands-on reading of chest films, foot and ankle x-rays, bone scans, MRI, and CT scans. Additionally, students review and practice photochemistry of developing plain films and x-ray positioning techniques. Prerequisites: GMS 649, 711.

**712 Clinical Orientation and Skills Workshop (1)**

Prepares students for diverse aspects of clinical care, patient interactions, hospital, and/or clinic protocols. Infectious disease, sterile technique, universal precautions, biomedical hazards, immunization policy,

instrumentation, and School rules and clinical regulations will be discussed. Demonstrations and workshops in practical skills may be presented. Prerequisites: all first and second year courses.

**713 Podiatric Surgery I (4)**

Fundamental concepts of forefoot and soft tissue surgery of the foot and ankle are presented. Prerequisite: GMS 640 and all other first and second year courses.

**714 Podiatric Surgery II (4)**

Fundamental concepts of rearfoot and reconstructive surgery of the foot and ankle are presented. Prerequisite: GMS 713.

**715, 716 Podiatric Medicine III, Podiatric Medicine IV (2,2)**

Disorders, both systemic and localized, are presented according to the body system involved; i.e., musculoskeletal, dermatologic, vascular, and neurologic. Lower extremity manifestations of systemic disease, differential diagnoses, and conservative management are emphasized. Prerequisite: GMS 634 and all other first and second year courses for GMS 715; GMS 715 for GMS 716.

**717 Biomechanics of Foot Function (2)**

Advanced studies in foot function with emphasis on biomechanical comprehension and orthotic correction of foot/lower extremity deformity. Prerequisite: GMS 557 and 625.

**717L Biomechanics Clinical Practicum Laboratory (1)**

Laboratory applications of biomechanical theory and practice as presented in GMS 717. Emphasis on examination and clinical problem solving. Prerequisite: GMS 717.

**718, 719, 720 Podiatric Clinical Clerkship I, II, III (4,7,7)**

Students will rotate through the Barry University Foot and Ankle Centers as well as affiliated hospitals. Students will participate in podiatric, medical, and surgical services, including emergency room, operating room, radiology, vascular laboratory, physical therapy, wound healing, and other hospital-based services. Students will be evaluated in terms of knowledge, attitude, skills, and motivation and will be required to maintain a patient log. Students will also be expected to successfully complete the junior class clinical exit examination prior to beginning senior level clinical rotations. Prerequisites: Successful completion of all courses of the first and second years and GMS 712 prior to entering clinical rotations or externships.

**722 Cadaver Surgery Laboratory (1)**

This course offers the student "hands-on" learning experiences in an array of basic surgical procedures. The course complements and reinforces the surgical

principals learned in the Podiatric Surgery I and II courses, giving the student practical experience in the performance of many common podiatric procedures and techniques. Indications and contraindications for specific surgical procedures and standards of care are also reviewed. Prerequisites/corequisites: GMS 713, 714.

### **738 Podopediatrics (3)**

General survey of growth and development of children with emphasis on the lower extremities: concentrating upon history and physical examination, diagnosis, treatment, and prognosis of podiatric disorders. Prerequisites: GMS 717.

### **802 Podiatric Medical Seminar (1)**

By utilizing clinical case presentations, students will review and apply principles of Podiatric Medicine presented during the first three years of training. Prerequisites: all first, second and third year courses.

### **806 Library Research Paper (1)**

This paper is required for senior students and serves to develop skills in literature review and presentation. (Podiatric Medicine Students)

### **809 Podiatric Senior Clinical Rotations (7)**

Students will rotate in afternoon clinic sessions through the Barry University Foot Care Centers and affiliated institutions. Students will be responsible for case presentations and case management involving general medical as well as podiatric disorders. Prerequisites: all first, second and third year courses.

### **813 Risk Management (1)**

This course addresses both the medical and legal aspects of Podiatric Medicine. Appropriate charting, record-keeping, documentation of patient progress, and complications are discussed. Patient/physician relationships are reinforced with malpractice principles, ethics, and medical jurisprudence. Prerequisites: all first, second and third year courses.

### **815 Orthopedic Seminar (1)**

Via clinical presentations, students will review and apply principles of orthopedics and biomechanics presented during the first three years of training. Prerequisites: all first, second and third year courses.

### **819 Communication Skills (1)**

This course emphasizes communication skills necessary for physicians to interrelate with their patients on an understanding and empathetic level. An additional goal is to improve interaction with community members and other physicians.

### **820, 821 Hospital Rotations (4,4)**

Fourth year students will rotate through podiatric, medical, and surgical services in the Barry University affiliated hospitals and clinics as a continuum of GMS 718, 719 and 720. Prerequisites: successful completion of GMS 712, 718, 719, and 720 as well as successful completion of the junior class clinical exit examination.

### **823 Surgical Seminar (1)**

Students will review and apply basic and advanced principles of podiatric surgery via clinical case presentations. Prerequisites: all first, second and third year courses.

### **825 Practice Management (3)**

This course will examine the administrative details of running a private practice. Preparing a banker's loan proposal, floor planning, ordering of office inventory/supplies, hiring of personnel, payroll, billing and collections, insurance, financial planning, advertising, and competition in the healthcare marketplace will be discussed. Prerequisites: all first, second and third year courses.

### **826 Sports Medicine (2)**

Comprehensive review of common sports injuries with discussion of mechanisms, prognosis, treatment, and rehabilitation. Prerequisite: GMS 717. Prerequisites: all first, second and third year courses.

### **831 Community and Minority Medicine (1)**

Review of the public health issues in the community as well as those specific medical problems affecting particular minority groups.

### **832, 833, 834, 835, 836 Podiatric Clerkship Programs I, II, III, IV, V (4,4,4,4,4)**

Students will be required to attend a total of 5 one-month outside clinical rotations at approved hospital-based or private office externship programs throughout the United States. The purpose of this additional training is to present geographical differences in medicine, epidemiology, and the practice of podiatric medicine throughout the United States, as well as provide the students with increased exposure to podiatric postgraduate training programs. Prerequisites: successful completion of GMS 712, 718, 719, and 720 as well as successful completion of the junior class clinical exit examination.

### **865 Advanced Independent Study (1-3)**

The purpose of this course is to develop within the student an appreciation for research as well as its importance in medical education. Hypothesis development, scientific method in data collection, methods of double blind study, and data analysis are presented. Prerequisite: permission of the Dean or Associate Academic Dean.

**875 Advanced Research (1-12)**

Students will conduct research based upon a format/hypothesis developed in GMS 665 or 865. The ultimate goal of this course is publication-quality literature under the supervision of a faculty member. Prerequisite: permission of the Dean or Associate Academic Dean.

**CMP1 Basic Medical Sciences Competency Examination (0)**

Comprehensive examination including macroscopic and microscopic anatomy (gross anatomy, histology, neuroanatomy), lower extremity anatomy, biochemistry, physiology, medical microbiology and immunology, pharmacology and pathology. Prerequisite: GMS 547, 550, 590, 595A, 595B, 600, 601, 620, 623, and 624.

**CMP2 Clinical Skills and Knowledge Competency Examination (0)**

Comprehensive practical examination of clinical skills and knowledge including, but not limited to, biomechanics, radiology, suturing, injections, venipuncture, and development of treatment plans based on oral case questions. Prerequisites-Corequisites: GMS 712, 718, 719, and 720.

**CMPR Basic Medical Sciences Competency Review (1)**

This is a seminar format course which reviews high-yield content and pearls relevant to the Basic Medical Sciences Competency Examination (BMSCE). It culminates with administration of the BMSCE for those students who did not pass it the first time or elect to retest.

# PHYSICIAN ASSISTANT PROGRAM

## MASTER OF CLINICAL MEDICAL SCIENCE (MCMSc)

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Cynthia Ferchak, MS, PA-C, Associate Director of Clinical Education

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Debbi Hanson, MCMSc, PA-C, Lab Director Physical Diagnosis/St. Petersburg

William Demshok, MS, PA-C, Associate Director Didactic Education

### THE PROGRAM

A Physician Assistant (PA) is a highly qualified health care provider who has been prepared, through a demanding academic and clinical curriculum, to provide health care services under physician supervision. PAs gather and evaluate medical data and participate in the process of clinical decision-making, diagnosis, and therapeutic management.

All students who successfully complete the Barry University Physician Assistant Program (Program) will be awarded both the Master of Clinical Medical Science degree and the Physician Assistant Certificate.

### Program Website

This catalog is published annually. The Program website [www.barry.edu/pa](http://www.barry.edu/pa) contains the most recent information about the Program as well as a section titled "errata" reflecting Program changes that will appear in the next catalog.

## Program Location

The Program has campuses in Miami Shores and at St. Petersburg College, through a partnership with the University Partnership Center. The faculty teach from each site via interactive videoconferencing. Applications to either campus are processed through the Central Application Service for Physician Assistants (CASPA).

## Vision Statement

Our vision is that our graduates will be PA leaders in health care technology and clinical practice.

## Mission Statement

The Barry University Physician Assistant Program educates students in the practice of collaborative medicine and encourages life-long learning and professional development. It fosters a technology rich environment and clinical training experiences among diverse patient populations. The Program enables students to develop competencies required to meet the health care needs of contemporary society.

## Program Objectives

The purpose of the Program is to prepare well-trained health care providers who will extend and complement the capabilities of physicians in the delivery of health care.

The Program:

- Prepares students to be competent and compassionate health care providers.
- Prepares students to be collaborators in intra-disciplinary health care teams.
- Emphasizes the importance of critical inquiry and lifelong dedication to continuous learning and self assessment.
- Cultivates the professional behaviors and values of the helping professions.
- Promotes the importance of health maintenance, health education and the prevention of disease for individual patients and communities.
- Prepares students to practice evidence based medicine that improves the quality and effectiveness of health care.
- Prepares students to be effective communicators in their work with patients, families and other health care providers.
- Prepares students to be proficient in using health care technology.

## Competencies and Outcomes

Graduates of the Barry University Physician Assistant Program will be knowledgeable and competent in the following areas as expected by the PA profession:

- Medical knowledge regarding the basic medical sciences and pathophysiology; the diagnosis and management of disease; and the promotion of health.
- Interpersonal & communication skills involving verbal, nonverbal and written exchange of information, which results in effective information exchange with patients, patients' families, physicians, professional associates, and the health care system.
- Patient care that is effective, patient-centered, efficient and equitable in the treatment of health problems and the promotion of wellness.
- Professionalism which emphasizes the practice of the values and ideals, which are embraced by the helping professions, and result in the practice of medicine in a manner that is ethical, sensitive to diverse patient populations and adhering to legal and regulatory requirements.
- Practice-based learning and improvement in regards to the ability to engage in critical analysis of their own practice experience, medical literature and other information resources for the purpose of evaluation and improvement of patient care practices.
- Systems-based practice which delivers the highest quality care at the most advantageous value, within the complex health systems providing medical care.

## Educational Philosophy

The vast amount of information in medicine can never be mastered by any one person. However, it is each practitioner's responsibility to learn as much as possible each day in order to develop the widest fund of knowledge possible. The Program encourages its students to engage medicine as a life-long learning experience.

Course syllabi and lecture materials are meant to help the student obtain a broad overview of the identified topics. However, neither tests nor examinations for licensure, nor the patients whom a student may encounter in a clinical rotation, can exhaustively cover the content of any given area in medicine. Therefore, it is incumbent upon the student to study beyond the syllabus and course materials and to develop intellectually to every extent possible.

## Risks and Dangers of Medical Practice

Practicing medicine places a practitioner at greater risk than is normally encountered in the course of daily life. There is a risk of contagion of diseases such as

tuberculosis, HIV/AIDS, hepatitis; there is a risk of death from these diseases.

There is a risk of being victimized by violent behavior since some patients behave in a violent fashion, particularly when they are under the influence of substances, or suffer from psychotic disease or delirium.

Practicing medicine requires a devotion to humanity, a vocation to serve all people in need, a humility to endure insult, attack and risk, a conscientious effort to avoid risk and confrontation and a selflessness which is not often asked of people in most other professions.

The PA Program offers its students instruction in universal precautions of avoiding contagion, and of avoiding harm in cases of violent behavior. However, the student must realize that some risk is inherent in the practice of medicine that cannot be predicted and, on rare occasions, cannot be prevented.

## **BARRY UNIVERSITY PHYSICIAN ASSISTANT PROGRAM TECHNICAL AND PROFESSIONAL STANDARDS**

### **I. Introduction**

Physician Assistant (PA) training is recognized as a broad-based process that requires the acquisition of general knowledge in all fields of medicine and of the basic skills required for the practice of medicine, regardless of specialty. The education of a PA in the Barry University Physician Assistant Program requires assimilation of knowledge, acquisition of skills, and development of judgment through patient care experience in preparation for semi-autonomous and appropriate decisions required in medical practice. The current practice of medicine emphasizes collaboration among physicians, other allied health care professionals such as PAs, patients and families.

### **II. Technical and Professional Standards**

- A. The Program Technical and Professional Standards (Standards), as distinguished from academic standards, refer to those physical, cognitive, and behavioral abilities necessary for satisfactory completion of all aspects of the Program curriculum. This includes the development of professional attributes required by the faculty of all Program students by the time of graduation and for future practice as a certified and licensed PA.
- B. The Program standards and essential functions of medical education shape the requirements for admission, retention, and graduation of applicants and students. All graduates are expected to be qualified to enter a field of PA practice of their choice.
- C. Students applying to the Program are selected on the basis of academic achievement, faculty evaluations, evidence of maturity, motivation, leadership,

integrity, and compassion. Students must be capable of meeting the Standards described herein.

