Proposal for a Program in Allopathic Medicine
Florida International University
Miami's Public Research University

June 30, 2004

Florida Board of Governors

REQUEST TO OFFER A NEW PROFESSIONAL DEGREE PROGRAM

Florida International University
University Submitting Proposal

First Class, 9/1/07
Proposed Implementation Date

School of Medicine
Name of College or School

Multiple Departments to be involved
Name of Department(s)

Allopathic Medicine
Academic Specialty or Field

Doctor of Medicine 51.1201
Complete Name of Degree
(Include Proposed CIP Code)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial commitment and the criteria for establishing new programs have been met prior to the initiation of the program.

To be hired — **College or School Dean** — **Date**

July 1, 2004 — **Graduate Dean** — **Date**

July 1, 2004 — **Provost and Executive Vice President Academic Affairs** — **Date**

July 1, 2004 — **President** — **Date**

July 1, 2004 — **Chair, FIU Board of Trustees** — **Date**

Indicate the dollar amounts appearing as totals for the first and the fifth years of implementation as shown in the appropriate summary columns in Table Three. Provide headcount and FTE estimates of majors for years one through five. Headcount and FTE estimates should be identical to those in Table Three.

	Total Estimated Costs	Projected Students			
		Full-Time Headcount	Part-Time Headcount	Total Headcount	FTE
First Year of Implementation	$13,716,250	36	-	36	33.75
Second Year of Implementation		82	-	82	89.63
Third Year of Implementation		138	-	138	158.63
Fourth Year of Implementation		223	-	223	258.94
Fifth Year of Implementation	$30,815,425	277	-	277	329.81

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Executive Summary

Florida International University (FIU) proposes to build on its strong foundation in basic sciences, health professions programs, and biomedical engineering, to develop a new program in Allopathic Medicine leading to a doctorate in medicine (M.D.) degree. This program, envisioned as part of a larger health and medical education initiative, will lead to the creation of a badly needed academic health center in South Florida to:

- Help address the region's current and anticipated physician shortages by increasing the number of culturally sensitive, under-represented minority physicians serving South Florida;
- Improve the quality of health care in South Florida;
- Provide an affordable, accessible medical school in South Florida that directly partners with community hospitals and health care clinics throughout the region;
- Advance biomedical and scientific knowledge through research, scholarship, and direct application to the health care needs and industrial opportunities of South Florida, the state, the nation, and the wider region served by FIU; and
- Contribute to the economic development of the region, the state and the nation.

South Florida's population growth and the rapid changes in its demographic composition have outpaced its ability to educate physicians and meet the health care and medical needs of the community. Out of necessity, the region imports a large majority of its doctors, and many of them are not board certified. FIU developed its Health and Medical Education Initiative to address these issues.

At first glance, Florida does not seem to suffer from a serious physician shortfall, ranking 16th nationally in total physicians per 100,000 population.[1] However, this ranking is misleading, since the underlying ratio does not take into account differences among physicians in terms of their productivity and qualifications, both of which have implications for access and quality of care. For example, Florida has the oldest physician workforce in the country and South Florida physicians have a very low level of specialty certification.

[1] American Medical Association, Physician Characteristics and Distribution in the U.S., 2003-2004 edition (Chicago: 2003), p. 340.

This age structure is mainly due to the fact that many physicians move to Florida to retire and maintain valid licenses, although they may not practice or do so only in a limited way. Low specialty certification rates are also related to age, but even more to the very high proportion of foreign trained physicians in South Florida.

The ratio of physicians to population masks another unique aspect of South Florida's healthcare needs. Not only is the average age of South Florida's physicians higher than the national average, the average age of its population is also higher, and individuals over the age of 65 are much heavier users of healthcare services than younger ones.

South Florida is not alone in experiencing physician shortages – there is a growing recognition that the nation as a whole is experiencing physician shortages. South Florida's health care crisis is exacerbated by the age and the cultural characteristics of its population, which is growing at a rapid pace. New strategies are needed to address South Florida's projected physician shortages.

There are a number of ways of approaching this problem, including increasing the size of existing medical schools, increasing the number of medical residents training in our communities, developing new medical schools, and developing incentives for the migration of Board-certified physicians to Florida and continuing to import foreign-trained doctors at higher rates (See Appendix 1.) FIU believes that a combination of these will be most effective for South Florida, and a new public School of Medicine at FIU can be the catalyst for solutions to the region's health care crisis.

FIU's program would be the only public educational M.D. program in South Florida and the fifth allopathic medical degree program in the state.[2] In developing its program, FIU will collaborate with the four largest community-based hospitals in Miami and with numerous leading community health care organizations to focus teaching and research on issues fundamental to a large, multicultural urban community. This collaboration will help FIU address critical community health needs and avoid a wasteful duplication of resources.

[2] The others are at the University of Florida, the University of South Florida, Florida State University and the University of Miami. Nova Southeastern University offers an osteopathic medical degree program.

In medicine, there is a natural chain of events that determines a career pattern. Many students attend their local educational institutions. Once in college, and if feasible, students tend to continue and study medicine at the same university. These same medical students do rotations in the University affiliated hospitals and, when they graduate, tend to stay for their residency training. Once they complete this training, physicians often stay in the communities where they were residents.

This pattern is likely to hold at FIU where 85% of FIU's alumni remain in the state and 80% remain in South Florida. Based on this experience, it is reasonable to expect that the majority of graduates from the FIU School of Medicine and FIU's health professional programs will remain in the region as well. In Detroit, for example, more than 65% of the physicians practicing in the Greater Detroit region are graduates of the Wayne State Medical School or residents who completed their training in the area.

One of the characteristics of the South Florida community that poses a significant challenge for its health care delivery system arises from its cultural characteristics. Over one half of the population of Miami-Dade County is Hispanic or Latino, and Broward County has a large Hispanic or Latino community as well. Only 3.4% of the nation's physicians are Hispanic,[3] and only 10% of the 2003 entering class at the University of Miami is Hispanic.[4] We anticipate that the demographic makeup of FIU's medical student body will be similar to that of the University as a whole (65% minority), so that the medical degree program will significantly increase the number of qualified under-represented minority professionals entering the South Florida health care delivery network.

In addition to graduating M.D.s, the existence of the FIU School of Medicine will facilitate the creation of new residency training positions in South Florida. Our plan is to initiate residency training immediately via affiliations with healthcare affiliates in Miami. These new residency positions will contribute quickly to reducing South Florida's physician shortages. The residents themselves will provide critical medical care during their residencies. Also, as noted above, there is a demonstrated link between the location of a physician's residency and the location in which

[3] American Medical Association, "Total Physicians by Race/Ethnicity – 2002" (http://www.ama-assn.org/ama/pub/article/print/168-187.html.
[4] http://www.miami.edu/UMH/CDA/UMH_Main /0,1770,2600-1;14190-2;22080-3,00.html.

that individual practices following his or her residency[5] so that more residents in the area will lead to more practicing physicians. Board certification will be the goal of the new academically-based residency training program.

FIU itself plans to develop and sponsor new residency training programs at Mercy Hospital, Baptist Health South Florida and Health Choice Network, and faculty members from the proposed School of Medicine will direct and lead these programs. The School of Medicine also will facilitate the expansion of existing residency programs in the area. The number of residents approved for any institution by the graduate medical education accreditation body is based upon the adequacy of resources for resident education, including the quality and volume of patients and related clinical material, the faculty-residents ratio, and the quality of faculty lecturing. Although a freestanding hospital may have sufficient patients and resources for accreditation, affiliation with a medical school is instrumental in fulfilling requirements related to the number and quality of the faculty and faculty development and ultimately, Board certification of graduates.

