

**Substantive Change Prospectus  
for the  
M.D. degree at Florida International University**

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# **Substantive Change Prospectus to Southern Association of Colleges and Schools (SACS) Commission on Colleges (COC)**

April, 2009 by Florida International University College of Medicine

## ***I. ABSTRACT***

Florida International University seeks approval from the Southern Association of Colleges and Schools to establish a new and ongoing College of Medicine (COM) that will offer a Doctor of Medicine degree. The COM will be primarily housed on the main campus of Florida International University, 11200 SW 8th Street, Health & Life Sciences Building, Miami, Florida 33199. Off-campus sites with formal affiliations or contracts for services in the Miami metropolitan area will be used for clinical education. These include The Jackson Health System (North Jackson Medical Center), Mt. Sinai Medical Center, Miami Children's Hospital, Mercy Hospital and the Gordon Center for Research in Medical Education. The FIU plan for a College of Medicine was awarded Preliminary Accreditation by the Liaison Committee for Medical Education in February 2008 following approval and funding commitments by the Florida State Legislature and Board of Governors and the FIU Board of Trustees. These approvals were preceded by 12 years of institutional planning.

The primary need for the College of Medicine is to address a current and projected shortage of Medical Doctors (primary care and specialists) in a region with a very large medically underserved population. The goal of the college is to provide educational opportunities, in a public university, for qualified students to earn an M.D. Degree.

The educational plan is for a standard, full time, cohort, four-year curriculum preparing M.D. graduates for licensure and post graduate study in any medical specialty area. Initially the program is designed for classes of 40 students with a plan for enrollment increasing to 80 then 120 students over five years with each new class starting in August. The program is post baccalaureate. A recruitment goal is a student body and a faculty that reflect the diversity of this community's population.

Active learning in classroom, laboratory, small group, community and clinical sites and independent study all with direct faculty supervision will guide the development of knowledge, skills, values, behaviors and attitudes to fulfill the competencies established for M.D. graduates. The COM has set seven graduation competencies: the six recommended by the American Council for Graduate Medical Education (ACGME) and an additional seventh competency of Social Responsibility. Competency in the ACGME six will be developed with contemporary programs in basic and clinical medicine emphasizing case and problem based learning and applied learning in clinical settings. Social responsibility is instilled through a novel community based program developed to help students gain an understanding of social and cultural factors that impact individual and community health and health care in South Florida.

The COM will use multiple metrics and indicators to evaluate the effectiveness of its educational programs and student competencies: customized National Board of Medical Exams (NBME); United States Medical Licensing examinations (USMLE); and institutional measures of knowledge, skill and behavior (non-cognitive measures). Instruction for the FIU

College of Medicine students will be delivered by highly qualified and experienced M.D. and Ph.D. faculty whose knowledge and skills encompass clinical medicine, basic science and research. Faculty have been recruited and appointed in five basic science and eleven clinical departments. Research faculty have been recruited and provided well equipped laboratories.

For the initial classes, complete and appropriate facilities exist: classrooms, laboratories, simulation labs, study rooms and a student lounge. The COM Library has its own Director and staff, dedicated space and collections. The library director reports to the Executive Associate Dean for Academic Affairs. Adequate funding and institutional resources for the M.D. program have been provided by the Florida Legislature and the University.

## **2. BACKGROUND INFORMATION**

As part of its 1996 overall institutional objectives (see 1996 Strategic Plan Reaching for the Top in **Appendix 2**), Florida International University began a focused initiative to develop degree programs in health and medical education, as well as biomedical research.

One of FIU's six strategic themes (see below) involves the university engagement in health at the local and global level. This objective in promoting public service led FIU ineluctably to its new College of Medicine. A COM is a natural extension of FIU's prior mission statements and vision themes, namely promoting public service, discovering new knowledge, and solving health-related problems through research, and contributing to the economic development of the region and state. The existence of a new medical school at FIU does not detract from extant efforts. The College of Medicine is constructed with and leveraged to address the need to increase the number of physicians in this region. Overall, the addition of the medical school to FIU is an evolutionary process that has been in place for years.

### **Florida International University Mission and Vision are:**

#### **Institutional Mission**

*Florida International University is an urban, multi-campus research university serving South Florida, the state, the nation, and the international community. Our mission is to impart knowledge through excellent teaching, promote public service, discover new knowledge, solve problems through research, and foster creativity.*

#### **Institutional Vision**

FIU's vision is to become one of the top urban public research universities in the country. The Millennium Strategic Plan 2001-2010 identified six strategic themes on which the university will focus in order to achieve this vision. Given rapid globalization in the 21st century, FIU's strategic themes necessarily engage at both the local and global level (see

the Millennium Strategic Plan 2001-2010 link at <http://www.fiu.edu/oir/docs/msp.pdf>, or **Appendix 3)**

These themes are:

- Health
- Environment
- International
- Florida and local economic development
- Arts, culture, and diversity
- Learning opportunities

In September 2008, the President of FIU unveiled an updated strategic paradigm to the university community. The 2001 vision of a robust health sciences initiative was reinforced in a new document, **FIU 3.0 A New Strategic Paradigm** (See **Appendix 4**). The updated objectives specifically call for enhanced quality and magnitude of research and doctoral degrees, with the College of Medicine pivotal for achieving the goals in health science research.

### **Legal Authority for the Change**

On September 19, 2005, the Board of Trustees of Florida International University reviewed the request (**Appendix 5**) and approved establishment of an FIU College of Medicine to offer a Doctor of Medicine (M.D.) degree (**Appendix 6**). The Board of Governors of the State University System of Florida approved the plan for the FIU COM on March 23, 2006 (see board minutes in **Appendix 7**). On May 3, 2006, the Florida Legislature passed language establishing the Florida International University College of Medicine. Governor Charlie Christ committed funding on May 24, 2007. See Senate Bill in **Appendix 8** or link at: <http://www.flsenate.gov/data/session/2007/Senate/bills/billtext/pdf/s2800er.pdf>.

These new funds guarantee that the creation of the College of Medicine will not be achieved by diverting funds previously appropriated for the undergraduate and graduate programs of FIU.

### **Programmatic Accreditation**

Approval by the Florida legislature for a medical school is necessary, but not sufficient. Medical Doctor degree programs in the United States are accredited by the Liaison Committee for Medical Education (LCME). The U.S. Department of Education recognizes the Liaison Committee on Medical Education (LCME) to accredit programs of medical education leading to the M.D. degree as offered by institutions that are accredited by regional accrediting associations. The FIU College of Medicine thus had to be accredited by the LCME, which was received in 2008 (**Appendix 9**) and now seeks approval from SACS through this substantive change prospectus.

LCME Accreditation for a new M.D. degree program is a three part, 6 year process that begins approximately 18 months prior to the inaugural class; full accreditation cannot be received prior to the year (2013 at FIU) the inaugural cohort graduates.

The first step, Preliminary Accreditation, authorizes recruitment of an inaugural class and the implementation of the educational program. The second step, Provisional Accreditation, may be awarded prior to the inaugural class entry into the clinical phase of the program or the third year, Full Accreditation may be awarded during the fourth year of a program and if achieved, the inaugural class would graduate from a fully accredited Medical Doctor Degree program. FIU has been awarded preliminary accreditation (March 2008) and will pursue Provisional Accreditation in 2010 and Full Accreditation in 2012, commensurate with a plan for the first class to graduate in June of 2013 with full LCME accreditation.

Preliminary Accreditation was awarded by the LCME on the basis of a Self-Study, a Data Base and a site visit documenting the status or development of five main areas: Institutional Setting, Educational Programs, Medical Students, Faculty, and Educational Resources. The documents answer the questions provided for the five main areas of the college's governance, curriculum, student services, teaching, and resources. Provisional Accreditation requires a new Self-Study, updated database and another site visit. FIU COM will submit a completed Self-Study and database in August 2010. Full Accreditation requires yet another Self-Study, current database and site visit. If the LCME finds that the program complies with all accreditation standards, then full accreditation status will be granted.

### ***3. ASSESSMENT OF NEED AND PROGRAM PLANNING /APPROVAL***

#### **Assessment of Need**

There is abundant evidence of the need to create a public medical school in South Florida. The closest public medical school is the University of South Florida, located 275 miles northwest of Florida International University in the middle-west region of the state and serving a much less dense and diverse population. By the mid-1990s, it had become clear that South Florida's rapidly increasing population needed more and better-educated healthcare professionals. Annually, colleges of medicine in the state of Florida were educating fewer than 500 graduates, whereas the state was licensing 2,500 physicians. Meanwhile, public health issues such as Human Immunodeficiency Virus (HIV) infection and medical care for the indigent were increasingly placing pressure on the existing medical establishment.