- D. The medical education process involved in the Program focuses largely on the care of patients, and differs markedly from postsecondary education in fields outside of the health sciences. The primary responsibility for the selection of students and for the content of the curriculum rests with the Program and its faculty.
- E. The PA role is, and must remain, a broad, undifferentiated role that produces graduates capable of supporting the full range of physician practice and patient needs. The Program credentials awarded must attest to the acquisition of general knowledge in all fields of medicine and the basic skills requisite for the practice of medicine under physician supervision.
- F. Applicants are assessed without regard to sex, race, religion, color, national or ethnic origin, age, physical disability, or sexual preference. Admission to the Program is competitive and is based on individual merit and performance within each applicant pool for a given academic year, and not on personal convictions, preferences, or happenstance of birth unrelated to academic performance.
- G. The Standards, along with the Program policies, procedures and process for the admission and education of PA students, parallel, to some extent, those set forth by the Physician Assistant Competencies published by the ARC-PA, AAPA, NCCPA and PAEA, and inform and guide the decisions of the Program faculty. All students of medicine, including PA students, must possess those intellectual, ethical, physical and emotional capabilities required to undertake the full curriculum and to achieve the levels of competence required by the faculty.
- H. The Standards are as follows.

#### **1. Observation**

The Program curriculum requires essential abilities in information acquisition.

- a. The student must have the ability to master the course work presented in the form of lectures, written material and projected images. For many required tasks, observation necessitates the functional and mixed use of the sense of vision and other sensory modalities.
- b. Learning is enhanced by the functional use of the senses of smell and touch. The candidate must possess adequate sensation of vision, hearing, equilibrium, smell, taste, touch, pain, temperature, position, pressure, movement, stereognosis, and vibration, particularly when gross and/or subtle changes in symmetry are present.

- c. The student must have the cognitive abilities necessary to master relevant content in basic science and clinical courses at a level and pace deemed appropriate by the faculty.
- d. These skills may be described as the ability to comprehend, memorize, analyze, and synthesize material.
- e. The student must also be able to discern and comprehend dimensional and spatial relationships of structures and to develop reasoning and decision-making skills appropriate to the practice of medicine.
- f. Students must be able to perceive, by the use of senses and mental abilities, the presentation of information through small group discussions and presentations, large-group lectures, one-on-one interactions, demonstrations, laboratory experiments, patient encounters (at a distance and close at hand), diagnostic findings, procedures, and written material and audiovisual materials.
- g. Representative examples of materials/occasions requiring perceptual abilities in the first year include, but are not limited to: books, diagrams, discussions, photographs, x-rays, clinical case presentations, patient interviews and physical examinations, completion of cognitive and skills requirements for ACLS and PALS certification, and performance of suturing, casting, splinting, gowning, gloving, surgical scrubbing and establishing/maintaining sterile fields in the operating room setting.
- h. Additional examples from the second (clinical) year include, but are not limited to: physical exams; rectal and pelvic exams; examinations with stethoscopes, otoscopes, fundoscopes, sphygmomanometers, and reflex hammers; verbal communication and non-verbal cues (as in taking a patient's history or working with a medical team); live and televised surgical procedures; assisting at surgery and childbirth; x-rays, MRIs, and other diagnostic findings; online computer searches; and, responding to a wide variety of urgent and/or emergent patient presentations.

## 2. Communication

The student must have the ability to take a medical history and perform a physical examination. Such tasks require the ability to communicate with the patient.

- a. The student must be capable of perceiving the signs of disease or distress as manifested through the physical examination so these findings can be communicated verbally or in

writing or both. Such information is derived from viewing and touching the body surfaces, palpable changes in various organs, and auditory information (patient voice, heart tones, bowel, and lung sounds).

- b. The student must be able to communicate effectively (in English) with patients and family, physicians, and other members of the health care team.
- c. These communication skills require the ability to assess all information, including the recognition of the significance of non-verbal responses and immediate assessment of information provided to allow for appropriate, well-focused follow-up inquiry.
- d. The student must be capable of responsive, empathetic listening to establish rapport in a way that promotes openness on issues of concern and sensitivity to potential cultural differences, and includes interacting therapeutically with psychiatric patients. In essence, this requires that the student be able to function, often in a fast paced environment, in order to:
  - \* Elicit information
  - \* Convey information
  - \* Clarify information
  - \* Create rapport
  - \* Develop therapeutic relationships
  - \* Demonstrate competencies
- e. The student must be able to skillfully process and communicate information regarding the patient's status accurately and in a timely manner to the physician supervisors and all other members of the health care team. Complete, accurate information then needs to be communicated in a succinct, yet comprehensive manner, in settings in which the time available is limited. This may include, but is not limited to, participating in clinical rounds and conferences, oral presentations to physicians or other members of the healthcare team, written or dictated patient assessments and writing prescriptions.
- f. Appropriate communication may also depend on the student's ability to make a correct judgment in seeking supervision and consultation in a timely manner, particularly in urgent and emergent situations.

## 3. Sensory and Motor Function

The student must have sufficient sensory and motor function to elicit information from patients by palpation, auscultation, percussion, and other diagnostic maneuvers.

- a. The student will be required to coordinate both gross and fine muscular movements,

- equilibrium, and functional use of the senses of hearing, touch and vision.
- b. More specifically, the student must be able to exercise such fine motor skill as to adequately perform laboratory tests, including but not limited to, wet mount, urinalysis and gram stain.
  - c. The student must exercise such level of dexterity, sensation and visual acuity as to competently and accurately complete such processes as administering intravenous medication, making fine measurements of angles and size, measuring blood pressure, respiration and pulse, performing physical examinations, and performing therapeutic procedures such as phlebotomy, EKGs, reading radiographs, suturing and casting.
  - d. The student must be able to hear sufficiently to accurately differentiate percussive notes and auscultory findings, including but not limited to heart, lung, and abdominal sounds, as well as discern normal and abnormal findings using instruments such as tuning forks, stethoscopes, sphygmomanometers, and Doppler devices.
  - e. A student must be able to transport himself or herself in a manner which provides timely response in both general and emergency care situations. Moving patients and engaging in some procedures requires the level of skill, strength and endurance necessary to perform the procedure(s) quickly, safely, effectively and for a reasonable period of time, often in a stressful environment.
  - f. Examples of emergency treatment reasonably required of a PA are cardiopulmonary resuscitation, the administration of intravenous medication, application of pressure to stop bleeding, the opening of obstructed airways, the suturing of simple wounds, and the performance of simple obstetrical maneuvers. Such actions often require simultaneous coordination of gross and fine muscular movements, equilibrium and functional use of the senses of touch and vision.

#### **4. Intellectual-Conceptual, Integrative and Quantitative Abilities**

Students must be able to demonstrate higher-level cognitive abilities, which include:

- \* Rational thought
- \* Measurement
- \* Calculation
- \* Visual-spatial comprehension
- \* Conceptualization
- \* Analysis

- \* Synthesis
  - \* Organization
  - \* Representations (oral, written, diagrammatic, three dimensional)
  - \* Memory
  - \* Application
  - \* Clinical reasoning
  - \* Ethical reasoning
  - \* Sound judgment
- a. Examples of applied cognitive abilities in the first year include, but are not limited to: understanding, synthesizing, and recalling material presented in classes, labs, small groups, patient interactions, and meetings with preceptors; understanding 3-dimensional relationships, such as those demonstrated in the anatomy lab; successfully completing oral, written, and laboratory exams; understanding ethical issues related to the practice of medicine; engaging in problem solving, alone and in small groups; interpreting the results of patient examinations and diagnostic tests; analyzing complicated situations, such as cardiac arrest, and determining the appropriate sequence of events to effect successful treatment; working through genetic problems.
  - b. Additional examples of required cognitive abilities in year two include, but are not limited to: integrating historical, physical, social, and ancillary test data into differential diagnoses and treatment plans; understanding indications for various diagnostic tests and treatment modalities - from medication to surgery; understanding methods for various procedures, such as lumbar punctures and inserting intravenous catheters; being able to think through medical issues and exhibit sound judgment in a variety of clinical settings, including emergency situations; identifying and understanding classes of psychopathology and treatment options; making concise, prompt, cogent, and thorough presentations based on various kinds of data collection, including web-based research; knowing how to organize information, materials, and tasks in order to perform efficiently on service; understanding how to work and learn independently; understanding how to function effectively as part of a healthcare team.

#### **5. Behavioral and Social Attributes**

A candidate must possess the emotional health required for full utilization of his or her intellectual abilities, the exercise of good judgment,

the prompt completion of all responsibilities attendant to the diagnosis and care of patients, and the development of mature, sensitive, and effective relationships with patients.

- a. Candidates must be able to tolerate physically taxing workloads and to function effectively under stress.
- b. They must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of many patients.
- c. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that are assessed during the admissions and throughout the education processes.
- d. The student must be able to understand the basis and content of medical ethics.
- e. The student must possess attributes that include compassion, empathy, altruism, integrity, responsibility, and tolerance. (See Professional Behaviors, below)
- f. The student must have the emotional stability to function effectively under stress and to adapt to an environment that may change rapidly, without warning, and/or in unpredictable ways.

#### 6. Professional Standards

All students of the Program must consistently display integrity, honesty, empathy, caring, fairness, respect for self and others, diligence, and dedication. Students must:

- a. Promptly complete all assignments and responsibilities attendant to the diagnosis and care of patients (beginning with study in the first year);
- b. Develop mature, sensitive, and effective relationships, not only with patients but with their peers, all members of the Program and university community and healthcare teams;
- c. Tolerate physically, emotionally, and mentally demanding workloads;
- d. Function effectively under stress, and proactively make use of available resources to help maintain both physical and mental health;
- e. Adapt to changing environments, display flexibility, and be able to learn in the face of uncertainty;
- f. Take responsibility for themselves and their behaviors.

Examples of professional behavior in year one include, but are not limited to: attending required experiences on time and prepared; displaying good personal hygiene and dressing according to Program requirements; refraining from the abuse of alcohol and/or

prescription drugs, and the use of illicit drugs; handing in assignments on time; refraining from plagiarizing or cheating; treating faculty, staff, and other students with respect; making an effort to understand prejudices and preconceptions that might affect patient interactions or collegial relationships (especially in the areas of race and ethnicity, sexual orientation, gender, disability, age, and religious difference); developing successful working relationships with preceptors, staff, and peers by accepting constructive feedback and modifying their behavior accordingly.

Additional examples of professional behavior in year two include, but are not limited to: maintaining a professional appearance and demeanor on service (e.g. white coat, name tag, appropriate attire, neat appearance, respectful speech, sobriety); representing oneself accurately; appreciating and preserving patient confidentiality; responding sensitively to patients' social and psychological issues; developing empathic listening skills; understanding social biases and stigmas, and not reinforcing them; advocating for patients when appropriate; using hospital/clinic resources responsibly; showing up prepared and on time for rounds, lectures, conferences, and procedures; getting advice when handling ethical dilemmas; taking constructive feedback from attending physicians and residents with open-mindedness and the intention to improve; contributing to the effectiveness, efficiency, and collegiality of healthcare teams.

Applicants are assessed without regard to sex, race, religion, color, national or ethnic origin, age, physical disability, or sexual preference. Applications are encouraged from students of medically-underrepresented minority groups.

The medical education process involved in the Program focuses largely on the care of patients, and differs markedly from postsecondary education in fields outside of the health sciences. The primary responsibility for the selection of students and for the content of the curriculum rests with the Program and its faculty.

### III. Disabled Students/Applicants

A. *Introduction.* A student, who has a disability, as defined by Section 504 of the Rehabilitation Act and the Americans with Disabilities Act, does not mean the student is not qualified to study and practice medicine in the Program. To be qualified for the study of medicine in the Program, students must be able to meet the academic, technical and professional standards, *with or without* a reasonable accommodation.

B. *Process for Assessing Disabilities and Reasonable Accommodations.*

1. No inquiry will be made on the application forms concerning a disability. Program policies regard-

- ing technical abilities and skills necessary to meet the competency requirements are published and available on the Program website and referenced in its literature, and included with the letter of admission. Students and candidates are encouraged to review the competency requirements.
2. Students accepted for admission to Program who believe they require a reasonable accommodation for any medical condition must contact Barry University's Office of Disability Services ("ODS") so that ODS can determine if the medical condition is a disability as defined by Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Part of ODS' review of whether or not a student has a disability includes a requirement that the student submit supporting documentation regarding the disability from a qualified health professional. The health professional must also provide an opinion on the student's ability to meet the Program Standards with or without reasonable accommodations. It is the responsibility of the student to provide a complete set of the Program Standards to the qualified health care provider before the opinion is rendered.
  3. A reasonable accommodation is viewed as a means of assisting disabled students with meeting essential standards by providing them with an equal opportunity to participate in all aspects of each course or clinical experience (a reasonable accommodation does not, however, guarantee that students will be successful in meeting the requirements of the course or clinical activity).
  4. Whether or not an accommodation is reasonable will be determined on an individual basis. Determining what is a reasonable accommodation is an interactive process between the disabled student, ODS, and Graduate Medical Services ("GMS"). ODS will discuss the reasonableness of the accommodation with GMS (which is typically the Vice-President of Medical Affairs or his/her agent) in light of cost to Barry University and the Standards described herein. Any disagreements between ODS and GMS regarding whether an accommodation is reasonable under current federal and/or state law should be addressed with Barry University's Office of Legal Affairs.
  5. All students accepted into the Program must sign a statement that they have read, understand and are able to meet the Program Standards, with or without reasonable accommodations. The Standards apply to all phases of the Program, including admissions, matriculation and graduation.