Florida's anticipated physician shortages provided an important impetus for the development of the M.D. program, but there were other factors as well. The School of Medicine will be a key component of FIU's broader Health and Medical Education Initiative. This Initiative includes a restructuring of FIU's health and medical science education programs, implementation of the allopathic medical degree program, enhancing partnerships with a full spectrum of health service providers in Greater Miami, and creating a multidisciplinary research consortium.

The development of a new School of Medicine will allow FIU to integrate the curriculum and learning practices of all of FIU's health professions students, with clear benefits for all of those students and for the delivery of health care services in the region. This integration will not only be a more cost efficient way to teach, but also will initiate students to the interdisciplinary team approach that will be their way of practice. It also will promote respect and understanding of the diverse roles of health professionals. Because the basic sciences are necessary for all of the health and medical education programs, they offer some opportunity for common

[5] Graduate Medical Education Committee, *Annual Report on Graduate Medical Education in Florida, As Required by the Provisions of Section 381.0403(9), Florida Statutes,* January 2004, p.3.

educational experiences. Even more integration is possible in the areas of cultural sensitivity, bioethics, and communication with patients, essential components of programs designed to prepare health care practitioners for the 21st century.

In addition to helping to address physician shortages and health care quality issues, the School of Medicine will contribute substantially to FIU's research enterprise. As part of the School of Medicine, FIU plans to recruit a highly productive research faculty and to create research programs that greatly strengthen the capacity for biomedical research at the University and in the region. FIU's expectation is that annual, incremental /new federal funding for biomedical research will exceed the annual appropriation for the school at maturity. The expanded capacity for biomedical research will compliment existing biomedical research at FIU, particularly in public health, basic medical science, biomedical engineering and community health services. It also will provide important opportunities for new and collaborative research with the University of Miami, our affiliated institutions for health care delivery and education, the public health department of Miami-Dade County, other medical academic institutions in the state and private sector research and development companies in the region. Faculty recruitment for the School of Medicine will emphasize research capability and collaborative opportunities along with educational excellence.

The School of Medicine will have a significant economic impact on the region and the state through both research and clinical care. Biomedical research and biotechnology have become major sectors in the U.S. economy and have been the most rapidly growing sectors in the last two decades. These areas continue to have increasing upside potential based upon the human genome project and the demand for improved health technology and services. Biomedical research is heavily funded by the federal government and this funding primarily flows to academic medical systems throughout the country. A recent study in 2002 showed that 45% of all federal Research and Development (R&D) funds to universities went directly to medical schools, even though only a relatively few of the nation's hundreds of universities and colleges have medical schools.[6] The basic research created through this funding enables private sector growth for creation of products,

[6] D. Fossum, et al., *Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges* (Santa Monica, CA: RAND Corporation, 2004), p. xii.

devices and services which simultaneously improves health in our communities and adds economic strength in our communities.

The location of a public medical school in Miami-Dade County also will provide a needed boost to the local pharmaceutical and medical device industries. For the past decade, Miami-Dade has been highly ranked among American counties for employment in these industries. It was ranked 13th among American counties for employment in the pharmaceutical industry and 10th for employment in the medical device industry.[7] A medical school with its associated biomedical and bioengineering research and training programs can provide the additional highly-skilled human capital and new technology needed to boost employment in these industries beyond current levels and provide conditions for industrial expansion.

In sum, a new FIU School of Medicine with its associated activities will add enormously to the quality of life in the region through educational opportunities for the students living in South Florida, improved quality of health care through advanced quality of training of healthcare professionals in the region and substantial expansion of economic growth potential of an already strong sector.

[7] U.S. Department of Commerce, County Business Patterns, 1999.

I. Program Description

Describe the degree program under consideration, including its level, emphases (including tracks), and total number of credit hours.

This proposal is for a professional program in allopathic medicine leading to a medical doctorate (M.D.). The M.D. program is a 4-year, 156 credit hour program designed to integrate the full spectrum of medical education and interdisciplinary research opportunities provided by FIU's other colleges, and to utilize existing community-based resources in order to educate culturally sensitive physicians who will serve the South Florida region.

Traditionally, medical education has focused on the hospital and on the diagnosis and treatment of pathological conditions. In recent years, new models have been developed that emphasize the community (where the most important issues are the prevention of illness, promotion of health and access to medical care) and patients in ambulatory care settings, including doctors' offices, as well as in hospitals. As the Institute of Medicine's National Committee on the Role of Academic Health Centers reported in 2003, "[H]ealth care practitioners will not be prepared for practice in the 21st century without fundamental changes in the approaches, methods, and settings used for all levels of clinical education (i.e. current medical schools must change dramatically). Current training of health professionals emphasizes primarily the biological basis of disease and treatment of symptoms, with insufficient attention to the social, behavioral, and other factors that contribute to healing and are part of creating healthy populations."[8]

FIU's program is based upon this 21st century approach to health care and medical education, employing a community health and patient-based model. Four of the five largest community hospitals in Miami and a number of its leading community health organizations will collaborate with FIU to focus teaching and research on primary care issues that are fundamental to South Florida's large, multicultural, urban community. FIU's program will emphasize community and population-based medical practice and medical research and will attempt to address disparities of health and disease and the

[8] Institute of Medicine, *Academic Health Centers: Leading Change in the 21st Century*, (Washington, DC, 2003) p. 117.

effectiveness of health services in the region. Cultural sensitivity, patient communication skills and competence, combined with appropriate diversity of the faculty and student body, will be fundamental dimensions of the program.

The University envisions an integrated education, built on evidence-based medicine and on the delivery of health services. Unlike the more traditional programs in which the education of health professionals is done in self-contained programs (medicine, nursing, public health), each independent from the others, with an exclusive curriculum focused on each specialty and independent clinical training, FIU will vertically and horizontally integrate all of its health and medical education program curricula into a comprehensive program focused on community-based health services.

The primary goal of this integrated structure is to advance the quality and efficiency of practicing healthcare professionals in anticipation of their future clinical service roles. All healthcare professions share the common responsibility of caring for patients, and patients will be the central focus of FIU's new integrated educational programs. Educational methodologies, whenever possible, will be based on the following principles:

- Centralized management and administration of the health professional's curriculum.
- Intense emphasis on evidence-based medicine and services.
- Inter-professional curriculum committees among the different disciplines to plan and coordinate the integration.
- Education centered on the patient and the community.
- Student training focused on very early contact with patients.
- Practice-based curriculum, emphasizing clinical practice.
- Culturally sensitive education, culturally sensitive and competent graduates.
- Learning programs planned around outcomes with shared responsibilities among the different professions and integrated clinical training.
- Problem-based education of groups of students in various health professions – medicine, nursing, social work, physical therapy, and others
- Education in doctors' offices and in health centers.
- Education supported by shared information technology.
- Research, innovation and evaluation in health services.

To facilitate the integration, FIU will appoint a Faculty Curriculum Integration Committee to identify opportunities for interdisciplinary courses and plan integrated curriculum content while respecting the individualities and needs of each health professional program. The Committee will restructure upper division programs to maximize common educational experiences and continuing involvement in the health priorities of the local community. Its mandate also will extend to FIU's undergraduate programs so as to ensure a seamless transition between undergraduate and graduate curricula.