To meet the diverse needs of the region and the state of Florida, FIU had already developed (1996-1997) a ten-year strategic plan "Reaching for the Top" that placed health education, biomedical research, and medical education at the top of the university's priorities (**Appendix 2**). Under this plan, FIU began to reorganize its academic structures to better suit and support the long-term goals of developing a COM. One of the culminating steps, In 2000, FIU reorganized departments and established its

College of Health and Urban Affairs that included the School of Nursing and the departments of Social Work, Public Health, Health Services Administration and Dietetics and Nutrition which eventually formed the Robert Stempel School of Public Health. This organization allowed for the health science programs to begin to collaborate more formally, build a base of interdisciplinary research and strengthen their internal constructs. As a final step and an indication of their respective strengths, the health sciences are now comprised of the College of Nursing and Health Sciences and the Robert Stempel College of Public Health and Social Work.

In 1997, the Medical School Concept Committee conducted an initial study. This group was composed of local hospital representatives and FIU faculty and staff. The Committee was asked to realize five outcomes of the planning process: refinement of the FIU health mission; better identification of FIU health program clientele; identification of programs and degrees required to meet local needs; identification of FIU's comparative advantages; and prioritization of future work in the health area.

The consensus of the Committee was that there was a strong need for an additional allopathic medical school in Miami Dade County that would have special strengths in community-based primary care, geriatric medicine, and tropical medicine. It was agreed that FIU was an ideal setting for such a medical school and that underrepresented minority students would be expected to have a strong presence in the student body of an FIU medical school.

In 2000, FIU's Medical School Planning Task Force began a feasibility study (**Appendix 10**). Later, economic impact reports were conducted by two separate and independent research firms, one in 2004 and one in 2006 (**Appendix 11**). Both reports describe the beneficial contribution the College of Medicine would provide to the region, community and University.

Concurrently, the Association of American Medical Colleges (AAMC) called for expansion of the number of U.S. medical school graduates by 30 percent over the next ten years, through both enrollment increases and establishment of up to eight new schools. This call was consistent with the FIU Strategic Plan calling for health education, medical education, and biomedical research as a University focus (see the Millennium Strategic Plan in **Appendix 3**).

### **Process for Implementation**

The first concrete step in implementing the FIU COM was identification of an individual with a distinguished record in medical education to be the Founding Dean. Thus on July 28, 2006, the Provost appointed Divina Grossman, RN, Ph.D., Dean of the School of Nursing at FIU to chair a search committee, charged to recommend candidates for the Founding Dean of the College of Medicine (see committee list in **Appendix 12**). The University Board of Trustees appointed John A. Rock, M.D., former Chancellor of Health Sciences at Louisiana State University, as the College of Medicine's Founding

Dean and Senior Vice President for Medical Affairs. See press release November 14, 2006 Link [http://news.fiu.edu/releases/2006/11-14\\_Dr\\_Rock.htm](http://news.fiu.edu/releases/2006/11-14_Dr_Rock.htm) or **Appendix 13**.

Dean Rock reports directly to the FIU President on matters of medical affairs, clinical affairs, and practice management, and to the FIU Provost on matters of educational programs and research. FIU's senior leadership, including the President and Provost, have shown strong and unwavering support for the new COM, indicating institutional commitment and appropriate financial support to ensure effective planning, program implementation, and operations.

Shortly after assuming his duties, Dean Rock named an Associate Dean for Curriculum and three Executive Associate Deans (EAD) to lead Academic Affairs, Clinical Affairs, and Student Affairs, respectively. An EAD in Finance and Administration was added soon afterward. (see organizational chart **Appendix 14**).

These highly experienced leaders are the drivers of the COM's institutional vision, priorities, and strategic direction. They have primary decision-making responsibilities in their respective areas with Dean Rock retaining overall authority (see vitae in **Appendix 15**).

In January 2007, the FIU College of Medicine Implementation Team (COMIT) was formed. Consisting of FIU administrators and staff, it met weekly and worked toward developing the operational infrastructure for the COM (see list of COMIT members in **Appendix 16**). This process facilitated the COM moving expeditiously toward accreditation by the Liaison Committee for Medical Education.

The COMIT was convened from FIU administration, faculty, student body, and other extramural constituencies. Their charge was to (1) collect and review data concerning the medical school's educational program, resources, setting, faculty and students, (2) identify institutional strengths and issues requiring action, and (3) define strategies to ensure that strengths are maintained and problems addressed. The denouement of the above process was the self study presented to the LCME. The LCME Self-Study process provides an evaluation of the quality of the medical education program and adequacy of resources that support it (see COM Self-Study in **Appendix 17**).

### **College of Medicine Mission Statement**

*The mission of the College of Medicine is to provide a program of study for the Doctor of Medicine Degree enabling graduates to pursue a wide spectrum of professional careers in Human Medicine. Careers in private practice, academic medicine, public service, leadership in health care and public policy are considered in the design of the educational program. A special emphasis in our mission is a focus on community health in our metropolitan region with a curriculum designed to educate physicians for medical practice in South Florida. This emphasis includes the study of culture and society in the region in relation to personal and community health.*

In establishing a College of Medicine, FIU seeks to elevate the quality of medical care in the Miami-Dade region and to provide South Florida residents with greater access to medical education. The expanded research program will fuel the economic growth potential of the region's already robust high-technology, high-wage biomedical and biotechnology industries. By the tenth year of operation, the goal is to have accomplished:

- Providing an affordable, accessible College of Medicine in South Florida that partners with community hospitals and healthcare clinics throughout the region.
- Maximizing an effective public/private partnership funding model.
- Enhancing the quality of health care by increasing the number of culturally competent, underrepresented minority physicians providing care to underserved populations in Florida, particularly South Florida, and throughout the nation.
- Graduating 120 medical students each year, assisting in the development of 500 residency positions, and addressing the region's current and anticipated physician shortages.
- Providing scholarships through successful fundraising in order to support the college's diversity goals.
- Forging biomedical and scientific advances through research in the COM and in collaboration within the university and community.
- Contributing to the economic development of the region, state, and nation.

### **Chronology Leading to Matriculation**

FIU Board of Trustees Approved Plan for COM	September 2005
Board of Governors of the State University System Approval	March 2006
Florida Legislature Approval	May 2006
COM Founding Dean Appointed	November 2006
Self-Study	August 2007
LCME Site Visit for Preliminary Accreditation	November 2007
Preliminary Accreditation Awarded (LCME)	February 2008
Student Applications to MD Program Begin	August – November 2008
Submission of Substantive Change Prospectus to SACS	April 2009
First Matriculation	August 2009
Self-Study to be Submitted for Provisional Accreditation (LCME)	August 2010

Site Visit for Provisional Accreditation (LCME)	September 2010
LCME Action on Proposal for Provisional Accreditation	February 2011
Self-Study for Full Accreditation to be Submitted to LCME	August 2012
Site Visit for Full Accreditation	September 2012
LCME Action on Proposal for Full Accreditation	February 2013
Graduation of First Class	May 2013

#### **4. DESCRIPTION OF THE PROPOSED CHANGE**

The proposed change is to establish a College of Medicine through which a new degree (M.D.) will be awarded. FIU COM graduates are expected to develop the seven competencies listed below, the first six are recommended by the Accreditation Council for Graduate Medical Education (ACGME) and incorporated into expectations set by the Liaison Committee on Medical Education (see sections A & B in **Appendix 18**). FIU has added a seventh to reflect its expectation that FIU graduates become culturally competent and socially responsible for citizens of greater Miami and South Florida. These competencies serve as the Program Outcomes for the M.D.

#### **Competencies for M.D.:**

##### **1. Medical Knowledge**

Students must demonstrate the application of knowledge about established and evolving biomedical, clinical, epidemiological and social behavioral sciences to the delivery of quality and safe patient care.

##### **2. Patient Care**

Students must demonstrate the willingness and the ability to provide health care to patients that is compassionate, appropriate and effective for treating health problems and promoting health.

##### **3. Interpersonal and Communication Skills**

Students must demonstrate interpersonal and communication skills that result in effective information exchange and teaming with patients, patients' families, and professional associates.

#### **4. Professionalism**

Students must demonstrate a commitment to service, adherence to accepted ethical principles and norms, sensitivity to diverse patient populations and to professional colleagues.