6. Although a disability may ultimately prevent some candidates or students from meeting the Program Standards, the Program is committed to providing any and all reasonable accommodations that will assist disabled students in entering and successfully completing the Program.

## NON-DEGREE OPTION

For those interested in taking courses for enrichment, a maximum of 16 graduate credits may be taken as a non-degree-seeking student. Students exercising this option are not eligible for financial aid and must pay for courses on a per credit basis before being allowed to register. Students exercising this option are not eligible for the NCCPA PANCE. Registration for this option requires permission from the Program Director.

## ADMISSION REQUIREMENTS

The successful candidate for admission to the Physician Assistant Program will have:

- a baccalaureate degree from a regionally accredited or internationally recognized college or university; it is highly recommended that the undergraduate grade point average, especially in science, be 3.0 or higher;
- completed two courses (six semester hours total) in general biology or zoology and at least six additional semester hours in other biological sciences, such as anatomy, physiology, human genetics, microbiology, histology, and cell and molecular biology (the first three courses are highly recommended);
- completed at least six semester hours in behavioral sciences, including psychology, sociology, and human growth and development;
- completed a minimum of six semester hours in general chemistry and three semester hours in either organic chemistry or biochemistry;
- taken the Graduate Record Examination (GRE); a combined verbal plus quantitative score of 1000 or more is highly recommended; the Medical College Admissions Test (MCAT) may not be substituted for the GRE; applicants whose GRE scores are more than 5 years old must re-take the GRE and submit more recent scores
- submitted a complete dossier of official college transcripts and three letters or forms of evaluation or recommendation, preferably including one or two from academicians and one or two from clinicians or supervisors who have observed the applicant's work in a health-care setting;
- evidence of prior experience in health care is highly recommended;
- met the Program Technical and Professional Standards.

In addition, though not a requirement for admission, students accepted into the Program must complete a course in medical terminology prior to matriculation.

A personal interview is required and extended only at the invitation of the Admissions Committee. The Committee strongly recommends that all documentation be complete prior to the interview.

In addition to the above, foreign-born non-U.S. or non-Canadian citizens must:

- have attended a college or university in the United States for a minimum of one year prior to application;
- have scored a minimum written test score of 600 or a computer-based test score of 250 on the Test of English as a Foreign Language (TOEFL).

Selection will be made by committee and is based upon the above criteria. Candidates are evaluated in the context of the applicant pool for the year in which they seek to matriculate. Therefore, the admission process for the PA Program is highly competitive. Candidates are considered on the basis of their overall GRE, undergraduate and graduate GPA, their health care experience and knowledge of the PA profession, letters of recommendation, the interview and their personal statement.

Individuals selected for admission must exhibit the necessary interpersonal skills, physical, psychological, and behavioral capacities to satisfactorily fulfill the rigorous requirements of the Program.

## Special Considerations

At the interview, the Program gives additional points to students applying to the Expansion in St. Petersburg if they are “place-bound” (i.e., if they are unable to leave their geographic area in order to obtain a PA education elsewhere).

As part of an agreement with the University Partnership Center at St. Petersburg College, up to 4 students per year who graduated from St. Petersburg College and who are admitted into the Program in St. Petersburg will receive a tuition discount of 20%.

## APPLICATION PROCEDURE

All applicants to the Barry University Physician Assistant Program must apply through the Central Application Service for Physician Assistants (CASPA). Applicants may begin the application process by visiting the CASPA web site at <http://www.caspaonline.org>. It is preferred that students apply only to one site (Miami Shores or St. Petersburg). Those who apply to both sites should notify the Admissions office of their first choice. Applicants invited for interviews will be invited only to their first choice site.

On occasion, a student offered a seat at the Barry campus at which they interviewed has requested to be seated at the other campus. Prior to considering such a request, the Program requires the student to visit the other campus for a tour of the facilities and to meet the Program faculty and staff. This helps assure that the student making the request is reasonably informed of what to expect when they matriculate.

Such requests are not routinely granted, and are made at the sole discretion of the Program director, and only after the student visit and consultation with the faculty and staff who would receive the transfer. Should the request be denied, the admitted student will be processed in accordance with routine Program policies for admitted and matriculated students.

The Program uses a rolling admissions process, i.e., it reviews applications as they are completed and makes decisions throughout the admissions cycle. For this reason, it is in the applicant’s best interests to apply as early as possible. Well-qualified applicants who apply late in the cycle may not be admitted because the class may already be filled.

The application deadline is December 1st of each year. Accepted applicants must submit two deposits of \$500.00 each. Deposits are non-refundable.

Inquiries or communications concerning admissions should be addressed to the Office of Graduate Admissions, Barry University, 11300 N.E. Second Avenue, Miami Shores, Florida 33161. Telephone inquiries will be answered if the applicant calls (305) 899-3123 but email inquiries are preferred (please email [aerodriguez@mail.barry.edu](mailto:aerodriguez@mail.barry.edu)).

This catalog is published annually. The Program website [www.barry.edu/pa](http://www.barry.edu/pa) contains the most recent information about the Program and a section titled “errata” reflecting changes that will appear in the next catalog.

## Advanced Standing and Transfer Policy

Due to considerable variation in physician assistant programs throughout the United States, students of other PA programs will not be accepted for transfer into the Program. In addition, applicants to the Program may not receive “advanced standing” based upon previous education or credits taken.

## ADMINISTRATIVE POLICIES AND PROCEDURES

Students are responsible for compliance with the policies of the Barry University and its Physician Assistant Program. Since these policies are under constant scrutiny, the university reserves the right to change any provisions or requirements in this document at any time within the student’s term of enrollment.

## Registration

All students must complete the appropriate registration forms at the beginning of each semester. Students must consult with and obtain the signed approval of their advisors on registration forms BEFORE the forms are submitted to the Registrar/Cashier Business Office. Registration in elective courses must be approved by the Program Director before the registration form is submitted to the Registrar/Cashier Business Office.

Students, who fail to complete registration requirements within 10 working days of the first day of class, including appropriate financial arrangements with the Office of Cashier Business Office, will NOT be permitted to attend classes, laboratories or clinical rotations/programs, take examinations or participate in any other activities of the School. The university will notify scholarship programs, banks providing government-subsidized loans, etc., when students cease to be appropriately registered.

## Drop-Add and Course Withdrawal

A brief period of schedule adjustment (i.e., drop-add) is provided to students at the beginning of the initial fall semester. Students should realize that the Physician Assistant Program curriculum is intense, structured, and lockstep. Even minor modifications may delay graduation. The withdrawal deadlines for the Program are Friday of the tenth week of the Fall and Spring semesters and Friday of the sixth week of the Summer semester. Students may withdraw from a course until the deadlines without grading penalty. The student's transcript will show a "W" beside the course from which he/she has withdrawn. A student who withdraws from a class after the withdrawal deadline receives an F grade.

Dropping a course is generally not allowed since the student would lose an entire year before they could be re-enrolled in those courses. The future ramifications of withdrawal from a course are such that they would severely limit the number of courses a student may take in future semesters.

This would dilute their educational experience and would postpone their entry into the clinical rotations too long; it would potentially change the fundamental basis of their Program.

All PA students must successfully complete all 1st semester core courses (Gross Anatomy, Physiology, Physical Diagnosis & Pharmacology) for academic progression to subsequent courses.

Students who wish to drop a Clinical Rotation may be able to do so by taking a leave of absence. This is fully described in the Clinical Year Manual.

## Transcripts

Transcript request forms must be completed and signed by the student before official transcripts may be issued. These forms are available in the Office of the Registrar. Copies of student transcripts are never released without written authorization from the student or, in the case of a governmental investigative agency, without a court order or subpoena. Students will be informed by the Office of the Registrar should this occur. At the request of the Business Office, official transcripts will not be released to a student (or requested institutions) if the student has an outstanding balance (i.e., a "hold" will be placed on transcripts/grades).

## Incomplete ("I") Grades

A grade of Incomplete ("I") indicates a failure to complete required work within the semester and implies the instructor's consent that the student may make up the work which is deficient. The Dean or Associate Academic Dean must be informed in writing by the instructor when an "I" grade is issued. When the work is completed to the satisfaction of the instructor, the "I" grade will be changed to a letter grade. The instructor will forward a completed Grade Adjustment form for the grade change to the Dean or Associate Academic Dean for signature and then to the Registrar. Students, under special extenuating circumstances, (e.g., illness, leave of absence, etc.) may be granted an "Incomplete" in a course. All incomplete written examinations must be taken by the end of Wednesday of the first week of the new semester. Laboratory examinations to complete missed work may be administered at a later time at the discretion of the faculty, based upon availability of necessary laboratory materials. A grade not reported as completed within the time required by the school becomes an F. Failure in any course in which an incomplete was issued will (1) reflect in a grade of "F" for the semester in which the course was originally registered, and (2) result in academic probation or suspension retroactive to the beginning of the semester in which the course work was completed. In addition, achieving a failing grade in a completed course may result in failure to meet published prerequisites for another course, and may therefore require a schedule adjustment (drop) in the semester in which the incomplete was unsatisfactorily completed.

## Reporting and Recording of Grades

Semester grade reports are posted on WebAdvisor by the Office of the Registrar for each student to access: Semester grades are not mailed. A "hold" will be placed on the grades/transcripts of a student who has an outstanding balance owed to the University, as indicated by the Office of Cashier Business Office. No

grades/transcripts will be released until such balances have been paid.

The Office of the Registrar does not record percentage scores for any course or test; it does, however, permanently record the letter grade earned by the student in every course he/she takes while in the Program. Individual instructors must be contacted to obtain percentage scores earned in any particular course.

Change of name or address notification is the responsibility of the student. Appropriate change of address forms are available from the Office of the Registrar. Students must also inform the Program office manager at their campus of any name, address or telephone number change.

## Student Health

Upon entry to the PA Program, every student must have health insurance coverage which meets Barry University requirements, including coverage of occupational exposures. Coverage must remain in effect at all times while enrolled in the Program. Graduate students taking six or more credits may purchase health insurance through the Barry University Health Plan (see [www.uhcsr.com](http://www.uhcsr.com)). Students should review the coverage offered by the Barry University student health policy at the web site of the Student Health Center (SHC) (<http://student.barry.edu/SHS/insurance.htm>)

Prior to beginning the Program, students must provide a copy of their Barry University Health Plan enrollment form or other current insurance card to both the Program and the SHC. In the event a change of insurance coverage occurs, the student must submit proof of the new plan. Students covered by an insurance plan other than the University plan must complete a waiver that must be obtained from the PA Program office. Failure to submit proof of Barry University Health Plan coverage, or provide the waiver and proof of other insurance, will result in holds on registration and/or withdrawal from all clinical activities, with potential delays in progression through the Program.

On or before the first day of new student orientation, each student must provide the Program proof of compliance with Program student health requirements. These are based in part on the CDC Guidelines for Health Care Workers including:

- Statement of Good Health Form (included in welcome pack)
- MMR x2 (doses must be 4 weeks apart) or adequate titer
- Tetanus/diphtheria/pertussis (Tdap) series and a booster within the past 10 years
- Hepatitis B vaccination 3-doses series or waiver
- Varicella (chickenpox) immunity demonstrated by titer, or evidence of receipt of immunization

- PPD screening for tuberculosis (or chest x-ray report if PPD positive)
- The Program also recommends that students receive influenza immunization as specified by the CDC

Each student must update their PPD status and Statement of Good Health every 12 months or more often if required by a clinical site to which the student is assigned. The above information may be released to third parties to facilitate student clinical placements.

Students must also present a basic cardiac life support certification at new student orientation.

Students are advised that faculty of the Program are prohibited by ARC-PA standards from providing health care services to students. Students must not seek health care from their didactic or clinical faculty.

## Screening and Documentation Requirements

Due to various federal and state mandates concerning protection of vulnerable patient populations, Homeland Security requirements and anti-fraud initiatives by Medicare and Medicaid, students enrolled in clinical training programs across the nation face a number of fairly intrusive and costly screening and documentation requirements.

Students matriculating into the PA Program will undergo a number of screening and documentation requirements. It is expected that this number will continue to increase beyond the present time.

Among the various screening requirements are criminal background check(s) and random drug tests. The costs for these screens are borne by the student.

## Drug Screens

A positive drug screen will result in reevaluation of the individual's fitness for retention or dismissal from the Program. Conditions for retention may include monitoring by appropriate health care professionals, regular surveillance of compliance with Program policies, and drug testing, all at the student's expense.

## Criminal Background Check

Upon matriculation to the Program and annually, thereafter, all students whose education and training will involve participation in clinical settings are required to undergo a criminal background check. Students are responsible for all expenses related to meeting student health requirements and background documentation.

Applicants who answer "no" to questions relating to criminal background in their CASPA application, who later matriculate and are found to have a positive criminal background check, are likely to be dismissed

from the Program on the basis of misrepresentation. In the event of a reported incident, a determination about the applicant's/student's continued progress in the Program will be made by Barry University in accordance with School and University procedures.

Applicants who have been convicted of a felony or misdemeanor may be denied certification or licensure as a health professional. Information regarding eligibility may be obtained from appropriate credentialing boards. Clinical rotation sites may not permit participation in the clinical experience. This should be considered seriously by the candidate prior to application and matriculation.

Applicants are advised that results of criminal background checks and other required background screening will be released to third parties involved in their clinical education.

Criminal offenses incurred after the student matriculates may result in the student's dismissal from the Program; if this occurs, tuition and fees will not be refunded.