At the lower division level, the Committee will advise the Honors College on the development of a pre-medical track in the Honors Program, and it will develop a standard health professional program. This lower division program will include courses in the basic sciences, psychology and other social sciences, and mathematics. It also will incorporate a variety of local, community-based experiences in the health professions and provide a firm basis for progression to the health profession degree a student may choose to pursue at the bachelor's level or beyond, be it in nursing, medicine, public health, physical or occupational therapy, dietetics and nutrition, bioengineering. Students will share community experiences and courses in such subjects as ethics, individual and public communication, and community relations. They also will be mentored and trained in professionalism and leadership by a variety of faculty members. Students will be expected to achieve competency in effective communication with Spanish-speaking patients.

Students who enter the M.D. program are likely to be representative of the race and gender profile of South Florida, and the University will ensure that all of these students have 1) a strong background in the basic medical sciences, 2) a general understanding of health care issues, and 3) dedication to working in an urban environment serving underserved populations. Prospective students will come from the ranks of graduates of FIU, other State University System (SUS) universities, non-SUS institutions, and health professionals in other disciplines, especially from South Florida. Greater than 95% of those admitted will be Florida residents.

II. Institutional Mission and Strength

A. Is the proposed program listed in the current FIU New Academic Programs 5-Year Plan? Is the proposed program listed in the State Universities System Strategic Plan? How do the goals of the proposed program align with the University's mission, goals, themes, and strategic plan?

In May of this year, the Florida Board of Governors approved a new strategic planning framework for the State University System. This framework establishes specific goals for growth of degrees in targeted programs through the 2012-13 year. Under the category of Economic Development and Emerging Technologies, Medical Science and Health Care are listed as priorities. Since the Board of Regents' dissolution on June 30, 2001 and the appointment of independent Boards of Trustees, FIU academic administrators have worked with our Trustees and the newly formed Board of Governors to identify new academic programs that address the needs of our region and the state. The degree in allopathic medicine responds to needs that have been identified in the health area in the Board of Governors' strategic plan.

Historically, the last State University System Strategic Plan approved at the State level was the 1998-2003 SUS Strategic Plan. This Plan was last discussed by the Board of Regents at its meeting on May 24, 2001, when the BOR asked each university to submit proposed mid-point modifications. A degree in allopathic medicine was not on that list, although as noted below, new degrees in Medicine and Law were identified in FIU's Strategic Plan, Reaching for the Top, which was submitted to the Board of Regents.

FIU has had two major strategic planning efforts in the last decade. The first effort resulted in the plan "Reaching for the Top," which clearly identified a professional degree in Medicine as a future development for FIU. The current Millennium Strategic Plan was approved by FIU's Board of Trustees in December 2002. The Millennium Strategic Plan acknowledges FIU's obligation to the state, the community, and its global constituency to offer academic programs, conduct research, and create partnerships that provide solutions to problems confronting its local and extended community. One of the Plan's major strategic themes is health. FIU plans to systematically expand its engagement with the health care needs of the community.

To implement the health theme of the Millennium Strategic Plan, FIU developed the Health and Medical Education Initiative to respond to specific and urgent needs in the South Florida community for citizen access to health care. In accordance with the University's strategic emphasis on diversity, the Initiative is intended to help alleviate the shortage of qualified under-represented minority medical doctors in the South Florida region and the state. It is based on an integrated health care professional education model that is community-based and patient-centered.

The School of Medicine also will address a third FIU strategic theme– economic development in the region – by spurring additional growth in the local biomedical and biotechnological industries. Nationally, medical schools are powerful magnets for federal research funding. In FY 2002, 45% of all federal R&D funds to universities went directly to medical schools, even though only a relatively few of the nation's hundreds of universities and colleges have medical schools.[9] Federal research funding is large and direct federal funds also flow to the State of Florida. The School of Medicine will contribute to the local and regional economy first by attracting federal and other research funding (whose impact will be magnified as the dollars spent are cycled through the local economy), and also by generating new knowledge and intellectual property that can form the bases for new products. Moreover, the University will train scientists in addition to M.D.s who can then become the highly skilled workforce needed for industrial biomedical development.

B. How does the proposed program specifically relate to existing institutional strengths such as programs of emphasis, other academic programs, or institutes and centers?

During the implementation phase of the Millennium Strategic Plan, the University identified ten priorities for focus and investment, including the establishment of a school of medicine and selective investment in the medical and biomedical sciences. The School of Medicine and investment in biomedical research build on existing strengths at FIU, both in terms of its current research endeavors and in terms of its relationship with the community.

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[9] D. Fossum, et al., Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges (Santa Monica, CA: RAND Corporation, 2004), p. xii.

Florida International University attracts 85% of its student body from the surrounding four-county area and 80% of its alumni remain in South Florida. FIU's student body is 53% Hispanic and 13.5% African American. FIU leads the nation in the production of Hispanic engineers, and its production of minority scientists increases from year to year as a result of strong local interest, expanding outreach programs to the local public school system, and retention programs aimed at undergraduates. A medical program at FIU would draw on the expanding pool of minority students at FIU who already have the requisite math, science, and language skills to succeed in medical school and who also would be inclined to train and practice their profession in South Florida.

The M.D. degree program, coupled with enhanced coordination of related health programs, the introduction of new health degrees, and deepened partnerships with hospitals and clinics in the community will produce health professionals who understand the value of collaboration in the care of individuals and the improvement of the health of the community.

The program also builds on the strong foundation of basic sciences, allied health programs, biomedical research, and center and institute initiatives of the University. FIU's strongest graduate programs are in the basic science fields of Microbiology, Molecular Biology, and Human Biology; Chemistry and Biochemistry; Physics, and also in Computer Science, Dietetics and Nutrition, Psychology, and Biomedical Engineering. A recent survey revealed great strength and substantial infrastructure in these areas. These departments, and some of their centers and institutes, are described briefly below:

- *The Department of Biological Sciences*. This Department has 37 regular faculty members utilize 10 teaching labs, 40 research labs, and 4 core facilities—cell culture, DNA sequencing, immunology, and microscopy (confocal, fluorescence, SEM, TEM). In FY2003, biological sciences department members brought in $4.67 million in contract and grant funds, enrolled 659 undergraduate and 115 graduate majors, and graduated 8 Master's and 7 Ph.D. students.

  Among this Department's strengths are its strong program in Gross Anatomy staffed by two anatomists who serve not only the pre-medical students but also the allied health and nursing students. It also hosts the

Center for Ethnobotany and Natural Products which investigates the use of natural products in both traditional and modern health systems. While this Center investigates plants used in medicine, it does not limit itself to therapeutic products. Researchers also study the role of natural products in nature, their importance in traditional communities, their biological activity, active constituents, and sustainable use.

- *The Department of Chemistry and Biochemistry*. This Department has 19 regular faculty members who utilize 8 teaching labs and 19 research labs. The Department is well equipped with analytical facilities including NMR and Mass Spectrometry research spectroscopy facilities. In FY2003, Department members brought in $923,000 in contract and grant support, enrolled 176 undergraduate and 41 graduate majors, and graduated 9 students with the Master's degree and 3 students with a Ph. D. degree. Among the Department's strengths is its International Forensic Research Institute which conducts original research in forensic science and provides advanced training to practicing scientists.