#### **5. Systems-Based Practice**

Students must demonstrate an awareness of and responsiveness to the larger context and systems of health care and the ability to call on system resources to provide optimal care.

#### **6. Practice-Based Learning and Improvement**

Students must be able to investigate and evaluate patient care practices, appraise and assimilate scientific evidence, and continually improve their practice of medicine.

#### **7. Social Responsibility**

Students must recognize and adapt best practices to accommodate the specific health care needs of their patients, families, and community.

### **Student Learning Outcomes (SLOs)**

The College has developed specific graduation educational objectives for the M.D. program and organized these into five areas called Strands. The Strand objectives, found in **Appendix 19** serve as the basis for Student Learning Outcomes. Strand objectives also guide individual course objectives.

The five Strands are:

- Human Biology
- Disease, Illness, and Injury
- Clinical Medicine
- Professional Development
- Medicine and Society

Assessment measures of the Program and Student Learning Outcomes occur in the following evaluations: Basic and Advanced Cardiac Life Support Exams, Pediatric Life Support Exams, Clinical Skills Exams, Objective Structured Clinical Exams, Preceptor Evaluations, Medical Student Academic Portfolio, National Medical Board Examiners Subject Exams, Standard Patient Simulation Evaluations, and United States Medical Licensing Exam. Each of these outcome measures are separate from course grades and

accurately indicate the degree of student success in meeting the M.D. Program and Student Learning Outcomes.

## **Curriculum Structure**

The FIU COM curriculum has been designed to enable students to obtain the knowledge and skills, professional behaviors, values and attitudes required for competence in science and clinical practice. The curriculum is integrated vertically among the five Strands with concurrent courses addressing common clinical cases from varied perspectives. Knowledge and skills are developed in three stages: introduction, elaboration in clinical context and application in a clinical setting. Study is organized into four sequential periods; foundations, organ systems patho-physiology, clinical clerkships, and medical specialties- selectives and electives (See -Period Calendar in **Appendix 20**). Abbreviated syllabi for Period 1 courses are provided as **Appendix 21**. The program is a full time, mandatory cohort curriculum i.e., all students take same courses at same time during years one and two. During year 3, students take the same clerkships in varying sequence. Year 4 has elective courses, differences in sequence and two capstone courses taken by all students.

Novel to FIU College of Medicine is the Medicine and Society Strand created to prepare physicians to practice medicine in an interdisciplinary and integrated manner. The program offers a comprehensive and integrated program that runs through the entire four years of medical student education. Beginning in their first year, students study ethics, social determinants of health, culture and multidisciplinary team practice through collaborative experiences with students from other fields (e.g., public health, nursing, social work). Students are assigned households and communities for four year service learning experiences. Students work with participating households and the community to identify and address existing healthcare needs and services acting as facilitators and patient educators. FIU COM thus has the potential to impact medical education by addressing the specific health outcomes of the communities served. Systematic study of the impact of this educational program on individual health and health services in the community will determine the effectiveness of the program beyond the educational value to the students. It is hypothesized that factors such as fewer emergency room visits, improved health literacy, and increased preventive care may result from the program. The overarching aim is to demonstrate commitment by FIU COM to its surrounding community and to contribute toward improving healthcare in areas of great need.

The curriculum is designed by the curriculum committee, which also has oversight and evaluation responsibilities. The entire educational program is within the division of academic affairs including faculty, administrators, course directors, Strand leaders and the medical education staff. The curriculum is managed by Strand leaders with a longitudinal plan based upon graduation competencies and outcome objectives. Faculty and course teams plan specific activities and teaching methods and evaluate student performance under authorization of the curriculum committee and support from the administrative cohort. College of Medicine faculty members will be responsible to their respective Course Directors, who in turn will be responsible to Strand Leaders. For a

reporting structure please see **Appendix 22**. The Curriculum Committee is selected from faculty as shown below.

This Curriculum Committee consists of

- 5 Strand Leaders
- 7 Clerkship Directors
- 1 Pathologist
- 4 Basic Scientists
- 3 Students - beginning 2009
- Associate Dean for Curriculum
- Ex-officio Executive Associate Dean for Academic Affairs
- Ex-officio Executive Associate Dean for Student Affairs
- Ex-officio Director of the Office of Medical Education
- Ex-officio Director of the Medical Library

Strand Leaders and faculty will be appointed by the Executive Associate Dean for Academic Affairs.

The Curriculum Committee (CC) is responsible for establishing the graduation competencies and student learning objectives that are assigned to Strands and courses. The CC of the college is advisory to the Associate Dean for Curriculum for management of the curriculum. Validation of curriculum effectiveness is facilitated by data and its analysis gathered by the Office of Medical Education, which reports to the Associate Dean. See Curriculum Committee organizational chart in **Appendix 23**.

The FIU COM curriculum relies heavily on virtual and real case-based educational formats providing students with multiple opportunities to observe and apply knowledge and skills in various healthcare challenges and develop independent analytical skills. The curriculum employs and emphasizes active learning formats with formal guidelines limiting passive activities, i.e., lecture format. Full class participation in the classroom, small groups, directed and independent study and problem based learning, laboratory, simulation, clinical setting and individual mentoring are employed as the formats for active learning.

The Curriculum Committee will specifically oversee the educational program by 1) ensuring the quality of Strands and courses; 2) reviewing proposals for addition or modification of content in Strands and courses, and making recommendations to the Associate Dean for Curriculum; 3) assuring that proper pedagogical methods are employed; 4) assuring that Strands, courses, and clerkships assess student performance, both formatively and summatively; and 5) monitoring the overall effectiveness of the curriculum. The Curriculum Committee reports to the Executive Associate Dean for Academic Affairs.

Achieving the above utilizes individual Course Evaluation Subcommittees specific for each course. Each course subcommittee, which includes students, reviews each course following completion, reporting findings and making recommendations to the Curriculum Evaluation Committee. The course evaluation committees report formally to the standing Curriculum Evaluation Committee which conducts regular systematic assessments of the curriculum by periods of study.

### **Admission Criteria**

The FIU COM will participate in the American Medical College Application Service application process. Its admission process is thus similar to that of other accredited medical schools in the U.S. and is coordinated and integrated with FIU. FIU COM requires a predetermined minimal performance (25) on the Medical College Admission Test (MCAT), and a minimum GPA of 3.0 as criteria for acceptance. The COM also includes an interview component to assess the applicant's maturity, commitment to human service, compassion, altruism, communication skills, interest in community work and intent to practice in South Florida. The interview component reflects the mission of the FIU COM. Interest in community work and South Florida residency will, however, neither automatically qualify nor disqualify a prospective student, but will assist the Admissions Committee in forming a more comprehensive view of the candidate.

## **5. FACULTY**

### **Compliance in Recruitment**

Florida International University complies with federal, state, and internal policies regarding equal opportunity and affirmative action for employees, applicants, and students. The College of Medicine (COM) has recruited highly qualified faculty based on educational, research, and clinical service achievement and credentials.

Adherence to FIU guidelines helped ensure diversity. Recruitment of the founding faculty followed the open ("sunshine") protocol applicable in the state of Florida. The application pool was vetted for diversity, and appointments were made consistent with FIU faculty demography: 15 percent Hispanic, 12 percent Asian, 8 percent black, and 64 percent Caucasian. The college thus has recruited a founding faculty that represents the diversity of the FIU faculty. These faculty will serve as role models for the FIU COM students. All founding faculty have earned terminal degrees M.D. and or Ph.D. and have completed post graduate training in either medical residency programs or postdoctoral fellowships.

### **Organizational Structure**

Faculty organizational structures have been developed, namely a Faculty Assembly, requisite faculty committees and departments. Committees provide input into strategic initiatives in such areas as curriculum, research, and admissions. An example is the previously mentioned Curriculum Committee, which reports its findings to the Faculty Assembly in oversight of the curriculum. Policies for appointment, renewal of

appointment, promotion and tenure policies of the University are available online at **URL:** <http://academic.fiu.edu/docs/Revised%20T&P%20Manual%202-9-07.pdf> or see Tenure and Promotion Manual in **Appendix 24**. Faculty bylaws provide College of Medicine-specific information. They have been approved by the COM Faculty Assembly and the University (**Appendix 25**).

## **Composition**

Faculty at the FIU College of Medicine fall into two general categories: basic science faculty and clinical faculty. At FIU COM no formal instruction will be provided by residents, post-doctoral students, or graduate students. A faculty roster with credentials and experience is summarized in **Appendix 26**; vitae provided for key faculty are located in **Appendix 27**.