## Didactic Students

All didactic year students are required to own a laptop computer and should have them in their possession at the time of New Student Orientation. The Program makes syllabi and course materials available online. Developing computer skills is critical to the success of students in the Program and in practice. Though not a requirement for admission, students are expected to possess computer skills prior to matriculation. They are expected to have skills in word processing, email and internet browsing.

Students will need to have internet access at their place of residence throughout the PA Program. This is necessary for communications, assignments, research and maximization of the learning experience. Minimum standard laptop computer specifications are found at <http://www.barry.edu/pa/adFin/laptop.htm> and change approximately every three months.

A laptop purchase program through Dell ensures that a laptop is more affordable and allows a significant discount off of Dell's normal retail price. The machine incorporates all of the necessary features, speed, capacity, etc., that are required for the Program. Financing of the laptop is available through Dell. The laptops are configured with a software bundle and a three year warranty. They are supported by Barry University's Division of Information Technology (DoIT). Prior to matriculation, students should visit the Barry University Physician Assistant website (<http://www.barry.edu/pa/adFin/laptop.htm>) and click on the link to Dell's university program page in order to order the laptop.

## Clinical Students

All clinical year students must have home internet access and a hand held personal digital assistant (PDA) computer and will be required to purchase a specific software program enabling them to track their patients and procedures.

## Student Work Policy

The PA Program is very demanding and requires student attendance many evenings during the didactic year as well as the potential for scheduling nights and weekends during clinical rotations. All attendance is mandatory. This would make it very difficult for a student to work while enrolled in the Program. Outside employment is strongly discouraged but remains at the discretion of the student.

## ACADEMIC POLICIES AND PROCEDURES

### Attendance

Attendance is required (i.e., mandatory) in all courses including lectures, laboratory sessions, clinical rotations, and demonstrations. *Attendance sheets are distributed at the beginning of each class and submitted for daily review.* After 3 absences per class per semester, excused or unexcused, a Program Professional Referral Form should be completed, referring the student to meet with their faculty advisor to discuss the attendance issues. The Professional Referral will be placed in the student's academic/administrative folder. If absences are due to severe illness, death in family or similar unavoidable occurrences, this will be documented for future reference. Reliable documentation of the circumstances should be provided by the student. Any unexcused absence(s) will be documented in the same fashion. At the time of graduation, if no more unexcused absences have occurred, this documentation will be removed from the student's administrative file. Recurrent unexcused absences are grounds for student disciplinary action, probation or suspension from the Program as it demonstrates unprofessional conduct. Tardiness to class will be documented and managed in similar fashion. Any instructor may, at his/her discretion, include attendance (or the lack thereof) as part of the syllabus, including the impact attendance may have on the grade a student receives while enrolled in a course. Students are responsible for all material and assignments covered in that particular course and all examinations including unannounced quizzes.

Attendance at all clinical rotations and end of rotation activities is mandatory (see Clinical Rotations). No student will be permitted to arrive late or leave the clinical site without the permission of the clinical preceptor and/or clinical faculty. Requests for absences

from a clinical rotation should be presented at least two weeks prior to the requested dates of the absence. It is the responsibility of the student to find someone willing to “cover” for him/her during the absence if the preceptor requests such coverage. Last minute requests are disfavored and will not be routinely honored. Students may be required to repeat an entire rotation if excessive absences occur. Further information regarding attendance at rotations during the clinical year may be found in the Clinical Year Manual.

## Academic Integrity and Behavior

Promotion of academic integrity and ethical professional behavior are goals of the Program. Cheating or plagiarism will not be tolerated. Refer to the “Policies and Procedures” section of this catalog and the Barry University Student Handbook for definitions of cheating and plagiarism. A student who gives or receives information or assistance during a testing session will automatically fail and earn 0% as an exam or quiz grade. The same consequence will apply to any proven case of plagiarism. Further, the individual(s) will be referred to the Dean for appropriate disciplinary action and the incident will be documented in the student’s file. Any student who is referred to the Dean for violation of the dishonesty policy on two occasions will be dismissed from the University.

The following is excerpted at the request of the National Commission on Certification of Physician Assistants:

“Graduates of the PA Program are eligible to take the NCCPA Physician Assistant National Certifying Examination (PANCE). Successful completion of the PANCE is required for initial licensure in every state.

The NCCPA takes very seriously any and all threats to the security of the PANCE and will not hesitate to discipline, and to take legal action against, anyone caught violating the confidentiality of the examination.

When you sign the agreement on your application for certification, you stipulate to the following:

You understand that the content of PANCE, and each individual PANCE question, is the property of the NCCPA, is copyrighted and is strictly confidential information;

You understand that the unauthorized retention, possession, copying, distribution, disclosure, discussion, or receipt of any PANCE question, in whole or in part, by written, electronic, oral or other form of communication, including but not limited to e-mailing, copying or printing or electronic files, and reconstruction through memorization and/or dictation, before, during, or after an examination is strictly prohibited;

You understand that, in addition to constituting irregular behavior subject to disciplinary action, such activities violate the NCCPA’s proprietary rights, including copyrights, and may subject you to legal action.

You understand that the consequences of breaking this agreement may include, but are not limited to, the following:

Disqualification from PANCE

Denial of certification

Revocation of eligibility to sit for future PANCE

Revocation of certification

Legal action for monetary damages” (NCCPA)

## Professional Conduct Code

Students are expected to comport themselves in a professional manner in the classroom, in clinical sites, on campus, and at all other times. Expected conduct is specified in the Barry University Student Handbook, Clinical Year Manual, this Graduate Catalog, and in syllabi and other materials distributed by instructors. Unprofessional behavior will be reported to the Program Director for consideration of disciplinary action.

## Statement on Professionalism Behaviors

The physician assistant profession and PA education programs generally have an excellent reputation for instilling an appropriate sense of professional behavior in PA students and graduates. In order to foster and continue this tradition, the students and faculty of the Program have cooperated in developing a system that addresses instances of both positive and negative student behaviors.

Judgments of professionalism are often more qualitative than quantitative. The Barry University Physician Assistant Program relies on the sound judgment of its faculty in the assessment of student professional behavior. Early recognition of positive behaviors and elimination of unprofessional behaviors benefits the individual student, the student body and the Program. It also helps avoid the possibility that a student might progress through the Program with an adequate fund of knowledge and clinical skills, only to be found lacking in their ability to meet the Program’s technical standards or demonstrate the professional behaviors necessary for PA practice as a member of the health care team.

When negative issues about professional behavior arise, the Program encourages students and faculty, including preceptors, to informally address the student(s) involved in a non-confrontational dialogue. If the issue is resolved in this manner, it may be taken as a sign of success and professional maturity. If the issue or conduct recurs/persists, the individual(s) observing the negative conduct should fill out a referral form ad-

ressed to the student's faculty advisor. The advisor will then meet with the student to discuss the issue(s). The faculty advisor will then indicate the advisor's opinion on the reported issue and make written recommendations for corrective action in accordance with Program policies, as set forth in the student handbook, graduate catalog and clinical year manual.

Each instance of referral for either positive or negative behaviors is tracked on a flow sheet placed at the front of each student administrative file and permanently retained in that record. Instances of conduct deemed to be negative and serious lapses will result in referral to the program director for administrative and/or disciplinary hearings. Repeated episodes of otherwise minor issues may serve as the basis of an early summative review of the student and/or referral to the program director to determine the student's fitness to remain in the Program. It is also expected that faculty will refer to the flow sheet to when answering queries concerning professional behaviors of students in training posed by licensing agencies, credentialing bodies and prospective employers of its graduates.

## **Ethical Behavior and Honorable Conduct**

Only the highest ethical and moral behavior should be evidenced by physicians and physician assistants. Behavior which is not of this caliber reflects poorly on the profession. Every student should aspire to the highest ethical standards daily. In the event there is an incident in which a student's integrity is questioned and is found lacking (such as breach of the dishonesty policy or patient confidentiality), the student will be re-evaluated for suitability in the PA profession and may be dismissed from the Program.

## **Dress Code**

Students are expected to dress professionally for all didactic and advanced didactic classes. Required dress is Business Casual 'No shorts, tee shirts, revealing garments; tank tops, blue jeans, flip flops or hats. Scrubs with white coat on Physical Diagnosis lab days only. Violations will be written up on the Professionalism Referral Form and referred to faculty advisor and, if necessary, to the program director.

Students are expected to dress professionally for all didactic and advanced didactic classes. Required dress is Business Casual 'No shorts, tee shirts, revealing garments; tank tops, blue jeans, flip flops, & hats Scrubs with white coat on PD lab days only. Violations will be written up on the Professionalism Referral Form and referred to faculty advisor and if necessary, the program director.

There are specific dress code requirements for participation in clinical rotation and related activities. Visible studs and rings (face, tongue, lips, etc.) are to be removed during all clinical rotation activities. Tattoos are to be covered with clothing or other opaque material (cosmetics, Band-Aid) during clinical rotation activities.

## **Financial Aid**

Loan, scholarship and other financial aid information is available through the Office of Financial Aid. It is the student's responsibility to seek out that information.

The PA Program awards the following scholarships:

The Dean's Scholarship of \$2500 to didactic-year students achieving the highest didactic year grade point averages;

The Dean's Award is given at Convocation to the class valedictorian;

The President's Award is given at Convocation in recognition of outstanding service, academic and clinical achievement;

The Program Director's Award is awarded to a student in recognition of scholastic achievement;

The Catherine Margaret Parkhurst Memorial Scholarship of \$250 to assist a student who demonstrates compassion and sensitivity;

The Carolyn Parkhurst Rosser Award of \$250 to a student who demonstrates strength of moral and ethical character.

The Vernon A & Virginia M. Culver Memorial Scholarship of \$500 to a student for excellence in research analysis.

The Marc and Mildred Rice Memorial Award for Excellence in Pediatrics for \$100 awarded to a student whose 300-500 word essay on "What A Child Taught Me" is chosen as the most meaningful. Anonymously awarded. Essays judged by the donor.

The Jules Ross Award is a memorial honoring one of the Program's first and finest faculty members; it is given to a student who demonstrates enthusiasm and excellence in community service.

The PA Program Scholarship Endowment Fund was established to provide scholarships to students in the PA Program. The endowment funds scholarships to PA students. Core faculty will consider essays of application from PA students who nominate themselves or classmates for these scholarships. This award is based upon compelling financial need. It is presently \$1,000 per year which may be divided among more than one student.

## Academic Advisement

Every student matriculating into the Program is assigned an academic advisor by the Program Director. Full-time faculty members assume academic advising responsibilities. Advising assignments may be changed by the Program Director at the request of the student or faculty member. In the advising process, students have certain responsibilities, which are:

1. to be aware of the educational objectives of the institution and meet them;
2. to comprehend the institutional criteria for evaluating student progress in all academic programs;
3. to fulfill the institutional standards for academic success and continuance in programs for graduation. Students should note that the institution is under no obligation to grant a degree or keep the student enrolled in the Program if he/she fails to maintain satisfactory academic progress;
4. to understand and complete all degree requirements for graduation that were published at the time the student matriculated;
5. to make his/her own academic decisions after consultation with the advisor. The advisor's role is to advise the student; the final decision must be made by the student.

## GRADING SCALE AND EXAMINATION POLICY

The official grading policy of the Program is as follows:

|   |             |
|---|-------------|
| A | 90%-100%    |
| B | 80%- 89.99% |
| C | 70%- 79.99% |
| D | 66%- 69.99% |
| F | below 66%   |

Satisfactory completion of ALL courses, rotations, exit examinations, and clinical requirements (see Clinical Rotations) is necessary for the student to graduate. In addition, a student must attain a minimum cumulative GPA of 2.0, with no more than two unresolved D grades, in all academic and clinical courses taken within the School.

The type, content, and frequency of examinations will be determined prior to the beginning of each course by the faculty member directing the course. This information will be presented in writing to the students at the beginning of the course. In keeping with the policy of academic freedom, each faculty member reserves the right to determine the percentage of the final grade that is comprised of attendance, dress, attitude, professional behavior, examinations, quizzes, laboratory assignments, etc.

Most testing in the PA Program is conducted by online computer testing.

A test may be administered outside the scheduled examination period only when extenuating circumstances warrant it and at the discretion of the faculty member. The student must make every possible effort to notify the instructor prior to an examination for permission to reschedule the test. Failure to follow this policy will result in a grade of zero or F being assigned to the examination.

## Academic Good Standing

A student is considered to be in good standing academically, if he/she maintains both a semester average and a cumulative GPA of 2.00, has no unresolved F grades, has no more than two unresolved D grades, and has no outstanding financial obligations to the Program.

The Program does NOT provide any remediation mechanisms for failures of a didactic course. Failed courses must be repeated in their entirety. The final transcript of a student may reflect no more than two unresolved D grades. If a student earns more than two D grades, the student must repeat courses to reconcile the academic deficiency. Unsatisfactory resolution of an F or D grade or withdrawal from any course that is repeated will lead to automatic suspension from the university. Due to the structured nature of the curriculum, repeated courses will usually result in extending a student's education beyond its prescribed duration.

## Academic Probation – Suspension

A student in the Physician Assistant Program will be placed on academic probation if he/she:

- 1) achieves a cumulative or semester GPA below 2.00 (calculated utilizing a 0.0 to 4.00 scale)  
OR
- 2) earns an F grade in any semester  
OR
- 3) earns two D grades in any semester  
OR
- 4) earns a third D grade in any subsequent semester.