- *The Department of Physics*. This Department has 22 faculty members and teaches 29 graduate and 22 undergraduate majors. It graduated 2 Master's degree and 1 Ph.D. student in FY2003, and brought in $1.33 million in contract and grant support. The Department has 6 research and 3 teaching labs. The Physics Department has strength in biophysics, particularly in the physics of the eye and protein folding.

- *The School of Computer Science.* This School has 19 faculty members who teach 115 graduate and 661 undergraduate majors. The School has 20 research and 5 instructional labs. In FY2003, the School graduated 34 Master's students and 3 Ph.D. degree student and its faculty brought in $1.3 million in grants and contracts. The School has been developing its strength in bioinformatics and data base management, two areas of keen interest to the health care industry.

- *The Department of Dietetics and Nutrition*. This Department has 13 faculty members who teach 63 graduate and 130 undergraduate majors and brought in $1.21 million in contract and grant funds in FY2003 to support their work. They graduated 14 students with the Master's degree and 2 students with the Ph.D. degree. The Department has 5 research labs and 2 teaching labs. This Department is host to the National Policy and Resource Center on Nutrition and Aging, funded in part by a grant

from the Administration on Aging of the Department of Health and Human Services, to provide information for nutrition, aging network, and long-term care professionals. This Center has earned national prominence in its important field and is a powerful adjunct to the doctoral program in Dietetics and Nutrition.

- *The Center on Aging*. This Center, in the College of Health and Urban Affairs, focuses its research and training efforts on three areas: healthy aging and new retirement paradigms; elders, crime, and the justice system; and services for the elderly and long-term care. The Center offers undergraduate and graduate gerontology certificate programs, professional continuing education, and specialized professional training.

- *The School of Nursing.* The School of Nursing works in close partnership with local hospitals to relieve the dire shortage of nursing personnel. Its M.D. to R.N. program for foreign-trained doctors is the first of its kind in the country and has just graduated its first class. The School of Nursing is especially strong in training nursing personnel to provide culturally competent care, a critical consideration in an international city such as Miami. The School of Nursing's research has distinct foci in the areas of minority health issues of elders, women and children, and those with HIV/AIDS.

- *The Department of Biomedical Engineering.* This Department, with its five million dollar endowment from the Wallace H. Coulter Foundation, soon to be matched by the state, has 8 faculty members, 34 graduate and 25 undergraduate majors, and it brought in $1.26 million in FY2003. It has 12 research labs and 1 instructional lab. All four of the major U.S. biomedical device companies have operations in the region and the Department has close ties to them and to many smaller biomedical and biotechnological firms and health care providers. In addition to its degree programs, the Department offers certificate programs in Medical Device Engineering and Medical Instrumentation. This is one of a very few programs in bioengineering that offers both its faculty members and students clinical rotations during which they experience directly real life situations associated with the use of medical devices and instruments in clinical medicine.

  The Biomedical Engineering Program has five primary areas of focus - mechanics, materials, and devices; instrumentation and image/signal

processing; drug delivery/tissue engineering; medical physics/nuclear medicine; and cytomics. Both students and faculty also participate in industrial practice partnerships. The partnerships result in product development and commercialization of the products and techniques that offer alternative solutions to address the South Florida health care needs.

- *The Center for Advanced Technology and Education.* This Center, in the College of Engineering, has developed new technology for the functional mapping of the brain and the study of key brain disorders and neurorehabilitation. The Center pursues new insights into key physiological aspects of neurosciences to improve the interface between the human brain and computers. The Center works very closely with and shares equipment with brain researchers at Miami Children's Hospital, an affiliate of the M.D. program. Center researchers have developed a new, tissue-sparing technique for the surgical treatment of epileptic children.

- *The Department of Psychology*. This Department's greatest strength is in developmental psychology, focused through two centers, the Infant Development Research Center and the Child and Family Psychosocial Research Center. The former studies perceptual, cognitive, social and emotional development in infancy and early childhood; the latter, children's phobias and anxiety. The National Institute of Mental Health funds the Child and Family Psychosocial Research Center's Child Anxiety and Phobia Program. The Program provides comprehensive diagnostic assessment and state-of-the-art treatments for children and adolescents (7-16 years old) who are experiencing excessive fear and anxiety related problems. The Department had 4 Ph.D. graduates in 2003-04.

- *The Stempel School of Public Health*. In addition to its intense involvement with the local community on important issues such as pediatric lead poisoning, this School has made a name for itself internationally as a center of research into the behavioral aspects of the AIDS epidemic. It also has strength in the area of health care disparities, a critical national, state, and local issue.

- *The School of Social Work*. This School's Professional Development Center annually provides the highest-quality, competency-based training for hundreds of Family Safety staff in the Department of Children and Families in the area from Vero Beach to Key West. Also, its Institute on

Children and Families at Risk serves as the School's research and development arm focused on culturally responsive services and supports for at-risk children, families and communities.

- *The Health Services Administration Program*. This nationally accredited program provides professional education for management careers in health service organizations. It utilizes a variety of local hospitals, mental health programs, emergency medical systems, HMOs, community health centers, and related public health and private agencies to give students supervised field experiences. These same venues function as "practical laboratories" for operational research in health services administration.

- Total research funding for the College of Health and Urban Affairs exceeds $12 million dollars annually.

The School of Medicine will enhance FIU's ability to conduct research in the biomedical and life sciences. It will have a significant positive impact on ongoing FIU research programs in biochemistry, biophysics, molecular biology, clinical psychology, and bio-informatics, and it will spur research in genomics, proteomics, bioinformatics, and biomarkers.

Current research activity in FIU's School of Nursing and in the allied health sciences focuses on health promotion, human responses to diseases, and responses to treatment modalities as well as on testing new health care equipment and technology for effectiveness and acceptability. Clearly, there is a natural link between this work and work that would be done in the School of Medicine.

The creation of a new medical school also provides an opportunity to integrate the curriculum, learning practices, and research of all of the health professions schools and departments, and train individuals in collaborative health care that is appropriate to the needs of the South Florida area. FIU's current degree program offerings and research activities in the Colleges of Arts and Sciences, Health and Urban Affairs, and Engineering as well as in centers and institutes will not, by themselves alone, enable the University to meet its obligation to adequately respond to the critical need for well trained health professionals in South Florida. This can be done only if the University implements an allopathic medical program and is thus able to

train the entire health services team in a collaborative way and in a way that is appropriate to the region.

There are significant opportunities for synergies among the research and educational programs to be undertaken in the School of Medicine and those which are currently ongoing at the University. The foregoing discussion describes only a few of the many interdisciplinary and multidisciplinary opportunities the addition of the allopathic medical program will provide the University community. The wide variety of relevant academic degree programs currently offered by FIU is shown in the FIU Table below.