Full-time faculty in basic science are housed at the FIU University Park campus. Those in clinical science focus their activities in hospital and clinical care facilities. Other contributions come from voluntary clinical faculty who practice in Miami-Dade and Broward Counties at a variety of venues.

All COM faculty are expected to participate in faculty development activities to improve their skills in teaching and evaluation. The COM's Faculty Development Program is overseen by the Office of Medical Education. It supports and recognizes excellence and scholarship in teaching and education using criteria grounded in evidence-based and peer-review processes. The COM's Faculty Development Program complements the programs within FIU's Academy for the Art of Teaching.

## **Basic Science Department and Faculty**

The COM has **five basic science departments**: Cellular Biology and Pharmacology, Molecular Microbiology and Infectious Diseases, Immunology, Human and Molecular Genetics, and Pathology. All basic science faculty will have primary appointments in one of these departments. Chairs for each of the five departments have been appointed. Because the COM will not offer independent graduate programs (Ph.D.) at the outset, the basic science faculty of the COM will be offered courtesy appointments for the purpose of supervising Ph.D. candidates in other Colleges of FIU that have doctoral-degree programs in fields relevant to medicine (e.g., Ph.D. in Department of Biological Sciences in the College of Arts and Sciences).

FIU's initial recruitment of basic science faculty gave priority to teaching faculty responsible for the curriculum. Accordingly, FIU COM Academic Affairs was allocated funds for Strand Leaders, Course Directors and a cohort of Master Teachers in the primary medical science disciplines.

Additionally we have hired research faculty who may carry a small teaching responsibility. Sufficient resources were identified to recruit a cadre of National Institutes of Health (NIH) funded investigators. Nominal teaching and administrative duties are

expected, but these faculty are provided ample time for competitive research pursuits (70-80% of their time). Faculty have been recruited in focused area clusters including senior leadership who are all NIH funded and junior faculty who will be part of focused research groups.

### **Clinical Departments and Faculty**

At the present time, we have established ten clinical departments (Medicine; Neurology; Obstetrics and Gynecology; Pediatrics; Psychiatry; Orthopedics; Ophthalmology; Radiology; Surgery; Humanities, Health & Society).

Faculty in Clinical departments are expected to be involved in varying degrees in each area of the College of Medicine's mission: education, research, and patient care.

FIU COM's primary public clinical teaching affiliate will be The Jackson Health System. A formal affiliation agreement has been executed. The Jackson Health System has dedicated one hospital, Jackson North Medical Center to become the primary and exclusive teaching hospital for FIU COM. The Jackson Health System is also the primary site for the University of Miami's College of Medicine's clinical instruction at a different site, the Jackson Memorial Hospital. The Jackson Health System has full specialty range and a large number of medical residency training programs. In addition, formal affiliations have been consummated with three private hospitals providing additional clinical teaching opportunities: Miami Children's Hospital, Mt. Sinai Medical Center and Mercy Hospital, the former two which have established residency programs. These sites serve both inpatients and outpatients. Each provides clinical and experiential education in specific areas of medicine. (See affiliation agreements in **Appendix 28**).

Clinical teaching will be provided by full-time, part-time and voluntary faculty working at various clinical sites. In year 3 (2011-2012) we expect to develop and expand clinical residency programs in partnership with these hospitals. Such interactions will offer appropriate experiences for COM students to plan and prepare for post graduate study.

### **Types of Appointment**

There are three full-time faculty employment tracks:

**Tenure Track:** Faculty on this track must have a major commitment to scholarly activity. They are expected to achieve genuine academic excellence in at least one of the following areas: education, research, or patient care. They are expected to develop increasing national and international reputations and to publish/present in commensurate number in competitive forums. The COM follows the tenure review process outlined in University, College of Medicine and Departmental policies (see Faculty Handbook in **Appendix 29**).

**Non-tenure Clinical Scholar:** Full-time faculty on this track will typically devote a majority of their effort to either patient care or teaching or both. They are expected to

pursue scholarly activity and service, but not to the extent required of tenure track faculty. Their scholarly activity might involve clinical research, medical students or resident/fellow education, or promulgation of clinical experience.

**Non-tenure Research Scientist:** Faculty on this track will be expected to devote a majority of their effort to research, but not necessarily independently. Their research activity will typically fall under the aegis of a major research program. Extramural research support is encouraged but not a requirement for promotion. Faculty on these non-tenure tracks may be part-time.

There are two other faculty tracks:

**Clinical (volunteer) faculty:** Faculty on this track serve in a volunteer capacity, without financial compensation. Appointments are typically reserved for physicians who are employed outside of FIU and are board certified in a specific discipline. These faculty are expected to contribute actively to the education, research, and/or clinical programs of the College of Medicine. They are ordinarily appointed in clinical departments.

**Adjunct faculty:** Faculty on this track may receive part-time compensation or may serve in a volunteer capacity without financial compensation. Appointments are typically reserved for faculty whose primary appointment is at another institution. All M.D. clinical faculty are expected to have appropriate current specialty board certification, with rank commensurate with qualifications and effort. Clinical Assistant Professors will usually have interacted with learners less than 40 hours per year, counting one delivered lecture or small group discussion as three hours, time in educational seminars per hour, time spent overseeing observational activity, rounding, or supervising in surgery are generally equal to one hour credit. Clinical faculty with greater than 40 hours effort will ordinarily become Clinical Associate Professors. Clinical Professors will be considered exceptional, usually requiring national recognition such as being a board examiner, clinical society officer, or having substantive publications.

## **Research**

Florida International University faculty have been involved in biomedical research prior to the development of COM see Office of Sponsored Research (OSRA), newsletter link: <http://osra.fiu.edu/awards.htm> or see webcapture of department and two months of awards in **Appendix 30**. Substantive resources thus exist in disciplines relevant to medicine including Biological Sciences, Physics, Chemistry and Biochemistry, Public Health, Biomedical Engineering, and Environmental Studies. Many programs are mature, having multiple activities including external funding, graduate students and post-doctoral fellows: all can provide research mentorship for medical students.

COM research will focus on three areas: 1) Reproduction and Development, 2) Environmental Sciences, and 3) Social Medicine. As mentioned, the initial senior research faculty are all NIH funded and expected to serve as vanguards and mentors. They were provided substantial packages: 800-2100 square foot lab space, equipment,

personnel, and ample time (80%) for research. FIU processes and provides research development awards through its Office of Sponsored Research Administration (OSRA).

The founding research faculty will further enhance research capability by mentoring full-time junior faculty members. The Mentor chosen is expected to share with the Mentee the common goals of a "real-time" assessment of his/her progress toward tenure. The mentee can seek advice concerning his/her role or progress. Departmental expectations for one's academic career can involve relative commitment for clinical activities, teaching, research, and scholarly achievements. Mentors provide practical advice regarding preparation of manuscripts, grant applications and presentations in teaching or research seminar venues.

The College of Medicine rewards teaching excellence. Research and scholarship in medical education will be encouraged and will be recognized in promotion and tenure proceedings, and can be the primary basis for awarding tenure.

### **Structured Access to Faculty by Students**

Each full-time teaching faculty member and each research faculty member is assigned a private office. Students can approach faculty with concerns they may have via e-mail, telephone or directly during office hours. Students can also reach part-time and voluntary faculty via email or by phone through a department secretary.

Contact information and office hours are delineated in every syllabus. In addition, general statements about faculty office-hours policy can be found in the Faculty Handbook (**Appendix 29**), and in the Student Handbook, which is currently being created.

## **6. LIBRARY AND LEARNING RESOURCES**

The library of the College of Medicine will be a separate, dedicated facility that will leverage FIU's existing library resources to increase overall capabilities. The COM recruited and hired a Library Director and staff; the director reports to the Executive Associate Dean for Academic Affairs. The College of Medicine also draws upon resources of Florida International University's Steven and Dorothea Green Library, located on FIU's University Park campus. See campus map in **Appendix 31**. A five-minute walk from the COM Health and Life Sciences II building, the Green Library houses considerable materials and provides professional services to support FIU's extant health sciences schools, namely the College of Nursing and Health Sciences, and the Robert Stempel College of Public Health and Social Work.