Students not in good standing will be periodically reviewed by the Faculty Student Evaluation Committee to determine eligibility to remain in the Program. The Program Director may require a student on probation to register for a limited course load, resulting in extension of a student's education beyond 28 months.

Probation will be rescinded after completion of the next semester of active registration if the student achieves a cumulative GPA of 2.00 or higher with no new F or D grades.

A student in the Physician Assistant Program will be suspended if he/she:

- 1) achieves a GPA of less than 1.00 in any semester  
OR

- 2) qualifies for academic probation for two consecutive semesters  
OR
- 3) earns more than one F or any combination of F and D grades in any semester, regardless of GPA  
OR
- 4) earns three or more D grades in any semester regardless of GPA.

Any student earning more than two D grades must repeat courses in which that grade was earned. A maximum of two unresolved D grades will be allowed.

Any student on probation or with unresolved grade deficiencies in the initial didactic (classroom) year, as previously stated, will not proceed into the clinical rotations of the second year. If a student is repeating a course to resolve a grade deficiency, a minimum C grade must be earned in the repeated course. An F or D grade in, or withdrawal from any course that is repeated will lead to automatic suspension from the University.

A student who has been suspended for academic reasons generally may not petition the Registrar for readmission until one year has lapsed. The Office of the Registrar must have the approval of the Program Director to readmit a student following suspension.

Any student who withdraws from one or more courses in a semester is eligible to register for the withdrawn course(s) in the next semester it (they) is (are) offered. The student may not register for any advanced course that explicitly requires the withdrawn course as a prerequisite.

Students who receive three (3) F grades may be dismissed.

## Extended Academic Programs

A student must pass Anatomy, Physiology, Pharmacology, and Physical Diagnosis in order to progress to the second semester of the Didactic year.

There is no mechanism for extending the basic Academic Program. It is expected that PA students will complete the 28 month curriculum in approximately 28 months.

Exceptions to this may occur for the following reasons:

- A student may fail a clinical rotation and need to repeat it; this would culminate in a later completion date than anticipated;
- A student may take a leave of absence for personal, family, military reasons and may return at a later date to complete the Program (in this case, remediation may be required upon the student's return, based upon the length of the absence).

## Graduation Requirements

All candidates for the degree of Master of Clinical Medical Science in the Physician Assistant Program shall have:

- 1) satisfactorily completed ALL basic and applied medical science courses, clinical rotations (inclusive of exit examinations), and all other Program requirements. Any grade deficiencies must have been removed and GPA must be 2.00 or above.
- 2) maintained acceptable professional standards (see Professional Conduct Code).
- 3) fulfilled all responsibilities and financial obligations to the Program and the university.
- 4) been recommended by the faculty to the Board of Trustees for graduation. This recommendation will be based upon the above criteria. In addition, there will be a written objective assessment by the Program of the learner after completion of all course requirements. It will be a comprehensive review intended to document the learner's integration of the knowledge, skills and attitudes necessary for professional practice. The review will be compiled by the student's advisor, based upon didactic year transcript, clinical year evaluations, the student's performance on a comprehensive examination and the student's performance on the last End of Rotation testing of the physical exam.
- 5) The Program conducts a summative evaluation on each student which begins with a summative clinical skills examination during their final EOR. If a student's performance is not satisfactory, he/she is remediated and re-tested. During the final term, the faculty advisor meets with the student and reviews the first didactic year transcript, clinical year evaluations by preceptors, the administrative file, and Physician Assistant Clinical Knowledge Rating Assessment Tool (PACKRAT) scores. Based on this information, the advisor determines if the student will be prepared to enter clinical practice following completion of his/her final didactic semester requirements and indicates this on the summative evaluation form. The final component requires that the student pass the Primary Care Review course examination with a grade of C or higher at the end of the final semester. The Program Director reviews these materials and assures the Dean of the School as to each student's readiness to graduate. Students who demonstrate deficiencies or weaknesses in any of the defined competencies are counseled regarding failure, but are also given opportunity to remedy deficiencies and retest to pass before graduation. Failure to pass the summative evaluation after remediation prevents the student from graduating. Note: There is no minimum score for the PACKRAT examination. The information is used to counsel the

student on their personal academic strengths and weaknesses.

Recommendation for the Master of Clinical Medical Science degree is a discretionary right residing with the faculty and administration of the Program, but shall not be withheld arbitrarily. There is no contract, stated or implied, between the Program and the students, guaranteeing that a degree or certificate will be conferred at any stated time, or at all. Accreditation guidelines mandate that the Program evaluate each graduation candidate to determine the appropriateness of their graduation. If students are found lacking in appropriateness, remediation will be required in their final didactic semester. Such remediation could delay their graduation.

Students who have satisfactorily completed all program requirements are eligible to sit for the Physician Assistant National Certifying Examination.

### **PANCE Results\***

| Class Year | Program First Time Taker Pass Rate | NCCPA National (First Time Takers) Pass Rate |
|------------|------------------------------------|--|
| 2004       | 86%                                | 90%  |
| 2005       | 89%                                | 91%  |
| 2006       | 86%                                | 92%  |
| 2007       | 92%                                | 93%  |
| 2008       | 92%                                | 94%  |

\*as of March 12, 2009. Most recent results available on the Program's website [www.barry.edu/pa](http://www.barry.edu/pa)

### **ACADEMIC APPEALS AND GRIEVANCE**

Students have the right to appeal any grade that they believe was inappropriately assigned. Students will be allowed a maximum of 10 business days after the grade for a quiz or examination is made available to challenge that grade with the course instructor, unless otherwise specified in the course syllabus. If informal discussions with the faculty member do not resolve the appeal, the student must present, within 15 business days of receipt of the grade in question, an appeal in writing to the PA Program Didactic Director, who will respond within 5 business days.

If the response of the Didactic Director does not satisfy the student, the student may appeal within 2 business days of receipt of the Didactic Director's response to the PA Program Director, who in turn will respond within 5 business days. If the response of the Program Director does not satisfy the student, the student may appeal within 2 business days of receipt of the Program Director's response to the Associate Academic Dean of the medical school, who in turn will respond

within 5 business days. If the response of the Associate Academic Dean does not satisfy the student, the student may appeal in writing, within 2 business days of receipt of the Associate Academic Dean's response, to the Dean of the medical school. The Dean will respond within 5 business days of receipt of the appeal. The decision of the Dean regarding the appeal is final. Students who do not challenge or appeal a particular grade within the appropriate time periods as described waive all future rights to appeal/challenge of that grade. Nonacademic grievance and appeal procedures are outlined in the Barry University Student Handbook.

### **PROFESSIONAL APPEALS AND GRIEVANCE**

Students have the right to appeal a professional or behavioral sanction by the Program Director within 2 business days; the student may appeal to the Associate Academic Dean of the medical school, who will in turn respond within 5 business days.

If the response of the Associate Academic Dean does not satisfy the student, the student may appeal, in writing, within 2 business days of the receipt of the Associate Academic Dean's response to the Dean of the medical school. The Dean will respond within 5 business days of the appeal. The decision of the Dean regarding the appeal is final. Students who do not challenge or appeal a particular professional or behavioral sanction within the appropriate time periods as described waive all future rights to appeal/challenge of that sanction.

Suspended students may reapply after a year.

### **ACADEMIC CURRICULUM**

The curriculum leading to the Master of Clinical Medical Science degree, normally takes 28 months to complete. The first year involves didactic classroom courses (some with laboratories) in the basic and applied medical sciences. The next twelve months involve rotations in hospitals and other approved facilities. Students return to the campus for additional didactic courses and research for their final semester. In general, successful completion of 122 semester hours is required for graduation.

Extension of studies beyond the prescribed 28 months is not possible. The exception is when a student requests a leave of absence for pressing personal, military or family reasons, or must repeat a clinical rotation. The student may have the opportunity to return at a later date to complete the curriculum and, depending, upon the length of the leave, may be required to complete remediation activities prior to continuing. These situations will be assessed on a case-by-case basis and are at the discretion of the program director and based upon faculty recommendations.

The following curriculum is continuously reviewed and is therefore subject to change.

## MASTER OF CLINICAL MEDICAL SCIENCE PHYSICIAN ASSISTANT PROGRAM CURRICULUM

### FIRST YEAR semester hours

#### Fall

|          |  |   |
|----------|--|---|
| GMS 507P | Research Methodology                                 | 2 |
| GMS 530A | The Physician Assistant Role in Modern Health Care I | 1 |
| GMS 585  | Physiology   | 4 |
| GMS 586  | Neuroanatomy   | 2 |
| GMS 580  | Clinical Microbiology and Infectious Diseases        | 3 |
| GMS 590P | Gross Anatomy with Lab                               | 6 |
| GMS 605C | Physical Diagnosis I                                 | 3 |
| GMS 621A | Clinical Pharmacology                                | 1 |

#### Spring

|          |   |   |
|----------|---|---|
| GMS 510  | Human Genetics                                  | 1 |
| GMS 535  | Human Behavior and Psychiatry                   | 3 |
| GMS 602  | Medical Pathophysiology I                       | 6 |
| GMS 605D | Physical Diagnosis II                           | 4 |
| GMS 621B | Clinical Pharmacology II                        | 2 |
| GMS 640P | Surgical Principles                             | 2 |
| GMS 701  | Obstetrics/Gynecology/<br>Pediatrics/Geriatrics | 3 |

#### Summer

|          |   |     |
|----------|---|-----|
| GMS 537  | Public Health Issues: Health Promotion and Disease Prevention | 1   |
| GMS 552  | Medical Spanish   | 2   |
| GMS 603  | Medical Pathophysiology II                                    | 3   |
| GMS 649P | General Radiology   | 3   |
| GMS 705B | Emergency & Traumatology I                                    | 2   |
| GMS 665  | Independent Study*  | 1-3 |
| GMS 530B | Physician Assistant Role in Modern Health Care II             | 1   |
| GMS 605E | Physical Diagnosis III  | 3   |
| GMS 621C | Clinical Pharmacology III                                     | 2   |

\* An elective may be taken in any first year semester

### SECOND YEAR

There will be eight six-week rotations, including Emergency Medicine, Family Medicine, Internal Medicine, Obstetrics/Gynecology, Pediatrics, Psychiatry, Surgery and an Elective rotation.

Following each rotation there will be End of Rotation Exercises at Barry University.

### Fall, Spring & Summer\* semester hours

|          |                           |   |
|----------|---------------------------|---|
| GMS 727  | Clinical Orientation (PA) | 1 |
| GMS 740A | PA Rotation 1             | 6 |
| GMS 741A | PA Rotation 2             | 6 |
| GMS 742A | PA Rotation 3             | 6 |

|          |               |   |
|----------|---------------|---|
| GMS 743A | PA Rotation 4 | 6 |
| GMS 744A | PA Rotation 5 | 6 |
| GMS 745A | PA Rotation 6 | 6 |
| GMS 746A | PA Rotation 7 | 6 |
| GMS 747A | PA Rotation 8 | 6 |

\* Any student in the Program who experiences a delay in progression in didactic education or clinical training should consult with the Director of Clinical Education. The structure and rotation course numbers for such students are set at the discretion of the Director of Clinical Education and the Program Director, and may be based on previously published information.

### THIRD YEAR semester hours

#### Fall

|          |   |      |
|----------|---|------|
| GMS 553P | Biomedical Ethics/Health Care Delivery            | 2    |
| GMS 731  | Clinical Epidemiology and Evidence-Based Medicine | 1    |
| GMS 806P | Library Research Paper                            | 7    |
| GMS 638  | Thanatology                                       | 1    |
| GMS 665  | Independent Study                                 | 1-3* |
| GMS 690  | Clinical Therapeutics                             | 2    |
| GMS 695  | Primary Care Review Course                        | 2    |

\* An elective may be taken in the advanced didactic semester.

## PA CLINICAL ROTATIONS

Participation in the clinical rotations is contingent upon successful completion of all the course work in the first year curriculum. Satisfactory completion is determined by a student's adherence to the academic policies and procedures and by academic good standing (all described in previous sections).

Treating patients in clinical settings is a privilege. Attendance is mandatory. For each occurrence of unexcused absence, the student's grade for that rotation will be reduced one letter grade. For example, the student who misses two unexcused days will be able to obtain a maximum grade of C. Excused absences may be obtained only through the Clinical Coordinator of the Physician Assistant Program or, in the absence of the Clinical Coordinator, the Director of Clinical Education or his/her designee. Two or more unexcused absences from any clinical rotation will result in failure of that rotation. Depending on the circumstances, students may be required to make up part or all of the time lost on rotation due to absence. Students may NOT change, alter or rearrange their clinical rotation schedule without prior approval by the Clinical Coordinator or Director of Clinical Education.

The Dress Code is absolute; cleaned and pressed white consultation style jackets and tailored slacks, shirt and tie for men; white consultation style jackets

and tailored slacks or skirts (knee length) and collared blouse for women. Appropriate footwear is required for all students (no open toe shoes or sandals).

Visible studs and rings (face, tongue, lips, etc.) are to be removed during all clinical rotation activities. Tattoos are to be covered with clothing or other opaque material (Band-Aid, cosmetics) during all clinical rotation activities.

Any student who is removed from a clinical or hospital rotation due to improper dress code, behavior, or other violation of the Clinical Year Manual may be placed on probation. Reoccurrence of the violation may result in remedial action by the Program Director, up to and including failure of the rotation necessitating repetition, delay in progression of training and/or possible suspension.

Professional attitude, motivation, maturity, poise, capacity to accept and respond to criticism of supervisors and peers are judged. Additionally, manual dexterity, diagnostic acumen, completeness and accuracy of charting, and documentation will be evaluated.