FIU Table 1
Florida International University
Health and Medical Education Initiative
Academic Programs

Program	Bachelor's	Master's	Ph.D./M.D.
Medical and Nursing Sciences			
Medicine (M.D.)			Proposed
Nursing	X	X	X
Health Sciences			
Dietetics & Nutrition	X	X	X
Physical Therapy		X	
Occupational Therapy	X	X	
Speech Pathology & Audiology		X	
Basic Medical Sciences			
Biology-Micro, Molecular, Human	X	X	X
Chemistry, Biochemistry	X	X	X
Health Sciences	X	X	
Physics, Biophysics	X	X	X
Public and Health Service Administration			
Health Services Administration	X	X	
Public Administration	X	X	X
Public Health		X	Proposed*

Program	Bachelor's	Master's	Ph.D./M.D.
Engineering and Medical Technology			
Biomedical Engineering	X	X	X
Health Information Management	X		
Informatics	To be proposed*	To be proposed*	To be proposed*
Computer Science/MIS	X	X	X
Social Medical Sciences			
Exercise Science/Physiology/ Sports Medicine	X	X	
Health/Clinical Psychology			To be developed as a track in existing Psychology doctoral program*
Philosophy – Bioethics	X		
Psychology	X	X	X
Religious Studies – Bioethics	X	X	To be proposed*
School Psychology			Specialist Degree
Social Work	X	X	X
Sociology	X	X	X
Special Education		X	X

*** These programs will be implemented from current college resources and enrollment growth funding resources.**

Note: A program that is currently offered is designated with an 'X'

C. Describe the planning process leading up to submission of this proposal. Include a chronology of activities, listing the university personnel directly involved and any external individuals who

participated in planning. Provide a timetable of events for the implementation of the proposed program.

Planning for an FIU School of Medicine began in earnest in 1995, after the University identified high quality health care as a community need and the creation of a medical school as a possible component of programming in the area of health and a solution to the health care challenge. From the beginning of the planning process, the University sought to forge partnerships with local community-based hospitals to provide the necessary clinical training.

Vice Provost, later Vice President for Research and Graduate Studies, Dr. Thomas A. Breslin, led the planning effort. In the fall of 1995, community-based hospital representatives joined a University team exploring the feasibility of an M.D. program offered in conjunction with local private hospitals, and in April, 1996, formed the Medical School Concept Committee, composed of local hospital representatives and FIU faculty and staff, to explore the need and feasibility of a medical school at FIU.

The Committee generated a white paper to the Board of Regents and University community, concluding that (1) 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, (2) FIU is an ideal setting for such a medical school, and (3) underrepresented minority students were expected to have a strong presence in the student body of an FIU School of Medicine.

The Committee felt that a medical school was feasible, provided the University rely on affiliated community-based hospitals and clinics to provide clinical training venues rather than operate a hospital itself. The Committee also believed the University had to strengthen its overall programming in the health and biomedical science areas, and emphasize an interdisciplinary approach to the provision of health care services.

Members of the Medical School Concept Committee were:

- David Bergwall, D.B.A., Director, School of Policy and Management, College of Urban and Public Affairs; Past Chair, Department of Health Services Administration

- Charles Bigger, Ph.D., Department of Biological Sciences, College of Arts & Sciences; Director, Minority Biomedical Research Support Program
- Judith Blucker, Ph.D., Acting Dean, College of Health, Vice Provost, Academic Budget and Personnel
- Thomas A. Breslin, Ph.D., Acting Vice President, Research & Graduate Studies; Chair of the Committee
- F. Chen, Ph.D., Pre-Medical Adviser, Department of Biological Sciences
- Robert Dollinger, M.D., Medical Director, Health and Wellness Center
- Domitila Fox, M.S., Department of Mathematics, College of Arts & Sciences
- Robert George, Ph.D., Anatomist, Department of Biological Sciences
- Jeffrey Horstmyer, M.D., Mercy Hospital
- William Keppler, Ph.D., Department of Public Health; Past Dean, College of Health
- Virginia McCoy, Ph.D., Chair, Department of Public Health, College of Health
- Zaida Morales, M.S., Department of Chemistry, College of Arts & Sciences
- Max Rothman, J.D., Director, South Florida Center on Aging
- Linda Simunek, A.R.N.P., Ph.D., J.D., Dean, School of Nursing
- Karen Sowers Hoag, Ph.D., A.C.S.W., Director, School of Social Work
- Dennis Wiedman, Ph.D., Asst. to the Provost, and Coordinator, University Strategic Planning.
- Dr. Ramon Rodriguez Torres, M.D., Immediate Past Chief of Staff, Miami Children's Hospital
- Dr. Eugene Schneller, Ph.D., Counselor to the President for Health Professions Education, Arizona State University; Member of the Commission on the Future of Medical Education of the University of California; Past Chair, Association of University Programs in Health Administration; and Past Chair, Western Network for Education in Health Administration
- Prof. Valerie J. Smith, Ph.D., Gatty Marine Laboratory, School of Biological and Medical Sciences, University of St. Andrews, St. Andrews, FIFE, KY 16 8LB

Following circulation of the Committee's white paper, the Board of Regents recommended that FIU undertake a Program in Medical Science (PIMS) with the University of Florida. However, the PIMS was not funded by the legislature, and plans for medical education at FIU were not pursued again

until after the University completed its re-accreditation in 2000 and launched its Millennium Strategic Planning process in 2000-2001.

During the Millennium Strategic Planning process, the University again identified health as a strategic theme, and an allopathic medical program as a major component of the solution to the health care quality concerns of the South Florida region. The University formed a new Medical School Planning Task Force, whose members were drawn from the University and from the senior staff of local hospitals, to study the feasibility of a medical school at FIU. The University also engaged Dr. Carlos Martini (a former Vice-President for Medical Education of the American Medical Association with staff responsibilities involving the bodies accrediting medical schools, residency training and continuing medical education) to perform new feasibility studies and undertake initial planning for the School of Medicine.

The Medical School Planning Task Force included:

- Ronald Berkman, Ph.D., Dean, College of Health and Urban Affairs, FIU
- Thomas A. Breslin, Ph.D., Vice President for Research, FIU
- Kelsey Downum, Ph.D., Associate Dean for Research, College of Arts & Sciences; Past Chair, Department of Biological Sciences, College of Arts & Sciences, FIU
- Kenneth Furton, Ph.D., Associate Dean for Budget and Facilities, College of Arts & Sciences; Past Chair, Department of Chemistry, FIU
- Henry Glick, M.D., Chief of Staff, Baptist Health System of South Florida
- Jeffrey Horstmyer, M.D., Chief of Neurology, Mercy Hospital
- Paul Katz, M.D., Vice President for Medical Education, Mt. Sinai Hospital
- Howard Lipman, Vice President for Advancement, FIU
- Christian Patrick, M.D., Ph.D., Chief of Staff, Miami Children's Hospital
- Carlos Martini, M.D., Former Vice-President for Medical Education American Medical Association, Consultant
- Danielle Hollar, Ph.D., Staff.