### **FIU University Libraries**

The Green Library at University Park and the Biscayne Bay Campus library have a large combined collection of journals, books, resources, and other publications (hardcopy and online). In aggregate, FIU has one of the largest university-based collections in Florida. Collections consist of over 1.7 million volumes and more than 9,000 journal

subscriptions, including 3,600 electronic full-text journals. (See **Appendix 32** for sample of journal subscriptions.) FIU's collections are catalogued in the online catalog of the State University System of Florida Libraries. All FIU online resources (with the exception of some licenses restricted to the College of Law) are accessible to COM students. The University Libraries belong to several consortia devised for resource sharing: the State University Library System, Florida Center for Library Automation, On Line Computer Library Center (OCLC) interlibrary loan system, Southeast Florida Library Information Network, Southeastern Library Information Network, Association of Southeastern Research Libraries, and Center for Research Libraries. The University Libraries' employees serve on various university governance bodies, including the Faculty Senate Curriculum Committee and the Graduate Council. The Associate Director for Collection Management coordinates the library analysis of the depth and breadth of library holdings for the academic programs under review.

The FIU Libraries are led by the Dean of University Libraries. This Dean reports to the Provost and is a member of the Dean's Advisory Council. The Dean not only oversees the Green Library on the University Park campus, but also the Biscayne Bay campus. The Dean of University Libraries supports the COM Library Director, meeting on a regular basis to discuss collaborative efforts.

### **The College of Medicine Library**

The COM Library has a very experienced Director (twenty-six years), who began at FIU in August 2007. The director reports to the COM Executive Associate Dean for Academic Affairs. Total staff is anticipated to number 4.0 FTE professional librarians, 3.5 FTE library assistants, and 2.0 FTE student workers. Operational since fall 2008, the College of Medicine Library occupies approximately 7,000 square feet of dedicated, controlled access and partitioned space on the third floor of the Green Library. Students will have 5438 square feet of dedicated study space within the COM library. This space not only houses library services for the COM, but also access to information systems, hard copy publications and materials, and printing and copying capabilities.

Overall, the COM Library maintains significant print and online resources to support its educational program. To complement existing online resources at the FIU Green Library, the COM Library maintains its own list of online databases, 1,400 books, 450 medical journals and many on line repositories. In addition, the COM Library maintains a collection of books drawn either from standard resources or requested by COM faculty. These resources are in addition to those available to all FIU students. Ancillary and support services (custodial, infrastructure) will be provided by central University Libraries. Every COM student will have access to these COM Library electronic holdings as well as University Libraries electronic resources, through either a wireless system available campus-wide or via the Internet through a proxy service.

Available Electronic databases include

- M.D. Consult (clinical decision support - with medical books, journals, and drug info)
- Access Medicine (medical books, drug info, image database)
- E-Medicine (clinical decision reference with drug industry information)
- Dynamed (clinical decision support with evidence-based foundation)
- UpToDate (clinical decision reference with evidence-based medical foundation)
- StatRef with Physicians' Information and Educational Resource (PIER) and the American College of Physicians (ACP) Journal Club (books, evidence-based medicine)
- Health and Psychosocial Instruments (HAPI) (health surveys)
- Cochrane Collaboration (evidence-based medicine studies)
- Natural Standards (alternative and complimentary medicine reference)
- Biology Image Library (slide images in biological sciences)
- Cyber Anatomy (3-D human anatomy)
- PsychAbstracts (psychological literature)
- PubMed (biomedical literature search engine)

The COM Library is committed to promoting continuing education for its library professionals and staff. COM Library professionals will attend seminars, receive technical journals, and attend targeted conferences and courses, such as the Association of American Medical Colleges or the Association of Academic Health Sciences Libraries. The exact nature and scope of these efforts will be determined by the COM's Library Director.

The COM is an associate member of the Association of Academic Health Sciences Libraries (AAHSL). AAHSL expertise and materials have guided COM development since 2007.

### **Student Access to COM Library and Resources**

All COM students will be provided with laptops that have appropriate software for accessing and downloading the above-mentioned electronic COM Library materials. Whether a student is on or off campus, access to library resources will be the same. Additionally, students can access all electronic resources 24 hours a day. Once the Library website has been accessed, all digital resources become available. Additionally, library staff is available for consultation via e-mail, telephone or in person.

The COM Library has study tables and forty private carrels, as well as two conference rooms with large screen video and internet access. This study space is in addition to COM-dedicated study and teaching space in the nearby HLS-II building. The COM Library will be staffed 112 hours per week, with extended hours during examination periods.

Student orientation to the COM Library will take place the week of matriculation for first-year students. During this orientation, the library will conduct an information skills needs assessment to ensure that every entering student has the required baseline library information skills. An additional needs assessment will be conducted at the end of their clerkships (Period 3: April 2011 – March 2012) in order to ensure that the students' information retrieval skills are adequate for the practice of medicine.

The COM Library staff will include an informatics professional, who will facilitate academic, curricular, and research computing endeavors of COM faculty and students. This individual, in coordination with COM Library and FIU University Technology Services, will provide instruction on the use of online course materials, identification and assignment of data, and generation of appropriate literature linkages. The COM Library staff will be available to instruct students in electronic data sources needed to complete their problem-based learning assignments.

### **The COM Library Advisory Committee**

The Library Advisory Committee is a College of Medicine standing committee comprised of key faculty members and one student from each class. The Director of the COM Library is an ex officio member. The Library Advisory Committee was first assembled in fall 2008. The committee meets monthly. A primary responsibility of the Library Advisory Committee is to provide direction and guidance to the COM on the adequacy and appropriateness of the library for the COM's faculty, staff and students. As one its main charges, this committee is responsible for library assessment.

### **Library Assessment**

To assess the adequacy of the COM Library's resources and services, the Library Advisory Committee will survey stakeholders annually, or more often if necessary. Evaluation will also be elicited from student and faculty representatives on the Library Advisory Committee, as well as from student focus groups assembled periodically. An online "Suggestion/Comment" box will also be available to provide feedback or requests for additional resources.

### **Access to other Libraries**

Consortium agreements include

- National Network of Libraries of Medicine – Southeast Atlantic Region
- Consortium of Biomedical Libraries of the South
- Miami Health Science Library Consortium
- Southeast Online Library Network (SOLINET)
- Florida Center for Library Automation / Council of State University Libraries
- Florida Medical/Health Science Library Consortium

FIU COM students and faculty will also have access to the library resources at the College's primary clinical teaching affiliate, the Jackson Health Systems. Librarians at Jackson and FIU are in active correspondence toward establishing a robust and supportive partnership for the COM's students and faculty, ensuring distributed access to COM journals, databases, and resources with the COM's clinical affiliate.

The COM has a contractual letter of agreement from the University of Miami's School of Medicine (UMSOM), for library access for FIU COM faculty and students (see Letter of Agreement in **Appendix 33**). This letter of agreement expresses open willingness to share resources. Details regarding licensing and access are being finalized. Hospital agreements are being developed at anticipated future clinical sites.

### **Information Technology Resources**

Existing FIU technology resources available to support the COM's informational and interconnectivity needs include:

- Easily available, highly reliable high-speed data network
- Wireless Internet connection in all campus buildings and many outdoor study areas
- Thirteen instructional and "open" labs on the main campus, complete with the latest software
- Connection to Internet2, the Florida Lambda Rail and National Lambda Rail
- Consortium agreements with the Center for Internet Augmented Research and Assessment, and AmericasPATH (AMPATH). [*FIU serves as the host for the AMPATH Network, the primary information technology conduit for most Latin American universities to access library-related information databases in the United States.*]
- Instructional centers whose goal is to maximize faculty use of the latest technologies, including Web Course Tool (CE6)

### **Faculty Resource Center**

- Available to all COM as well as to all FIU faculty members is a resource center providing broadcast video production, graphics design, and online course development.
- PeopleSoft Enterprise Resource Planning (ERP) systems for both the administration and students

## **7. PHYSICAL RESOURCES**

The Florida International University College of Medicine is committed to creating a cohesive learning and study environment for its students. With the help of the FIU administration, the COM has developed a strategic facilities plan to ensure that COM

students have ample dedicated learning facilities and environment. For the initial classes of forty entering in 2009 and 2010, dedicated COM facilities already exist. Additional dedicated space is planned to accommodate the larger eighty-member class matriculating in 2011 (see COM floor plan is shown in **Appendix 34**).

In order to increase enrollment to 120 new students yearly, FIU is constructing multiple new facilities. A new College of Nursing and Health Sciences (CNHS) building is under construction that will house the entire College beginning in 2010. The space currently occupied by this college in HLS I and II will be assigned entirely to the COM. The COM will increase its study rooms, student lounges, lecture hall capacity and faculty space to serve more students. Upon departure of the nursing faculty in fall 2009, the COM will renovate the vacated space for a summer 2010 completion that will allow all classes beginning with 2010 class to be housed in expanded facilities. This will be completed a full year ahead of the 2011 class, which is the first class to grow beyond 40 students.