At the completion of each clinical rotation, the student should demonstrate progression and increased capability in:

- a. eliciting and documenting an appropriate patient history;
- b. performing and documenting an appropriate physical examination;
- c. identifying, understanding and applying therapeutic regimens for disorders/diseases that are intrinsic to the area of clinical specialty;
- d. comprehending and applying the principles of peri-operative care (where pertinent);
- e. understanding and applying basic surgical techniques (where pertinent);
- f. recognizing complications related to medical procedures and applying therapeutic principles toward prevention and management of complications;
- g. the evaluation and management of problems in obstetrics, gynecology, pediatrics, and geriatrics, and applying the appropriate therapeutic regime;
- h. assessing the level of acuity of medical problems (primary, secondary and tertiary) and offering the appropriate therapeutic regimen or referral;
- i. functioning in the team approach to health care and work within the physician assistant role in providing comprehensive, primary health care of the patient.

Students requesting more than one rotation outside the local rotation area (sixty mile radius of their Barry University home campus) must state the reason(s) why they are requesting additional distant rotations in writing to the Director of Clinical Education. The request

must be submitted not less than sixty days prior to the start of the rotation period, unless the circumstances upon which the request is based are not apparent until a later time.

Requests for additional distant rotations may be based on (1) student obligations to dependent children or (2) bona fide medical need. Requests should be submitted in writing to the Director of Clinical Education as soon as they are reasonably apparent. The request(s) will be presented to the Program core faculty, which will decide whether the request will be granted. Lack of local housing or financial resources will not be considered sufficient reason for the Program to make additional out of area rotation assignments.

Even if the distant rotation request is approved, the Program cannot guarantee that suitable out of area rotations will be available at the time, in the specialty and/or the location necessary to maintain the student's rotation pattern. In that event, the student may sustain a delay in progression in training.

A student whose request is not granted and who is unable to complete the assigned rotation(s) within the local rotation area will be subject to delays in progression in training. At the discretion of the program director, such students may be placed on leave of absence.

Rotation assignments to sites related to Program grant activities will not be counted as out of area rotations for purposes of this section. Thus students may request up to two out of area rotations in addition to any rotations they take that are related to Program grant activities. The Program reserves the right to make additional out of area rotation placements based on the availability of Program resources and clinical resources within the local rotation area.

Students are not permitted to arrange their own rotations. In situations where they wish to participate in a distant rotation, the Program will work with the student's contact at that site to arrange suitable preceptor and affiliation agreements. The student may need to prompt expeditious completion of paperwork in such a situation.

## **Physician Assistant Course Descriptions— Prefix: GMS**

### **507P Basic Research Methodology**

Introduction to research design, experimental design, bio-statistical methods, and theoretical and statistical analysis of data. This course will introduce the student to a variety of qualitative and quantitative research methodologies. The student will be provided with the necessary skills to search, interpret and evaluate medical literature in order to maintain a critical, current and operational knowledge of new medical findings

and apply them to individualized patient care. Epidemiological concepts will include population dynamics, trends in diseases and disorders, rates, screening, and public health programs.

### **510 Human Genetics**

An overview of basic genetic science, of common problems in clinical genetics, and of issues in genetic counseling.

### **530A, 530B The Physician Assistant Role in Modern Health Care**

Introduction to the role of the Physician Assistant (PA) in health care delivery. Examines the historical development of PAs as associates to family physicians and internists, as well as evolving PA roles as medical generalists, primary care health providers, and PA specialty and subspecialty practice. Distinguishes the shared and distinct roles of physicians, nurses and other members of the health care team. Various aspects of PA professional life, including legal, legislative, regulatory, PA Professional organizations, PA program accreditation, PA certification and recertification, licensure, credentialing, professional liability, prescriptive and reimbursement issues are also addressed.

### **535 Human Behavior and Psychiatry**

This course will focus on the signs, symptoms, and therapies of the major mental disorders, emphasizing those most commonly seen and managed in primary care medical practice. Thus the anxiety disorders, depression, alcohol and drug abuse, and the organic brain syndromes will be considered in detail. Throughout, behavioral science concepts will be introduced as needed to explain both the characteristics of the disorders and of their treatments. Discussion will include how to generate a differential diagnosis and develop and implement an appropriate plan of treatment for the major disorders, as well as appropriate referral of patients.

### **537 Public Health Issues: Health Promotion and Disease Prevention**

An introduction to public health issues of concern to the physician assistant, emphasizing the role of the PA as a health educator. Discussion will include basic counseling and patient education skills which will be necessary for patients and their families to cope with illness or injury, to adhere to a prescribed plan of treatment, and to modify their behaviors to a healthier pattern.

### **552 Medical Spanish**

This course is intended to enable students to complete a history and physical and conduct a physical examination in Spanish. No prerequisite knowledge of Spanish is required. Focus is upon diversity and cultural issues.

### **553P Biomedical Ethics/Health Care Delivery**

This course focuses on selected topics in bioethics relevant to Physician Assistant practice: valid consent, the definition of death, euthanasia and physician-assisted suicide, advance directive, neonatology, and an intensive examination of the PA code of ethics. Discussion will include the attributes of respect for self and others, professional responsibility, and a commitment to the patient and their welfare. Further discussion will include the concepts of privilege, confidentiality, and informed patient consent.

### **580 Clinical Microbiology and Infectious Diseases**

Introduction to human immunity and medical bacteriology, mycology, virology, and parasitology, followed by topics in infectious disease using a systemic approach: infections of skin and wounds; bones and joints; eye, ear, nose and throat; dental and periodontal tissues; respiratory tract, gastrointestinal system, urinary tract; nervous system; cardiovascular system; sexually transmitted disease; diseases of the fetus and newborn; AIDS and opportunistic infections.

### **585 Physiology**

Introduction to physiology. Normal physiological processes will be discussed including basic principles, physiology of nerve and muscle, essentials of neuroanatomy, functions of nerve tissues, endocrinology and metabolism, gastrointestinal function, cardiovascular physiology, respiration and excretion. Biochemical and nutritional issues will be also be addressed.

Physiology lecture incorporates concepts from Anatomy, Histology, Biochemistry, Physics and Molecular Biology and applies them toward the understanding of the normal function of the major organ-systems of the human body. The major organ systems covered are: (i) cardiovascular, (ii) digestive, (iii) endocrine, (iv) muscular, (v) neural, (vi) renal (vii) reproductive and (viii) respiratory.

### **586 Neuroanatomy**

This course provides the student with a basic understanding of the structural organization of the central nervous system in sufficient depth to form the basis for clinical application. This course will cover the structure and function of the spinal cord, brain stem, cerebellum and cerebrum. The primary emphasis will be on the major motor and sensory pathways, spinal and cranial nerves and integrative mechanisms of the central nervous system.

### **590P Gross Anatomy with Lab**

Study designed to expose the student to the macroscopic aspects of human morphology and correlate them with clinical information. The whole body will be covered. Software and models are used. Lecture and lab.

**602 Medical Pathophysiology I**

Introduction to pathological processes in the human physiology. Topics include the common cardiovascular, pulmonary, hematologic/oncologic, genitourinary and renal diseases seen in primary care practice today. Disease will be described in the context of pathophysiological basis, presenting symptoms, physical and laboratory exam findings, natural course, epidemiology, differential diagnosis and treatment. Prerequisites: GMS 585, GMS 590P.

**603 Medical Pathophysiology II**

Continuation of topics in medical pathophysiology, include infectious diseases, neurology, rheumatology, gastroenterology, nutrition and endocrinology. Prerequisite: GMS 602.

**605C, 605D, 605E Physical Diagnosis I, II, III**

Introduction to and development of techniques in the common and basic components of physical and laboratory examinations, techniques of interviewing and history taking, and the care of the patient in all fields of medicine. In addition to the vital communication skills required to meet patient's needs, GMS 605 C emphasizes the organization and integration of the collected information ("clinical data") into the written medical record. The course also introduces the student to the process of clinical reasoning and the skill of differential diagnosis. Prerequisites/co requisites: satisfactory completion of the first course is a prerequisite for the second and the second for the third. Also includes EKG and laboratory medicine. Lecture and lab.

**621A, 621B, 621C Clinical Pharmacology (1, 2, 3)**

Students develop basic knowledge and practical skills in clinical pharmacology. The first course introduces fundamental concepts of pharmacology, including pharmacokinetic, pharmacodynamic and therapeutic principles. In the subsequent course, students learn applied concepts of law, pharmacology and therapeutics, integrating therapeutic principles and patient outcomes with previously established basic concepts. Real-life cases illustrate clinical applications of pharmacotherapeutic principles. Prerequisites/ co requisites: satisfactory completion of the first course is a prerequisite for the second and the second for the third.

**638 Thanatology**

Seminar course in end-of-life issues including resuscitation, living wills, DNRS and hospice. This course was developed as a direct result of awareness that current medical training lacks fundamental learning about the dying patient. Students that partake in this discussion course will be able to deal with emotionally charged end-of-life issues and will become more comfortable emotionally to deal with these topics.

**640P Surgical Principles**

Introduces the student to the evaluation and management of selected acute, chronic and emergent surgical conditions likely to be encountered in primary care. Emphasis is placed on the integration of anatomy and physiology, history and physical skills, pathophysiology and diagnostic studies. Pre and post-operative management, including appropriate referral practices are included. Prerequisite GMS 590.

**649P General Radiology**

Radiation physics, image production, and safety are covered. Evaluation of radiographic changes as they relate to systemic and local pathology. Prerequisite GMS 590.

**690 Clinical Therapeutics**

Students integrate their didactic and clinical experience through critical thinking to determine patient management decisions. In addition to reviewing present clinical therapeutics & medical intervention, previous concepts taught in pathophysiology, and physical diagnosis will be reviewed. Through a combination of lectures, cases studies, practice questions and reading assignments, students will explore a wide range of medical and surgical topics. Prerequisites: GMS 602, GMS 603.

**695 Primary Care Review Course**

The Barry University Primary Care Review Course has been designed specifically to assist PA students in their preparation for the PANCE certification exam. The design of the course closely follows the NCCPA content blueprint in the selection of topics and overall organization to provide focus for an organized review of the subject matter contained on the certification exams. Each lecturer will present outlines, objectives and in some cases practice questions and clinical pearls for their respective topics, which will be organized in a comprehensive syllabus. To receive credit for the course, all students must pass a comprehensive 4 hour PANCE Review Course examination, which like the course, closely follows the NCCPA content blueprint in the selection of topic questions and organization with a score of "70" or higher.

**701 Obstetrics/Gynecology/Pediatrics/Geriatrics**

This course is intended to provide the student with a background in family health care as it pertains to specific issues in obstetrics, gynecology, pediatrics and geriatrics.

The obstetrics/gynecology component of the course gives students an understanding of the etiology, pathology and treatment of commonly occurring conditions of the female reproductive system. The course will also provide students with the knowledge required to monitor and treat patients through uncomplicated and complicated pregnancies.

In the pediatrics portion of the course, the student will learn the evaluation and management of the normal/sick newborn, understand basic growth patterns and child development, correlate signs and symptoms to major pediatric disease entities, and develop an awareness of multicultural process; biculturalism, multiculturalism and begin to tailor interactions with patients based on this cultural awareness.

The geriatrics portion of the course introduces the basic and specific concepts of geriatric patient care. The focus is on those contemporary and common issues faced in general and family practice medicine when dealing with the aging patient. With this foundational knowledge, the concepts of care of the elderly, which often differ from core adult, adolescent or pediatric care will become more apparent. The student will be able to describe the process of aging in human health and disease, understand the demography and epidemiology of aging, explain medical entities of the elderly (including, where specified, anatomy, physiology, pathophysiology, diagnosis and treatment), explain the loss of homeostatic control mechanisms that occur with the aging process, articulate a greater appreciation for the health care needs of the aging patient with specific reference to highlighted issues, explain the purpose and procedures for a comprehensive geriatric examination and use the results to determine prescriptions for care.

#### **705B Emergency & Traumatology**

Discussion will include how to competently handle the diverse critical and cultural problems encountered in an Emergency Department. In an effort to foster critical medical decision making and problem solving, topics include, but are not limited to the following: providing a differential diagnosis for headaches and the approach to evaluating headache; management of hemorrhagic strokes; NIHSS utilization; initial management of a patient with Altered Mental Status (AMS); history and exam of a patient with abdominal pain; history, presentation and management of ectopic pregnancy; delineation of the types of etiologies for chest pain; how Evidence Based Medicine plays a role in risk stratification and practice recommendations; "red flags" in evaluating patients with neck and back pain; the role of EMS providers in the delivery of emergency care; discussion of how to triage in disaster situations and colors/priorities of patients to be managed; issues related to obtaining parental consent when treating a minor in the ED; management of a pediatric patient and how they differ from adults; the pregnant trauma patient; the Glasgow coma scale; physical exam of a patient with respiratory distress; toxicology; environmental emergencies. Contemporary medicine mandates rapid recognition of strokes and the NIHSS designation.

#### **727 Clinical Orientation (PA)**

Students are oriented to numerous aspects of clinical care, patient interactions, and hospital, clinic and operating room protocols. Lecture, discussion, demonstration, lab and workshop presentations are used to deliver the course content. Participants also complete ACLS and PALS certification courses.