During this time, FIU officials also held meetings with the following individuals to discuss the possibility of a new School of Medicine and the willingness of potential affiliates to collaborate in that effort:

- Manuel Anton, Senior Vice President, Medical Director, Mercy Hospital

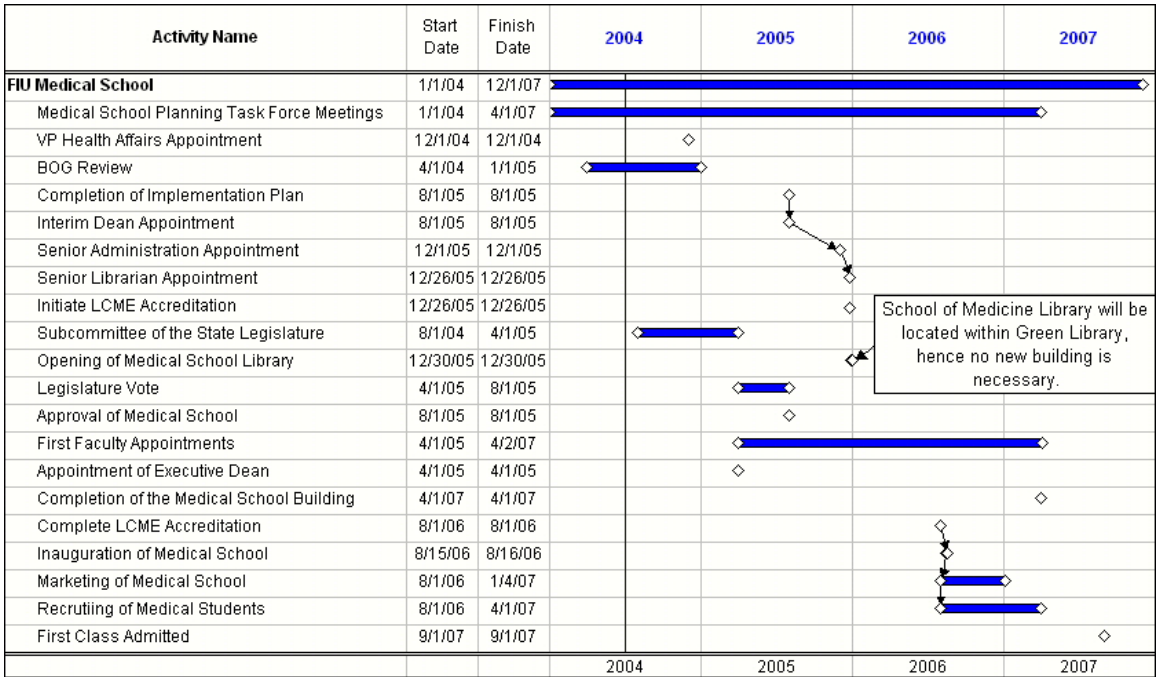
- James J. James, Director, Miami-Dade Public Health Department
- John Matuska, President and CEO, Mercy Hospital
- Fred Messing, Executive Vice President and CEO, Baptist Health of South Florida
- Thomas Rozek, President and CEO, Miami Children's Hospital
- Steven D. Sonenreich, President and CEO, Mount Sinai Hospital
- Barbara Barzansky, Liaison Committee on Medical Education
- Frank A Simon, Secretary, Liaison Committee on Medical Education

The Task Force reviewed and endorsed a Feasibility Study for the School of Medicine prepared by Dr. Martini, as well as an Implementation Plan. These are attached to this proposal as Appendix 2.

During 2002 and 2003, FIU continued its discussions with the four hospitals proposed as affiliated clinical training sites. In addition, University officials consulted with the University of South Florida medical school's administration to gain the benefit of its experience and to discuss opportunities for collaboration with the FIU School of Medicine and related undergraduate programs. Vice President Breslin and Dr. Martini continued to refine planning documents for the School of Medicine and involved in the process two additional consultants, Daniel Coleman, Ph.D., past Vice Provost for Academic Affairs and Planning and Institutional Effectiveness at FIU, and George Dambach, Ph.D., then the Associate Dean for Research, School of Medicine and Vice President for Research, Wayne State University. Drs. Breslin and Martini submitted to the Provost and President a draft document, "Health and Medical Education Initiative" based on work done by the Task Force and on a plan for the new School of Medicine developed by Dr. Martini. After consultation with the University community and with Eleni Sfakianaki, Medical Executive Director of the Miami-Dade County Health Department, this document was presented to the FIU Board of Trustees and formally accepted in November 2003.

Since November 2003, FIU has been refining a proposal for the M.D. program to submit to the Florida Board of Governors. This work has taken place under the direction of Dr. Thomas A. Breslin, in consultation with the Faculty Senate Task Force, affiliated hospital representatives, and health care providers in the community.

C. FIU School of Medicine Timeline



III. Program Quality – Reviews and Accreditation

If there have been program reviews, accreditation visits, or internal reviews in the discipline pertinent to the proposed program, or related disciplines, provide all the recommendations and summarize the University's progress in implementing the recommendations.

The University has specialized accreditation in nursing, physical therapy, occupational therapy, speech pathology and audiology, health service administration, public health, health information management, dietetics & nutrition, social work, school psychology, and special education. In addition, the University has completed academic program reviews for many of the life science, physical science, and health science programs during the last three years. These reviews included comparisons with benchmark programs at other universities, the use of outside consultants well respected in the relevant fields, and public scrutiny of review findings in special public forums. Based on these reviews and the University's strategic planning priorities, the University will make investments in the natural sciences, biomedical engineering, and the health sciences in accordance with the institution's strategic directions and the availability of enrollment growth funding. The various recommendations, and FIU's response to them, are set out in the FIU Table below.

FIU Table 2
Program Reviews
Recommendations and Responses

Program	Recommendation	Response
Health Information Mgt.	Develop a plan to boost enrollment	Double enrollments next 2 years, then grow 10% per year.
	Review certification options	In process.
	Improve rate of success on certification exam	Alumni (1990-2003) and employers surveyed annually; course syllabi reviewed and revised to meet needs disclosed in survey. Adjusting program goals as appropriate.

Program	Recommendation	Response
	Address accreditation concerns about curriculum and assessment.	Employ knowledge content assessment to assure that all knowledge content areas, domains, sub-domains and tasks are covered. Also employ SUS Student Assessment of Instruction.
	Improve Retention	Retention rate to be calculated each year; aim to retain at least 76% of students.
	Develop recruitment and marketing plan	In process.
Occupational Therapy	Develop a plan to recruit master's level students	New recruitment materials developed.
	Plan to graduate students who will meet or exceed national accreditation rates	Modified testing format to more closely resemble accreditation exam; introduced regular tutoring sessions in key areas; entering students must have 3.0 undergraduate GPA and 1000 on GRE.
	Develop an integrated 5-year MS program	Program is now in university curriculum review and approval process.
	Develop a non-thesis option for MS program	Done.
	Develop continuing graduate education programs	Have developed with the Center on Aging a certificate program in gerontology for post baccalaureate students, all on-line.
Biomedical Engineering	Assess readiness for doctoral program	Developed and implemented Ph.D. Program.
	Increase partnerships with FIU departments and industrial concerns	Partnership Program includes all major medical technology firms in area; smaller firms may access labs and equipment.

Program	Recommendation	Response
	Increase federal and private C&G support	C&G income increased to $1.27 million in FY2003.
	Position the Department to participate in the development of medical education at FIU	Department Chair appointed as a Medical School Task Force member.
Nursing	Benchmark the program against peer institutions	Done as part of the regular program review.
	Increase federal funding	Received $1.15 from NIH for Nurse Anesthetist Program in July 2003; also received $768,000 from Health Resources and Services Administration, the largest grant in Florida.
	Plan to increase student pass rates on the NCLEX Exam	Data analysis of exam scores will be conducted annually in October.
	Identify doctoral degree and faculty development options, program locations, family practice partnership options, and facilities needs and costs.	Have identified seventeen current faculty members ready to participate in Ph.D. program. Financial and logistical matters under study.
Biological Sciences	Develop a strategic plan that emphasizes graduate enrollment growth and Ph.D. production plan for enhanced multidisciplinary research initiatives in bioinformatics, biomedical, and environmental areas.	Department has emphasized hiring new faculty in biomedical areas, particularly faculty with established track records. Department has re-oriented graduate program to emphasize Ph.D. students with a 6-year target of 90% of funded students being Ph.D. students. It has entered into planning meetings with the Southeast Environmental Research Center to develop a multidisciplinary interdepartmental Ph.D. program in the environmental sciences.