### **Study Spaces and Lounges**

Classrooms and the small group teaching rooms are available to students for study outside regular didactic hours. Adequate study facilities have already been allocated for the first matriculants (2009-2010); additional space is allocated for the following two classes.

Study and lounge locations for the Florida International University College of Medicine are on the sixth floor of FIU's Health and Life Sciences II building (see floor plan indicating study spaces in **Appendix 35**). Study space is available, as well as on other HLS-II floors. A large study room (302 square feet) accommodates up to twenty students whereas 4 smaller group study rooms (140 sq. ft. each) accommodating up to ten each.

A student lounge on the HLS-II sixth floor provides a comfortable setting for relaxation. The lounge (370 sq. ft.) is equipped with couches, chairs, tables, lockers for students, microwave and a mini-kitchen. As mentioned, the COM library in the Green Library has forty study carrels and open seating at library tables (an additional 40); thus, each entering student will have a dedicated study space.

### **Contractual Use of University of Miami's Gordon Center Research in Medical Education (CGRME)**

The Gordon Center for Research in Medical Education (GCRME) was established forty years ago as an innovative laboratory for the application of advanced technology to facilitate medical education for medical students, physicians, physician assistants, nurses, and paramedic/firefighters. A new \$100 million facility was opened in 2007 serving the city, the state and the nation in training these health serving professionals. It is among the premiere clinical training centers in the world with state of the art facilities, learning programs and outstanding faculty. It is formally affiliated with the University of Miami School of Medicine and is located approximately twelve miles from the FIU COM campus.

FIU COM and the GCRME have a contractual arrangement for educational programs in basic, advanced and pediatric life support, medical doctor patient communication, diagnostic and basic clinical skills, diagnostic cardiology and neurology, emergency and biohazard clinical skills (see letter of agreement in **Appendix 36**).

The 34,000-square-foot state-of-the-art GCRME facility has full capacity for simulation and computer-assisted-design engineering, particularly Harvey® (developed at CGRME and now renowned world-wide), a cardiopulmonary patient simulator. The GCRME has a high-tech auditorium, a self-learning laboratory, standardized patient training areas, a mock emergency department, a fire rescue vehicle, a car for extrication of trauma victims, and hazardous materials decontamination showers. FIU COM students will use the GCRME facilities for formal training in communication, clinical skills, and cardiopulmonary resuscitation (CPR), as well as for taking Object Structured Clinical Examinations. The GCRME is fully integrated into the COM curriculum and will be used heavily during the first two years of the program, accounting for about 10% of student time. Our entering class (August 2009) will spend each Tuesday afternoon at GCRME. It is at this center that clinical skills tests will be performed.

### **Clinical Teaching Facilities**

The FIU College of Medicine's primary clinical teaching affiliation lies with Jackson Health System (JHS), Miami-Dade County's nonprofit public system. With an established history and a commitment to training and academic medicine, JHS provides an excellent clinical training environment for FIU COM students. JHS is the principal safety-net healthcare provider in Miami-Dade County. The Jackson Health System has a longstanding relationship with the University of Miami School of Medicine and serves as their primary teaching hospital.

The Jackson Health System (JHS) consists of three hospitals: Jackson Memorial Hospital (JMH), Jackson North Medical Center (JNMC), and Jackson South Community Hospital (JSCH). The 1,558-bed Jackson Memorial Hospital—the flagship of JHS—is the largest hospital in Miami–Dade County. The newest hospital in JHS is Jackson North Medical Center, consisting of 382 beds and treating over 9,000 inpatients and over 45,000 outpatients annually. Jackson South Community Hospital is a 199 bed acute-care facility that also offers a wide spectrum of experiences for FIU COM students. FIU will base its public hospital activities at Jackson North Medical Center. Jackson Health System has committed ample funds for recruitment of FIU clinical faculty at their sites; faculty will be paid through the FIU payroll and, hence, be full-time FIU employees (**Appendix 37**).

The College of Medicine has affiliation agreements with Mt. Sinai Medical Center, Miami Children’s Hospital, and Mercy Hospital. By distributing medical students' experiences across the spectrum of facilities in the community, the COM provides its students a range of educational cultures. Experienced faculty deliver the educational programs at all sites.

## **Security**

To safeguard both individuals and property, FIU secures its buildings each day. COM facilities are locked after hours. Buildings have a card-key access system that restricts or limits access to the COM facilities. Only faculty, staff, and students with proper identification are admitted after hours. COM faculty and staff are all issued ID cards and have ID badges identifying them as COM employees. Security cameras are in place throughout the buildings and are monitored by a security guard after hours.

University Police patrol both the university buildings and the parking areas. In addition, the University Police and Parking and Transportation Department, accessible by phone or through prominently marked call boxes throughout the campus, provide escort services for students and faculty on campus after hours.

Operating agreements with clinical teaching sites also explicitly address and ensure adequate security for our students, faculty, and staff.

## **8. FINANCIAL SUPPORT**

The College of Medicine will derive its overall financial support from a combination of sources. Initially, for the planning and start up phase, there will be reliance on special state appropriations. As students are admitted and the clinical and research enterprises become established and mature, funding support will be provided through tuition, state funding for enrollment, clinical operations and indirect returns from sponsored research minimizing the need for the initial special state appropriations.

The Florida International University College of Medicine (FIU COM) developed a business plan (**Appendix 5**) which included a 10 year financial plan for medical education (**Appendix 38**) and was used to obtain approval for the degree program from the FIU

Board of Trustees and the Florida Board of Governors. This long range financial plan was a component of the state’s review and resulting authorization to provide the stated special state appropriation and funding requirements. This projection was updated in 2007 (**Appendix 39**) to reflect current projections in preparation for the Liaison Committee of Medical Education site visit in August 2007 whereby the College received preliminary accreditation, as noted previously.

After the initial planning stage, it is anticipated the first year budget in FY 09/10 will be:

	FY 09/10
<b>Revenues</b>	
State Appropriation	22,389,939
Tuition	655,310
Clinical Practice Contribution	(147,750)
Contracts & Grants	239,438
<b>Total Revenue</b>	<b>23,135,937</b>
<b>Expenses</b>	
Salaries and Benefits	15,654,387
Expenses	1,414,550
Operating Capital Outlay	600,000
Electronic Data Processing	1,375,000
Library	842,000
Education/Research Labs	3,250,000
<b>Total Expenses</b>	<b>23,135,937</b>
<b>Net Surplus/(Deficit)</b>	<b>0</b>

In the event funding shortfalls are not supported by external funds, the College will evaluate the projected cohort size and adjust to available funding. However, the College of Medicine has been successful in developing partnerships with donors (**Appendix 40**) in addition to the partnerships it has cultivated with local area hospitals to alleviate the reliance on state funding. These funds will be used to support new faculty/departmental chairpersons.

## **9. EVALUATION AND ASSESSMENT**

FIU's College of Medicine is keenly aware of the importance of continuous assessment and quality improvement thus a solid, sustainable and robust system of assessment has been established.

A high-quality program enabling COM students to traverse the rigorous licensing exams required for professional advancement is our highest priority. A College-wide system of continuous improvement through assessment encourages a student- and learning-centered focus that is critical to achieving the mission of the COM. Furthermore, the administration recognizes that timely assessment in a national peer perspective is particularly important in a new program, allowing for early identification of areas for growth in the academic program and academic support services

### **Continuous Quality Improvement**

The core of the COM's assessment process is the goal of continuous quality improvement. The educational evaluation processes and the evaluation results provide the "fuel" that will drive continuous program improvement, educational innovation, faculty development, and an overall context conducive to change, flexibility, and adaptability. Assessment will not be confined to monitoring learning outcomes and standardized examination results. Other indices of educational program quality will include student and faculty perceptions of educational quality and the effectiveness of teaching, learning, as well as the assessment processes themselves. The COM will conduct periodic systematic reviews of the entire curriculum to ensure that its curriculum and overall educational experiences compare favorably to those of leading schools of medicine, using both external evidence and new information that emanates from the professional literature.

### **Validation and Achievement of Competencies and Objectives**

Using formative and summative assessment at appropriate intervals, the COM will continually evaluate its curriculum and educational program against external data, such as benchmark schools and any new evidence that emanates in the professional literature. These analyses will guide the COM's continuous curricular improvement.