#### **731 Clinical Epidemiology and Evidence-Based Medicine**

The application of basic principles of epidemiology and biostatistics to clinical decision making. An examination of topics in diagnostic testing (sensitivity, specificity, and positive and negative predictive values; diagnostic screening) and choice of treatments (outcome studies, clinical practice guidelines, cost-benefit analysis; relative risk reduction). Discussion will include basic kinds of medical research designs; calculation of indices of treatment effectiveness, including Number Needed to Treat; calculation of indices of screening test performance, including Number Needed to Screen; articulation of what kinds of treatments typically manifest large volume-outcome relationships; the nature of clinical practice guidelines and the ability to access them via the internet; and articulation of a correct definition of "medical error" and the current emphasis of a system approach to understanding how to decrease the incidence of errors. Prerequisite: GMS 507P.

#### **740A-747A PA Rotations 1-8 (6 each)**

Students attend and participate in clinical practices under the supervision of adjunct clinical faculty. Each clinical rotation will represent a block of six weeks duration. Each rotation is followed by End of Rotation activities designed to assess the students' progress in cognitive, behavioral and professional areas of clinical practice. Required rotations are designated in emergency medicine, family medicine, internal medicine, obstetrics-gynecology, pediatrics, psychiatry, surgery and one elective. Prerequisites: All first year courses and GMS 727.

#### **806P Library Research Paper (7)**

Successful completion of this research paper is required for physician assistant students and serves to develop skills in literature review and objective interpretation of the same, thereby enabling the student to draw valid conclusions. Prerequisite: GMS 507P.

# MASTER OF SCIENCE IN ANATOMY PROGRAM

## MASTER OF SCIENCE (M.S.)

John P. Nelson, D.P.M., Interim Dean and Associate Dean of Clinics

Michael L. Siegel, Ph.D., Associate Academic Dean

Ramjeet S. Pemsingh, Chair, Basic Medical Sciences

### THE PROGRAM

The Master of Science in Anatomy is a non-clinical, academic degree awarded through the School of Podiatric Medicine. Students must complete all degree requirements within three (3) years of matriculation.

### Purpose Statement

The purpose of the Master of Science in Anatomy is to provide students with quality education in an environment that is conducive to both teaching and research. Students are exposed to broad-based knowledge in the anatomical sciences. Graduates may elect to use their Master of Science degree as a terminal degree or to continue their education in a medical or other doctoral program. A Master of Science degree may be applied to careers such as teaching (in junior colleges or small four-year colleges) and research (research assistants).

### Program Goals

To accomplish its purpose, the Master of Science in Anatomy Program will provide training so that students will be:

- knowledgeable in the anatomical sciences as a result of didactic course work and applied research.
- capable of filling a shortage of gross anatomists in the teaching profession.
- knowledgeable in modern research procedures using light, transmission and scanning electron microscopy as well as histochemistry, autoradiography and other advanced research techniques.
- prepared to function morally and ethically in the context of research and academic environments.
- prepared to continue their education at the doctoral level.

### ADMISSION REQUIREMENTS

Admission is generally offered only to candidates deemed to possess a high potential for success in graduate medical academics. Applicants will be considered on a rolling basis for admission to either the summer or fall semester.

In order to be considered for admission to the University, a first-time graduate student:

- must have a bachelor's degree or equivalent from a regionally accredited or internationally recognized college or university with a GPA of 3.0 or greater on a scale of 4.0, especially in the last two years of study.
- must take and achieve a combined score of 1000 or higher in the verbal and quantitative tests in the Graduate Record Examination (GRE).
- must have a background in the sciences, including upper-level courses in biology, chemistry, physics, and mathematics.
- must complete the Barry University Graduate Application form. The application is accessible online from the program web site (<http://www.barry.edu/anatomy/default.asp>).
- must provide a dossier of official college transcripts as well as a minimum of three letters of recommendation from faculty in the major department of the applicant's undergraduate studies. Applicants may submit an assessment form from the department head on behalf of the department in which the applicant has studied, or letters from employers or supervisors if the applicant has recently been employed in a scientific field. Prospective students must indicate which option they are applying for on the application.
- must participate in a personal interview, which is arranged by invitation of the Admissions Committee.

Applicants who do not give evidence of being native English speakers or who have not graduated from an institution where English is the primary language of instruction are required to submit scores from the Test of English as a Foreign Language (TOEFL). The minimum acceptable paper-based TOEFL total score is 600; if the computer-based TOEFL is taken, the minimum total score is 250; if the internet-based TOEFL is taken, the minimum total score is 100. Applicants should make arrangements to take the test at least three to six months before the semester opening date to assure timely processing of their applications.

## APPLICATION PROCEDURE

The completed application form, letters of recommendation, official GRE test results, official transcripts from all undergraduate institutions attended, and official TOEFL results (if applicable) should be sent to:

Office of Admissions  
Master of Science Program in Anatomy  
Barry University  
11300 N.E. 2nd Ave  
Miami Shores, FL 33161

The Admissions Committee for the program will review all applications. Acceptable candidates will be invited to visit the campus for a personal interview. A formal letter of acceptance or rejection will be forwarded to the candidate within two weeks of the interview. Candidates will have four weeks to accept or decline the offer. If the offer is accepted, candidates will post a deposit of \$200.00 with their acceptance letter.

## ADMINISTRATIVE POLICIES AND PROCEDURES

### Registration

Students are assigned a faculty advisor and advised prior to registration. All students must complete appropriate registration forms during times designated by the School of Podiatric Medicine. All registration forms must be approved by faculty advisors. Completed registration forms are processed by School of Podiatric Medicine personnel and forwarded to Cashier/Business Office and the Registrar. Students who fail to complete registration requirements, including appropriate financial arrangements with Cashier/Business Office, within 10 working days of the first day of each semester will **not** be permitted to attend classes or laboratories, nor will they be permitted to take examinations or participate in other School activities. The School of Podiatric Medicine may notify scholarship programs, lenders, and all other appropriate parties should the student fail to register in a timely manner.

### Drop-Add and Course Withdrawal

A period of registration adjustment (i.e., drop-add) is provided to students during the first week of each semester. During this time, students may change their schedules with the written approval of their advisor. Students should realize that the curriculum is intense, structured, and allows that only minor modifications may be made. Addition of elective courses requires permission of the Dean or Associate Academic Dean.

The withdrawal deadlines for the School of Podiatric Medicine are Friday of the tenth week of the Fall and Spring semesters and Friday of the sixth week of the Summer semester; if the deadline falls on a University

holiday, it will be extended to the next business day. The dates are found on the School of Podiatric Medicine calendar and are posted prominently near classrooms, offices, and lounges. Students may withdraw from a course until the term deadline without penalty. The student's transcript will show a "W" beside the course from which he/she has withdrawn. Consultation with the student's advisor and approval of the Dean or Associate Academic Dean is required for withdrawal. Withdrawal from a course may severely limit the number of courses a student may take in future semesters; many courses require "prerequisites."

Students withdrawing from Gross Anatomy (GMS 590) will not be permitted to continue their studies until Gross Anatomy is satisfactorily completed. A student who fails a prerequisite course will be withdrawn from subsequent courses that require its successful completion; this will be effected by administrative action shortly after the end of the term. A student who withdraws from a class after the withdrawal deadline receives a failing "F" grade. Advisor's and Dean's approval and signature are required in any case of schedule modification.

### Comprehensive Examinations

Students must complete and pass written and oral comprehensive examinations, which are required for the degree. The content of the examinations will include all core courses.

### Transfer Students

A minimum residency of two semesters at Barry University is required. A student applying for transfer to this program must have taken courses in a medical or osteopathic medical school. Only grades of "A" or "B" in graduate level courses which correlate to the Master of Science in Anatomy curriculum [500 level and higher] will be considered for transfer. In addition, coursework must have been completed within three calendar years of application. All original research must be done at Barry University. Transfer students are not eligible for tuition waivers or graduate assistantship stipends.

### Transcripts

Official transcripts are prepared by the Office of the Registrar. Transcript request forms must be completed and signed by the student before official transcripts are issued. At the request of the Cashier/Business Office, official transcripts will not be released to students (or other institutions) if the students have outstanding balances owed to the University (i.e., a "hold" will be placed on transcripts/grades).

Copies of student transcripts are never released without written authorization from the student or, in the case of a governmental investigative agency, without a court order or subpoena. The Office of the Registrar will inform students should this occur.

## Incomplete Grades

A grade of Incomplete (“I”) indicates a failure to complete required work within the semester and implies the instructor’s consent that the student may make up the work that is deficient. The course instructor must inform the Dean or Associate Academic Dean in writing when an “I” grade is issued. When the work is completed to the satisfaction of the instructor, the “I” grade will be changed to a letter grade. The instructor will forward a completed Grade Adjustment form for the grade change to the Dean or Associate Academic Dean for signature, after which the form is sent to the Registrar. Students, under special extenuating circumstances, (e.g., illness, leave of absence, etc.) may be granted an “Incomplete” in a course. All unfinished written examinations and assignments must be completed by the end of Wednesday of the first week of the new semester. Laboratory examinations to complete missed work may be administered at a later time at the discretion of the faculty, based upon availability of necessary laboratory materials. If a grade is not reported within the time required by the School, the “I” becomes an “F”. Failure in any course in which an incomplete was issued will (1) reflect in a grade of “F” for the semester in which the course was originally registered, and (2) result in academic probation or suspension retroactive to the beginning of the semester in which the course work should have been completed. In addition, achieving a failing grade in a completed course may result in failure to meet published prerequisites for another course, and may therefore require a schedule adjustment (drop) in the semester in which the incomplete was unsatisfactorily completed.

## Reporting and Recording of Grades

The Office of the Registrar mails semester grade reports to the most current mailing address provided by the student on personal data forms. Change of address notification is the responsibility of the student. Appropriate change of address forms are available from the Office of the Registrar. A “hold” will be placed on the grades/transcripts of any student who has an outstanding balance owed to the University, as indicated by the Cashier/Business Office. No grades/transcripts will be released by the School of Podiatric Medicine until such balances have been paid. If in good standing with the Cashier/Business Office, students may access their grades online with WebAdvisor.

The Office of the Registrar does not record percentage scores for any course or test; however, it does record permanently the letter grade earned by the student in every course he/she takes while in the School of Podiatric Medicine. Individual instructors must be contacted to obtain percentage scores earned in any particular course.

## Student Health

Although the School of Podiatric Medicine does not require non-clinical students, such as those in the Anatomy program, to have health insurance, it is strongly recommended that every student secure and retain health insurance coverage at all times.

Students in the Master of Science in Anatomy program must also comply with all other applicable requirements of Student Health Services, as noted in the “Student Life” section of the Barry University Graduate Catalog.

## ACADEMIC POLICIES AND PROCEDURES

### Attendance

Attendance is required (i.e., mandatory) in all School of Podiatric Medicine courses, including lectures, laboratories, seminars, and demonstrations. An instructor may, at his/her discretion include attendance (or the lack of it) as part of the grade a student achieves while enrolled in a course. Students are responsible for all material and assignments covered in missed course sessions as well as all examinations, including unannounced quizzes. Attendance at scheduled examinations is mandatory. Examinations may be given in the evening or on Saturday due to space limitations.

### Academic Integrity and Behavior

Promotion of academic integrity and ethical professional behavior are goals of the School of Podiatric Medicine. Cheating or plagiarism will not be tolerated within the School of Podiatric Medicine. Refer to the “Policies and Procedures” section of this catalog and the Barry University Student Handbook for definitions of cheating and plagiarism. A student who gives or receives information or assistance during a testing session will automatically fail and earn 0% as an exam or quiz grade. The same consequence will apply to any proven case of plagiarism. Further, the individual(s) will be referred to the Dean for appropriate disciplinary action and the incident will be documented in the student’s file. Any student who is referred to the Dean for violation of the dishonesty policy on two occasions will be dismissed from the University.

## Professional Conduct Code

(See Student Handbook)

## Advanced Standing

Candidates for advanced standing may transfer to the School of Podiatric Medicine from another school of medicine. Students who were previously accepted into School of Podiatric Medicine need not apply. Legitimate candidates must be in good academic standing in the previously attended school of medicine with a cumulative grade point average of at least 3.00 with no failing grades, except when the course has been successfully repeated. An application, appropriate academic records (official undergraduate and graduate transcripts, MCAT, GRE or other applicable standardized test scores) and a letter from the Academic Dean and/or Dean of Student Affairs must be included among the applications. Based on the candidate's qualifications, the School of Podiatric Medicine Admissions Committee may require additional credentials.

Students who have completed graduate-level courses in institutions of other health professions (for example, allopathic or osteopathic medical schools, dental schools) may obtain credit for courses toward the Master of Science in Anatomy by two mechanisms: by transfer and by examination. All requests for advanced standing must be made through the Associate Academic Dean and must be supported by course syllabi and official transcripts of grades. Such requests must be made in the first two weeks of the first semester of study in School of Podiatric Medicine or, for first year, first semester courses, prior to the start of classes. All thesis-related research courses must be completed in School of Podiatric Medicine.

Students who have taken courses outside of the School of Podiatric Medicine may qualify for credit in the analogous School of Podiatric Medicine course. However, curricula, course requirements, and grading policies may vary greatly among courses taught by different instructors in different departments or different institutions. As a result, a passing grade in a course completed in another department or at another institution does not automatically entitle the student to receive credit for the same subject in the School of Podiatric Medicine.

To obtain transfer credit in place of successfully completing a School of Podiatric Medicine course, a student must:

- submit a request for transfer credit in writing to the Associate Academic Dean and
- document that he/she obtained a grade of B or higher in an equivalent course within the past

three years. The Associate Academic Dean will consult with the relevant course instructor(s) to determine the equivalence of the completed course based on syllabi and other resources (for example, information obtained from the instructor or department).