Program	Recommendation	Response
	Address concerns about graduate workloads, C&G research assistantships, and undergraduate advisement	Department has instituted policy that graduate T.A.s should teach no more than 2 lab courses per semester, as at peer institutions. Department has increased C&G support for graduate students to cover 50% of graduate students. Department has dedicated a full time secretary and a full time faculty member to advise undergraduate students at University Park campus. Department has hired an instructor with responsibility for advising undergraduates at Biscayne Bay Campus.
	Expand federal support for shared research equipment, NIH funds, NSF dissertation improvement	Department hiring new faculty with NIH R-01 experience. NIH Minority Biomedical Research Support Program supports biomedical research. Department is putting together a major instrumentation proposal to NIH to develop a biomedical imaging center. Department has acquired EPA dissertation improvement funding at the same level as NSF support and will pursue additional funds from NSF.

Program	Recommendation	Response
Chemistry	Develop a strategic plan that emphasizes graduate enrollment growth and Ph.D. production	New plan calls for 80% Ph.D. students among graduate students, and ratio of R.A.s has increased to 1-1. Graduate enrollment has more than doubled.
	Plan for enhanced multidisciplinary research initiatives in biomedical, environmental, forensic, and materials sciences including nanomaterials	Department has focused on environmental chemistry with the Southeast Environmental Research Center. Forensic chemistry group has been formed and is exploring a Ph.D. in that area. A biomedical group has also been formed. In process of hiring a physical chemist to address the materials sciences with an interest in nanotechnology.
	Revise the tenure and promotion guidelines to match C&G and refereed publication goals.	Guidelines revised in May 2003 to match goals for increased standards for publications and increased C&G standards.
Physics	Develop a strategic plan that emphasizes enrollment growth and Ph.D. production	Department has switched graduate enrollment strategy to enroll almost exclusively Ph.D. students. Additional undergraduate courses have been developed and offered to draw more students and increase number of majors by offering a B.A. in physics and tracks in business and physics and education and physics.

Program	Recommendation	Response
	Identify and plan for increased interdisciplinary research initiatives in areas such as nanotech, quantum computing, and biophysics	Department has hired another nanotech specialist and is proceeding with the hiring of a fifth, a total of 4 experimentalists and 1 theoretician; will work with Arts & Sciences and Engineering to apply for a state-funded Research Center of Excellence. Department is hiring 2 biophysicists to strengthen the biophysics groups and is already participating with the chemists in various biotech projects.
	Increase C&G support for Research Assistants	Brought in more contract and grant revenues and support more students with these funds.
	Develop ties with Oak Ridge National Laboratory similar to those with Thomas Jefferson National Laboratory so that each research active faculty member produces a Ph.D. each year.	Have established direct contact with Oak Ridge National Laboratory program officials. Recalibrating to establish a target appropriate to a small department with a limited number of assistantships and fellowships.

IV. Curriculum

A. For all programs provide a sequenced course of study and list the expected specific learning outcomes and the total number of credit hours for the degree. Degree programs in the science and technology disciplines must discuss how industry-driven competencies were identified and incorporated into the curriculum, as required in FS 1001.02 (6). Also, indicate the number of credit hours for the required core courses, other courses, dissertation hours and the total hours for the degree.

The School of Medicine faculty will be responsible for curriculum planning for the M.D. program. The first tasks of the founding faculty will be to

define expected learning outcomes, finalize the curriculum design, and prepare the sequenced course of study. The M.D. program curriculum will follow general requirements specified by the Liaison Committee on Medical Education and while medical school curricula can vary from institution to institution, the following items provide a general idea of what is done in medical schools across the country:

- In 1999-2000, on average, American medical schools required 37 weeks of instruction for the first year curriculum, 36 weeks for the second year, 46 weeks for the third, and 35 weeks for the fourth. [10]
- Medical students in their third and fourth years devote all of their time to required clinical clerkships and electives in clinical institutions. Clinical education is now dispersed geographically and provided in a variety of settings, including teaching hospitals, community-based clinics, health departments, physician offices, etc. The average length of the clerkship is 5.7 weeks for family practice; 11.6 for internal medicine; 3.7 for neurology; 6.8 for obstetrics and gynecology; 7.9 for pediatrics; 6.5 for psychiatry; 8.4 for surgery 8.4, and 5.3 weeks for surgical specialties.[11]
- Part of the students' clerkship time is spent in ambulatory care settings. Clerkships in these settings are of growing importance in the medical curriculum of most medical schools.
- A standard core curriculum in U.S. medical education programs includes the following courses:

    - Cell Biology/Histology/Micro Anatomy——14 weeks
    - CNS/Neuroanatomy/Neuroscience—12 weeks
    - Biostatistics/Epidemiology/Public Health—11 weeks
    - Anatomy/Gross Anatomy/Embryology—18 weeks
    - Pharmacology—22 weeks
    - Pathophysiology—22 weeks
    - Pathology—16 weeks
    - Immunology/Microbiology—16 weeks
    - Genetics—6 weeks
    - Introduction to Clinical Medicine/Clinical Skills—18 weeks
    - Ambulatory Care—18 weeks
    - Family/Community Medicine—18 weeks
    - Internal Medicine—13 weeks

[10] AAMC Curriculum Directory (2000-2001), http://services.aamc.org/currdir/start.cfm.
[11] Ibid.

- Obstetrics-Gynecology—18 weeks
- Pediatrics—10 weeks
- Primary Care—4 weeks
- Psychiatry—10 weeks
- Surgery—11 weeks
- Radiology—5 weeks
- Emergency Medicine—5 weeks
- Geriatrics—13 weeks

- Program elective offerings are selected from a variety of health care, health care improvement, communication, social science, and contemporary medical sciences courses.

B. Describe the admission standards and graduation requirements for the program

Admission Standards

A Medical School Admission Committee will be responsible for setting admissions standards and selecting the student candidates. At a minimum, the FIU School of Medicine will require a Bachelor's Degree or its equivalent from an accredited institution of higher education. In general, successful applicants will have completed at least one year each of college-level biology, physics, English, and chemistry (requirements vary by discipline, in some cases more than 1 year may be required), and have a science GPA of 3.5 or higher.

Applicants will be required to take the Medical College Admission Test (MCAT). There has been considerable discussion over the years about the fairness of standardized tests like the MCAT. However, when used in combination with the other academic and non-academic sources of information mentioned earlier, the MCAT is a good predictor of course grades and the likelihood of graduation without academic delay. Accordingly, although some medical schools do not include this requirement, FIU intends to include an MCAT requirement unless the Medical School Admissions Committee makes a policy decision to eliminate it.

In addition to these academic requirements, FIU will expect candidates for the M.D. degree to be able to perform all the essential functions expected of

a medical care practitioner. As such, they should be able to develop skills that require the abilities of observation, communication, coordination of both gross and fine muscular movements, functional use of the senses of touch and vision and the ability to synthesize and apply complex information. A number of social and behavioral attributes such as compassion, integrity, and interpersonal skills also are expected. Interviews conducted by admission committees and experienced faculty members will be used to assess prospective students on these non-academic dimensions.