The COM will use multiple metrics and indicators to evaluate the effectiveness of its educational program. Outcome measures will include, but not be limited to, the following:

- Results of the United States Medical Licensing Exam (USMLE) and other national examinations
- Student performance on National Board of Medical Examiners (NBME) "customized exams" in basic science courses
- "Shelf exams" in clinical disciplines that are provided by the NBME
- Performance-based assessment of clinical skills (e.g., Objective Structured Clinical Examinations [OSCE])
- Student responses on American Association of Medical Colleges (AAMC) Medical School Graduation Questionnaire
- Student evaluation of courses and clerkships
- Student advancement and graduation rates

- National Resident Match Program results, namely percentages of those who obtain their top choices
- Specialty choice of graduates
- Assessment of residency performance of graduates
- Licensure rates of graduates
- Specialty certification rates of graduates
- Practice location of graduates
- Practice type of graduates

Key indicators in the early years of the program will be the results of internal examinations, Objective Structured Clinical Examinations (OSCE), student evaluations of courses, and exam results on NBME and United States Medical Licensing Exam (USMLE). Long-term, licensure rates, assessment of residency match, assessment of performance as residents, and specialty certification rates will become important measures. These measures will be applicable only in 2014 and beyond, as our graduates enter postgraduate training and later practice.

### **Responsibility for Assessment**

At the FIU University level, assessment and evaluation of FIU's College of Medicine will be the joint responsibility of the Office of Medical Education (OME), which reports to the Associate Dean for Curriculum, and of FIU's Office of Planning and Institutional Effectiveness (OPIE). The COM will assess student learning and program outcomes regularly and submit an annual report of findings and corrective actions taken to the OPIE.

The Curriculum Committee will oversee the development and execution of the COM curriculum for all courses. Assessing this effort will be the responsibility of the COM Office of Medical Education which will provide reports to the Curriculum Committee and the Strand Leaders Committee. Guidelines set by the Curriculum Committee include time periods, scheduled time patterns, selection of subjects, teaching methods, and evaluation methods. Course Directors will develop specific student learning outcomes for each course. The Strand Leaders Committee, in concert with course directors, will select faculty, plan specific activities/teaching methods, and establish methods of evaluating student performance.

Assessment of success in meeting Student Learning Outcomes will be the responsibility of a subcommittee of the Curriculum Committee, which will be composed of both students and faculty. The subcommittee will be responsible for preparing formal course evaluation instruments—one for students and one for faculty—and for reviewing the results of those evaluations to ensure that course objectives have been achieved. To guarantee the student's perspective, students will have representation on the Curriculum Committee and all course evaluation subcommittees.

The reporting lines for evaluation are shown in the organizational flow chart for the management of the curriculum (**Appendix 41**).

Assembling scores from internal exams and national exams required for satisfying requirements in medical education will be the responsibility of the Office of Medical Education, which will forward its report and recommendations to the Curriculum Committee and to the Evaluation and Promotions Committee at the end of each curriculum period. The Curriculum Committee and its relevant subcommittees will review these scores and also student responses to the Association of American Medical Colleges graduation questionnaire.

Strand Leaders will focus on progressive achievement over the whole four-year curriculum by managing content, sequence, appropriate reinforcement, and assessment of performance. Course Directors will focus on achievement and continual improvement of the effectiveness of their own curricula by managing content, sequence, appropriate reinforcement, and assessment of performance.

### **Responsibilities for Review**

<b>DATA SOURCE</b>	<b>Curriculum Committee</b>	<b>Curriculum Committee Subcommittee</b>	<b>Student Evaluations and Promotion</b>
Results of USMLE	<b>X</b>	<b>X</b>	<b>X</b>
Student scores on internally developed examinations	<b>X</b>	<b>X</b>	<b>X</b>
Performance-based assessment of clinical skills (e.g., OSCE*)	<b>X</b>	<b>X</b>	<b>X</b>
Student responses on AAMC* Medical School Graduation Questionnaire	<b>X</b>	<b>X</b>	
Student evaluation of courses and clerkships	<b>X</b>	<b>X</b>	
Student advancement and graduation rates and NRMP* results	<b>X</b>	<b>X</b>	
Specialty choice of graduates	<b>X</b>	<b>X</b>	
Assessment by residency program directors	<b>X</b>	<b>X</b>	
Licensure rates of graduates	<b>X</b>	<b>X</b>	
Specialty certification rates	<b>X</b>		
Practice location of graduates	<b>X</b>		
Practice type of graduates	<b>X</b>		

- \* **USMLE** - United States Medical Licensing Examination
- OSCE** - Objective Structured Clinical Examination
- AAMC** - Association of American Medical Colleges
- NRMP** – National Residency Match Program

## **Managing Curriculum Content**

An online curriculum inventory support system is being developed and customized to assist faculty and committees managing curriculum content (see webcapture of one in **Appendix 42**). This system tracks and links each course's learning objectives with supporting instructional materials and methods and assessment items. It identifies where in the curriculum the learning objectives are introduced, then reinforced and then evaluated. Both faculty and students will have access to the system.

The system will serve as a comprehensive inventory of content and support queries for specific content, thus identifying repetition or omission. Inventory of curriculum content by stage or complexity of presentation permits monitoring of all content in all periods and contexts. The content inventory will code each level of presentation by a) introduction, b) clinical context, and c) clinical application. In general contexts, introduction occurs in year one, presentation in a medical context in year two, and applications of knowledge and skills in year three.

## **Evaluation of Student Performance**

Establishing quantitative and qualitative criteria for comprehensive, summative evaluations of students is the responsibility of the Curriculum Committee. The CC will align evaluation methods with institutional objectives and corresponding learning outcomes. For example, knowledge achievement may be assessed through multiple-choice tests, fill-in-answer questions, essay exams, student-generated reports and National Board of Medical Examiners (NBME) standardized subject examinations. Physical examination skills may be assessed by criteria-based direct observations and Objective Structured Clinical Examination. Professionalism expectations (including effectiveness in self-initiated learning and commitment to excellence) may be assessed using a portfolio-based assessment process. Integrated knowledge, skills/behaviors and attitudes/values can be assessed through Objective Structured Clinical Examination, as well as performance on the USMLE.

Performance-based assessments (e.g., PBL or case-based components, Objective Structured Clinical Examinations, and clerkship rotations) will involve multiple perspectives, including, wherever appropriate, not only faculty assessment but also self- and peer assessment.

All courses/clerkships will have a final, end-of-course evaluation of achievement based upon the objectives established for the course. In most courses/clerkships, four levels of performance will be used for grading student achievement: Honors, Near Honors, Pass, and Fail. Short courses or targeted educational experiences (e.g., Advanced Cardiac Life

Support training and instructional units lasting only one or two weeks) will generally be graded on a Pass/Fail basis.

All courses/clerkships four weeks or longer will have a final (end of course) exam. Instructors of longer courses or clerkships will provide interim assessments and feedback to learners (e.g., mid-rotation assessment and feedback in a one-month clerkship rotation). Formal, graded assessments will be supplemented with formative, non-graded assessments. The goal is to encourage student self-reflection and provide timely feedback.

### **Noncognitive and Professional Behaviors**

To better prepare students for medical practice, the College of Medicine will implement formative measures that identify and assess noncognitive and professional behaviors such as altruism, excellence, duty, communication and cross-cultural awareness. The noncognitive and professional behaviors that will be assessed correspond to learning outcomes in the professional development Strand and ultimately to graduation competencies listed previously in section 4, p. 14: Interpersonal and Communication Skills, Professionalism, and Social Responsibility (**Appendix 43**). Behaviors, values and attitudes are considered critical in evaluating the success of the student. FIU will assess the noncognitive behaviors within each course throughout the students' education. Aggregate results at the end of each period will become summative for promotional consideration. The non-cognitive assessments of cohorts will be incorporated into the institution's assessment of student learning outcomes to improve the overall program.

### **Promotion to the Next Academic Level**

The full curriculum is composed of both required and elective courses. Students must pass all courses in a given period for promotion to the subsequent period they must pass all courses in their curriculum for graduation. Before a student is permitted to progress to the next period of study, the Student Evaluation and Promotion Committee makes a promotion decision based upon evidence of each individual's academic achievement and development of knowledge, skills, critical thinking, clinical reasoning, and behavioral attributes.

Specific criteria for student promotion to each academic level is determined by the curriculum committee and are stated within the *Student Promotions Policies and Procedures Manual*. Evaluation will be conducted in a progressive, formative manner within appropriate courses, assessed formally for promotion to the clerkship period, and again for graduation. Course faculty determine the performance standards in each course.

The process of evaluation and assessment also includes a checks and balance system where students can appeal should they believe that the process has been inequitable. This process is aligned with the University.