To obtain credit by challenge in a School of Podiatric Medicine course, a student must:

- submit a request for credit by challenge in writing to the Associate Academic Dean;
- document that he/she obtained a grade of C or higher in an equivalent course. The Associate Academic Dean will consult with the relevant course instructor(s) to determine the equivalence of the completed course based on syllabi and other resources (for example, information obtained from the instructor or department); and
- successfully complete a comprehensive examination administered by the instructor of the School of Podiatric Medicine course. Comprehensive exams must be completed by the student no later than the end of the first week of the semester in which the course in question is taught.

Students who take the comprehensive examination and obtain a score of 80.00% or higher will receive the full credit for the course. A grade of "CR" will be registered on the student record.

A student who completes the comprehensive examination with a grade of less than 80.00% must take the School of Podiatric Medicine course in its entirety and fulfill all requirements for completion of that course.

## Financial Aid

Loans, scholarships and other financial aid information are available through the Office of Financial Aid. It is the student's responsibility to seek out that information.

## Academic Advisement

The Dean or Associate Academic Dean assigns to every student matriculating at School of Podiatric Medicine an academic advisor. Full-time faculty members in the Anatomy program assume academic advising responsibilities. Advising assignments may be changed by the Dean or Associate Academic Dean at the request of the student or faculty member. The responsibilities of School of Podiatric Medicine students relevant to advisement are:

- to be aware of the educational objectives of the institution and observe them.
- to comprehend the institution's criteria for evaluating student progress in all academic programs.

- to fulfill the institution’s standards for academic success and continuance in programs for graduation. The institution is under no obligation to grant a degree or keep the student enrolled in the program if he/she fails to maintain satisfactory academic progress.
- to understand and complete all degree requirements for graduation that were published at the time the student matriculated.
- to make his/her own academic decisions after consultation with the advisor. The advisor’s role is to advise the student; the final decision must be made by the student.

## GRADES AND GRADING POLICY

The following grades may be recorded for a course:

- A 90% – 100%
- B 80% – 89.99%
- C 70% – 79.99%
- F below 70%
- I Incomplete (changes to F if work is not completed by the end of Wednesday of the first week of the next semester)
- IP In progress (for Master of Science Research Thesis course only)
- CR Credit (completes course requirements, no grade points)
- NC No credit (does not complete course requirements, no grade points)
- W Withdrew from course before the School of Podiatric Medicine withdrawal deadline.

The School of Podiatric Medicine does not use plus or minus letter grades. The grade/honor point associated with each of the letter grades is noted in the Barry University “Academic Information” section of this catalog.

Satisfactory completion of all courses, including rotations and seminars, is necessary for the student to graduate. Students must maintain a grade point average (GPA) of 3.00 or higher, with no more than 8 credits of “C” grades. Should a student achieve “C” grades in excess of 8 credits, a grade of “F” or “NC” in any course, or achieve a cumulative GPA less than 3.00, the student’s course instructor(s) and the Associate Academic Dean will meet to determine if the student shall be permitted to continue in the program. Additionally, the student may submit a written appeal to the Associate Academic Dean at this time. If the student is permitted to continue, he/she will be required to repeat the course(s) and achieve a minimum grade of “B”. A grade of “C”, “F”, or “W” in a repeated course will result in immediate dismissal from the program. In all instances, the decision of the Associate Academic Dean is final.

Students repeating a course in any of the circumstances cited above may be required to repeat all or part of the course at the discretion of the course instructor.

The type, content, and frequency of examinations will be determined prior to the beginning of each course by the faculty member directing the course. This information will be presented in writing to the students at the beginning of the course. In keeping with the policy of academic freedom, each faculty member reserves the right to determine the percentage of the final grade that is comprised of attendance, attitude, professional behavior, examinations, quizzes, laboratory assignments, etc.

A test may be administered outside the scheduled examination time only when extenuating circumstances warrant it and at the discretion of the faculty member. The student must make every possible effort to notify the instructor prior to an examination for permission to reschedule the test. Failure to follow this policy will result in an F grade being assigned to the examination.

## Academic Good Standing

A student is considered to be in good standing academically when the student maintains a semester GPA of at least 2.00 AND a cumulative GPA of at least 3.00, having no unresolved F grades, and having no outstanding financial obligations to the School of Podiatric Medicine.

School of Podiatric Medicine does NOT provide any remediation mechanisms for failures on either an examination or an entire course. Failed courses must be repeated in their entirety. Unsatisfactory resolution of an F grade or withdrawal from any course that is repeated will lead to automatic suspension from the University. Repeated courses will usually result in extending the length of a student’s education.

## Academic Probation – Suspension

A student in the Master of Science in Anatomy Program will be placed on academic probation if he/she:

- 1) achieves a semester GPA below 2.00
- OR
- 2) achieves a cumulative GPA below 3.00
- OR
- 3) earns an F grade in any semester.

Students who are not in good standing will be periodically reviewed by the Associate Academic Dean to determine eligibility to remain in the program. The Associate Academic Dean of the School of Podiatric Medicine may require a student on probation to register for a limited course load, resulting in extension of the student’s education.

Probation will be lifted after completion of the next semester of active registration if the student achieves a cumulative GPA of 3.00 or higher with no new F grades.

A student in the Master of Science in Anatomy Program will be suspended if he/she:

- 1) achieves a GPA of less than 1.00 in any semester  
OR
- 2) qualifies for academic probation for two consecutive semesters  
OR
- 3) earns more than one F grade in any semester, regardless of GPA.

If a student is repeating a course to resolve a grade deficiency, a minimum C grade must be earned in the repeated course. An F grade in, or withdrawal from any course that is repeated will lead to automatic suspension from the University.

A student who has been suspended for academic reasons generally may not petition for readmission until two academic terms have lapsed. The Registrar's Office must have the approval of the Associate Academic Dean or Dean of the School of Podiatric Medicine to readmit a student following suspension.

A student who withdraws from one or more courses in a semester is eligible to register for the withdrawn course(s) in the next semester it (they) is (are) offered. The student may not register for any advanced course that explicitly requires the withdrawn course as a prerequisite.

Students who achieve three (3) F grades may be dismissed from the School of Podiatric Medicine and the University.

## Graduation Requirements

To graduate, candidates for Master of Science in Anatomy degree must:

- satisfactorily complete the program of study;
- have attained a grade point average of 3.00 or higher on a 4.00 scale, with no more than eight (8) credits of C grades and no outstanding grades of "F", "NC", "I", or "IP";
- successfully pass comprehensive written and oral examinations.

## ACADEMIC APPEALS AND GRIEVANCE

Students have the right to appeal any grade which they feel was inappropriately assigned. Students will be allowed a maximum of 10 business days after the grade for a quiz or examination is made available to challenge that grade with the course instructor, unless

otherwise specified in the course syllabus. If informal discussions with the faculty member do not resolve the appeal, the student must present, within 15 business days of receipt of the grade in question, an appeal in writing to the Associate Academic Dean of School of Podiatric Medicine, who will respond within 5 business days. If the response of the Associate Academic Dean does not satisfy the student, the student may appeal in writing, within 2 business days of receipt of the Associate Academic Dean's response, to the Dean of School of Podiatric Medicine. The Dean will respond within 5 business days of receipt of the appeal. The decision of the Dean regarding the appeal is final. Students who do not challenge or appeal a particular grade within the appropriate time periods as described waive all future rights to appeal/challenge of that grade. Nonacademic grievance and appeal procedures are outlined in the Barry University Student Handbook.

## ACADEMIC CURRICULUM

Enrollment may occur in the summer or fall semester, on a rolling admissions basis. Due to the intensive nature of the one-year curriculum, the course schedule is prescribed and no electives will be offered. The curriculum is continuously reviewed and is subject to change at the discretion of the program.

### Sample Program of Study

| <b>Fall Term</b>                                   | <b>Credits</b> |
|--|----------------|
| General Anatomy w/lab                              | 6              |
| Histology and Cell Biology w/lab                   | 5              |
| Research Methodology, Epidemiology<br>& Statistics | 3              |
| Biochemistry I                                     | 3              |
|  | 17             |
| <b>Spring Term</b>                                 |                |
| Neuroanatomy w/lab                                 | 3              |
| Lower Extremity Anatomy w/lab                      | 4              |
| Biomedical Ethics                                  | 1              |
| Biochemistry II/Nutrition                          | 3              |
|  | 11             |
| <b>Summer Term</b>                                 |                |
| Clinical Neurology                                 | 2              |
| Human Developmental Anatomy                        | 3              |
| Medical Microbiology I (Immunology)                | 2              |
| Library Research Paper                             | 1              |
|  | 8              |

## **Anatomy Course Descriptions— Prefix: GMS**

### **527X Biochemistry I (3)**

Introduction to the fundamental aspects of biochemistry. Topics include protein structure, enzyme kinetics, and basics of carbohydrate, lipid, and amino acid metabolism and their interrelationships. Same as BMS 527.

### **528X Biochemistry II/Nutrition (3)**

This is a continuation of GMS 527. Topics covered include biochemistry of purines and pyrimidines, fundamentals of molecular biology, biochemistry of hormones, biochemistry of special tissues, nutrition and its relation to disease. Same as BMS 528.

### **536X Basic Research Methodology (3)**

Introduction to experimental design, biostatistical methods, and theoretical and statistical analysis of data. Epidemiological concepts will include population dynamics, trends in diseases and disorders, rates, screening, and public health programs.

### **547X Neuroanatomy w/lab (3)**

Presentation of the morphologic and physiologic aspects of the nervous system. Clinical correlations are incorporated to emphasize the important anatomic structures and pathways. Lecture and lab. Same as BMS 547.

### **550X Histology and Cell Biology w/lab (5)**

Presentation of the normal microscopic structure of the human body. Emphasis will be placed on the integration of the morphology with the biochemical and physiologic process of the body. Lecture and Laboratory. Same as BMS 550.

### **553X Biomedical Ethics (1)**

An introduction to bioethics relevant to podiatric medical practice: valid consent, confidentiality and privacy, issues in death and dying, and the podiatric code of ethics.

### **590X Gross Anatomy w/lab (6)**

Study designed to expose the student to the macroscopic aspects of human morphology. Complete dissection of a cadaver will be correlated with surface anatomy, radiology and other clinical information. Lecture and lab. Same as BMS 590.

### **595X, 595Y Physiology I, Physiology II w/lab (4,2)**

Physiology is a lecture-laboratory course that spans two semesters and incorporates concepts from histology, biochemistry and anatomy and applies these concepts to the students' understanding of the normal functioning of the major organ-systems of the human body. The first module, GMS 595A, covers the following major

organ-systems: Neuronal, Muscular, Neuroendocrine, Reproductive, Cardiovascular, and Renal, while the second module GMS 595B covers the Respiratory & Gastrointestinal systems in addition to a laboratory component. GMS 550 Histology, GMS 527/528 Biochemistry. Note: GMS 595A Physiology I is a prerequisite for GMS 595B Physiology II.

### **600X, 601X Pathology I w/lab, Pathology II (4,2)**

Fundamental principles of disease processes such as tissue injury and repair, inflammation, the immune response, and neoplasia, as well as mechanisms of hemodynamic and metabolic derangement; illustrated in laboratory by means of clinical material and case studies. Lecture and lab. Prerequisite: GMS 550 for GMS 600; and GMS 600 for GMS 601. Same as BMS 600, 601.

### **610X Clinical Neurology (2)**

Emphasis on clinical presentation of disorders commonly involving the nervous system with particular emphasis on neuromuscular disorders and peripheral neuropathies. Problems of the nervous system such as muscular dystrophies, tumors, strokes, trauma, and seizures are described. Prerequisite: 547.

### **620X Pharmacology (3)**

Course encompasses basic pharmacological principles and classes of drugs. Same as BMS 620. Prerequisites: GMS 527, 528, and 595.

### **623X, 624X Medical Microbiology I, Medical Microbiology II w/lab (2,5)**

Comprehensive study of medical immunology, medical bacteriology, medical mycology, medical virology and medical parasitology. The courses survey the interaction between the human host and the pathogens, characteristics of pathogens, epidemiology, pathogenesis of disease, and treatment. Anti-infective agents will also be discussed, including modes of action, spectra of activity, and specific mechanisms of resistance. GMS 624 has lecture and laboratory/case presentation meetings. Prerequisites for GMS 623: GMS 527, 528, 550, 590. Prerequisites for GMS 624: GMS 623.

### **625X Applied Lower Extremity Anatomy w/lab (4)**

Provides a thorough knowledge of the anatomical structures of the lower limb, using standard anatomical terminology. Information of clinical interest included where relevant. Prerequisite: GMS 590 for GMS 625; GMS 625 for GMS 557.

### **642 Human Developmental Anatomy (3)**

Introduces student to structural development of the human embryo. Lectures, discussions, and student presentations will be included. No laboratory. Prerequisites: GMS 550, GMS 590.

**654 Research Techniques Seminar (1)**

Provides a theoretical understanding of techniques that may be encountered in the research laboratory. Topics to be presented by faculty and students may include histochemical staining, immunohistochemistry, electrophoresis, nucleic acid and protein blot analyses, polymerase chain reactions, in situ hybridization techniques, cell and tissue culture, gene expression from recombinant vectors, monoclonal antibody production, enzyme-linked immunosorbent assays, radiologic and non-radiologic detection of cellular components, and others.

**697 Special Topics (1-3)**

Analysis and discussion of contemporary topics. Evaluation of recently published research literature. Seminars and discussions with invited speakers.