## **Evaluation of Faculty Performance**

One data source for assessing the quality of instruction in the COM will be the students' critique of courses, which will include content, teaching methods, and instructor performance. Another data source for faculty performance will be peer evaluation by experienced faculty. A policy is being developed by the Office of Medical Education for the use of faculty peer-evaluation on a periodic basis, as well as implementing the procedure into the formal review process for tenure.

Course and clerkship leaders will have access to all faculty and course evaluations produced by students and faculty, the Curriculum Committee Evaluation Subcommittee, and the Curriculum Committee. They will also have access to results of all outcome measures, including FIU exams and USMLE and NBME data.

## **Evaluation of Courses**

Evaluation of courses in FIU's College of Medicine will employ a variety of methods and inputs across multiple occasions to monitor and nurture students' successful development throughout the degree program.

The working draft of the FIU College of Medicine Institutional Objectives and Learning Outcomes (**Appendix 19**) will serve as the initial template for the course faculty teams as they develop performance measurement instruments for each course. These learning outcomes are expected to be consistent with accreditation expectations, specific levels of learning assessed, and corresponding methods for teaching and assessment. They will be approved and endorsed by the faculty.

Assessments corresponding to introductory learning will reflect less complex levels of learning (e.g., recognition, recall, comprehension), whereas higher-level courses will target learning and assessment at more complex levels (e.g., application, analysis, synthesis, and evaluation or decision-making).

The first step in course evaluation will be collecting the course evaluations from students and faculty (see sample of Faculty/Course evaluation in **Appendix 44**). Students will formally evaluate every course upon completion, addressing content, teaching methods, instructors, and exams. Student evaluations will be mandatory. Teaching faculty will formally critique their own courses. All participating faculty, including the course director and the Strand leader, will review courses comprehensively with students.

A leadership group of students who participated in each class will prepare a summary of the student evaluations to present in person to a subcommittee of the Curriculum Committee. This subcommittee will have access to all student evaluations, including individual comments. The subcommittee will also hear a summary of the faculty critique of the course, presented by the course director and the appropriate Strand leader.

Subcommittees will formally evaluate every course, highlighting strengths and weaknesses and making recommendations for improvements. Their report will then move to the Curriculum Committee for review. Evaluations of individual faculty will be communicated to each faculty member, their departmental chairperson, and the Executive Associate Dean for Academic Affairs.

Finally, the Curriculum Committee will forward its conclusions and recommendations to the Executive Associate Dean for Academic Affairs and the Associate Dean for Curriculum. These two deans will develop a plan for monitored improvement, and will report their activities in executing this plan to the Curriculum Committee and to the students.

### **Evaluation of the Curriculum**

The first step in identifying gaps and redundancies in the curriculum is regular review and revision of the course educational goals and learning objectives as specified in the curriculum map and content inventory developed by the Office of Medical Education. Student course evaluations forwarded to the Curriculum Evaluation Committee will be used to identify content redundancy, contradictory or confusing presentation of material, critical content omission or inappropriate sequencing of content. Student evaluation instruments will be expressly designed to elicit such feedback.

After each academic period, Strand Leaders and the Curriculum Evaluation Committee will conduct a formal review. This review will use the course critiques of both students and faculty, along with student outcome/performance metrics. Recommendations for improvements will be sent to the Curriculum Committee and forwarded to the Executive Associate Dean for Academic Affairs and Associate Dean for Curriculum.

Every year, the Curriculum Committee will examine student evaluation results at aggregate levels (e.g., class cohort outcomes) for individual courses/clerkships, Strands, curriculum periods (1-4), and the degree program as a whole. This review will reflect the combined efforts of Student Affairs and Academic Affairs and the Curriculum Evaluation Committee. The Curriculum Committee will approve structure and guidelines for student evaluations and ensure that evaluation methods are appropriate and valid for their intended use. They will make specific recommendations for improvement and enhancement at the individual course/clerkship, Strand, degree program, and College levels. Analysis of such aggregate data will be used to monitor, evaluate, and continuously improve the quality of the degree program and its corresponding educational experiences and infrastructure (e.g., learning environment, support programs and services).

Based on this review, the Curriculum Committee will annually prepare a formal report on the curriculum for the Dean and Faculty Assembly. Recommendations for improvement will be forwarded for implementation to the Executive Associate Dean for Academic Affairs and Associate Dean for Curriculum.

While a course is in progress, assessment will also be performed concurrently by the Curriculum Committee. During the first years of the COM, weekly meetings of Course Directors with the Associate Dean for Curriculum and with student representatives will monitor intensity, comprehension, content problems, and general effectiveness.

### **Evaluation of Educational Support Services**

To ensure that its mission is being adequately met by support services, the College of Medicine will review assessment results of its support services at least annually.

The Office of Student Affairs plans regular assessments and evaluation for continuous improvement, they will administer surveys for all student-related events it sponsors for the COM. The counseling office will administer a counseling satisfaction survey to be completed anonymously by COM students attending counseling sessions.

The Office of Admissions also has regular assessments and evaluation in place for continuous improvement. These include audits that measure the quality of presentations to prospective students to ensure that all information provided is accurate and thorough. The department will also conduct exit interviews of prospective COM students to identify strengths and challenges for the selection committee.

In addition to external audits and reviews, the Office of the Registrar will administer a Customer Service Survey on a regular basis to assess the level of quality of services (**Appendix 45**).

Because COM students will do much of their learning (library materials, lecture notes, etc.) on laptops, the support services of the Department of Information Technology (IT) are crucial to the success of the college. The Director of IT reports to the Dean of the COM and will implement a series of quality improvement measures to ensure that COM students' needs are being met. This will be based on feedback from students, faculty and COM Administration. For example, the department will regularly review the call log to identify any negative patterns in performance or equipment. The department will also provide a customer service survey and have a suggestion box available online for students' comments or concerns. When the department updates software or learning information, it will alert students of the update by e-mail. Finally, after COM students arrive on campus, the IT department will meet regularly to identify any operation issues that may arise.

## **10. APPENDICES**

1. List of Degrees and available majors
2. Strategic Plan 1996-1997 "Reaching For The Top"
3. Millennium Strategic Plan 2001-2010
4. FIU 3.0 A New Strategic Paradigm Updated Strategic Vision
5. FL BOG Request to Establish a New Medical School [September 2005]

6. Board of Trustees approve establishment of an FIU College of Medicine to offer a Doctor of Medicine (M.D.) September 2005
7. Meeting minutes of Board of Governors approval of COM, March 23, 2006
8. Senate Bill for Governor committing funds for Medical Schools, May 24, 2007
9. LCME Notification Letter Awarding Preliminary Accreditation to FIU
10. FIU's Medical School Planning Task Force Feasibility & Implementation Report, May 2002 Volume 1 & January 2003 Volume 2.
11. Economic Impact Reports A) November 11, 2004, B) February 20, 2006
12. Search Committee List for New Dean
13. Press release from 11/14/2006, FIU Appoints Founding Dean
14. College of Medicine Organizational Chart
15. Curriculum Vitae of the Founding Dean
16. College of Medicine Implementation Team (COMIT) list of members
17. COM Self-Study report
18. Expected Student Competencies from A) ACGME & B) LCME
19. Institutional and Educational Objectives (Student Learning Outcomes)
20. Periods One through Four Calendar
21. Period One courses syllabi
22. Academic Affairs Reporting Structure
23. Curriculum Committee Organizational Chart
24. Tenure and Promotion Manual
25. Faculty Bylaws from September 2007
26. Faculty roster (Primary faculty-Period 1 and Period 2 through June 2010)
27. Primary Faculty Vitae
28. Affiliation Agreements with Clinical Partners
29. Faculty Handbook
30. Office of Sponsored Research Webpage capture and recent awards
31. Green Library location on Campus Map
32. Sample of the Library's On-line Collection
33. University of Miami Library Resource Usage Letter of Agreement, March 12, 2007
34. COM Facilities 3-year Floor Plan from August 2009 – June 2012
35. Study Space Floor Plan
36. Gordon Center For Research in Medical Education Agreement Letter
37. Jackson Health System Intent to Provide Funds Letter, October 3, 2007
38. 10 year Financial Plan for Medical Education
39. 2007 Update to Financial Plan
40. FIU COM Partnership with Donors-Example
41. Curriculum Management Oversight Chart
42. Webcapture of Curriculum Management Software ONE45
43. Non-Cognitive and Professional Behavior Evaluation Form
44. Faculty/Course Evaluation
45. Customer Service Survey for the Office of the Registrar