Other sources of information that will be used by the admission committee may include:

- Breadth and difficulty of undergraduate coursework.
- Letters of evaluation from undergraduate advisors or others.
- Involvement in extracurricular activities such as student government and community service.
- Involvement in and quality of health-related work and research.
- State or county legal residence.

Graduation Requirements

The degree of Doctor of Medicine (M.D.) will be granted only to candidates who have reached the age of 21 years and are of good moral character, as required by law. In addition, students must have completed the following requirements, thereby demonstrating mastery of all expected student learning outcomes:

- Been enrolled for at least four academic years as full-time medical students and satisfactorily completed the required work and passed the prescribed examinations.
- Taken the United States Medical Licensing Examination and received acceptable scores. Step I of the Examination must have been taken between the second and third year; Step II, any time during the fourth year prior to graduation.
- Taken and passed an Objective Structured Clinical Examination during their senior year.
- Acquired certification in Basic Life Support (BLS) and Advanced Cardiac Life Support (ACLS).
- Presented a satisfactory record of all procedures performed during their junior and senior years.

- Discharged all financial obligations to the School and satisfied all requirements of the Student Health Service.

Students who have met these requirements will be recommended to the Florida International University Board of Trustees for the degree of Doctor of Medicine. Attendance at the Annual Commencement Exercises is required for all degree candidates, although degrees may be conferred in absentia with prior approval from the Office of the Dean.

Honors

Prior to graduation, a faculty committee will review the academic performance of all students to ascertain which students, if any, merit the receipt of the Degree of Doctor of Medicine with Honors. Honors are classified as Cum Laude, Magna Cum Laude, and Summa Cum Laude. Uniformly high levels of academic performance, completion of creditable research, and other academic and personal characteristics will be considered in extending these honors.

Distinction in Research

The degree of Doctor of Medicine with Distinction in Research may be awarded to selected students who satisfy the rigorous requirements established for this degree. Information concerning this honor is available from the University Graduate School.

Licensing Examinations

A graduate of FIU School of Medicine who wishes to obtain a license to practice medicine must take the United States Medical Licensing Examinations. Graduates of the School will be admitted unconditionally to these examinations.

Residency and Fellowship Programs

Following the award of the Doctor of Medicine Degree and successful participation in the National Resident Matching Program, a student will begin his or her residency in one of the clinical specialties. These require from three to seven years of advanced clinical training leading to eligibility for certification by the various specialty boards. Fellowships for additional clinical or research training in the subspecialty disciplines will also be available at the affiliated hospitals of the FIU School of Medicine for those residents who plan to pursue an academic, research, or subspecialty-oriented career.

C. List the accreditation agencies and learned societies that would be concerned with corresponding bachelor or master's programs associated with the proposed program. Are the programs accredited? If not, why?

There are no corresponding bachelor's or master's programs associated with the M.D. program. There are, however, distinct health programs that have their own separate accrediting agencies.

Medical education in the United States is regulated by a voluntary system of accreditation and peer review first developed by the medical profession and medical educators in the 1920s. This system of accreditation is considered the best system of quality assessment for medical education in existence and has been copied by many other countries. The accreditation principles and processes of medical schools have become models for most of the higher education systems in this country and abroad.

Since the early 20th century, allopathic medical education in the United States has occurred in two phases. The first phase begins after college. Students generally take a standardized test, the Medical College Admission Test (MCAT), and go through a rigorous screening process. Once admitted to medical school, students begin a four-year program referred as "undergraduate medical education."

The second phase of medical education takes place after graduation from medical school, when the new graduate completes a period of "graduate medical education," referred to as the "residency," that will vary, according to the medical specialty selected, from three to seven years. Additional

years of training, called the "fellowship," are often required in order to enter a subspecialty.

Licensing is granted when a student graduates and completes a minimum of graduate medical education (3 years in most states).

Accreditation of Medical Education and Training Programs

The Liaison Council on Medical Education (LCME) accredits medical school programs. Residency training is accredited by the Accreditation Council for Graduate Medical Education (ACGME) and professional/continuing education by the Accreditation Council for Continuing Medical Education (ACCME).

The LCME requires that programs leading to the M.D. degree in the United States meet its standards of accreditation to ensure that graduates will be prepared to enter and complete their graduate medical education, qualify for licensure, provide competent medical care, and have the educational background necessary for continued learning. Accreditation is granted on the basis of the judgment that there is an appropriate balance between the enrollment size of each class and the total resources of the program, including the faculty, physical facilities, and the budget.

Governance of Medical Education

Allopathic medical education and the practice of medicine in the United States are governed by a series of boards and partnerships comprised of representatives from the academic and practitioner communities. Many boards have members-at-large as well as public and government representatives. The most important boards for allopathic medical education include:

- The Liaison Committee on Medical Education (LCME)
- The Accreditation Council for Graduate Medical Education (ACGME)
- The Accreditation Council for Continuing Medical Education (ACCME)
- The National Board of Medical Examiners (NBME)
- The National Residency Matching Program (NRMP).
- The American Board of Medical Specialties (ABMS)
- The Education Council for Foreign Medical Graduates (ECFMG)

Two professional associations, responsible for policies and programs in medical education, are also involved in the governance of medical education. In fact, these two organizations, listed below, co-sponsor and co-staff the seven previously mentioned boards.

- The Association of American Medical Colleges (AAMC)
- The American Medical Association (AMA)

Other important organizations, within this extensive network of partnerships are the following:

- The American Hospital Association (AHA)
- The Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- The Federation of State Medical Boards (FSMB)
- The Council of Specialists Medical Societies (CSMC)
- The fifty four licensing jurisdictions of the United States

Although FIU's School of Medicine cannot be accredited until after a decision is made to go forward with a new medical school, a number of FIU's existing health professions programs are accredited by health-related organizations, and this provides FIU with relevant accreditation experience that can facilitate accreditation of a medical school. The following agencies have accredited health professionals programs at the University:

- Accrediting Commission on Education for Health Services Administration
- American Dietetic Association
- American Association of Nurse Anesthetists/Council on Accreditation of Nurse Anesthesia Educational Programs
- American Health Information Management Association
- American Occupational Therapy Association
- Commission on Accreditation in Physical Therapy Education
- Commission for the Accreditation of Allied Health Education
- Council on Education for Public Health
- National League of Nursing Accrediting Commission
- Council on Social Work Education
- American Speech-Language-Hearing Association/Council on Academic Accreditation in Audiology and Speech-Language Pathology

D. Provide a one or two sentence description of each required or elective course.

A complete, detailed curriculum will be designed by the new faculty to be appointed in the Medical School. It is premature, therefore, to describe each course. In Section III, Curriculum, we describe the subjects that are considered the minimum required educational content of a medical school program according to accreditation criteria.

E. Describe briefly the anticipated delivery system for the proposed program as it may relate to resources, e.g., traditional delivery on main campus; traditional delivery at branches or centers; or nontraditional instruction such as instructional technology (distance learning), self-paced instruction, and external degrees. Include an assessment of the potential for delivery of the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to the feasibility of shared courses utilizing distance learning technologies, and joint-use facilities for research or internships.

Medical schools are complex organizations that not only provide education but also provide services to the community and conduct important research. All of the different factors that affect the United States health care system also affect medical schools. The high cost of providing care, the need for efficiency and accountability, the competition between professionals and health systems, the rapid growth of technology, the demands from an ever more informed population, and the development of new forms of managed care and other methodologies of payment for and delivery of care all must be considered in developing a new medical school.

The FIU School of Medicine will emphasize the growing trend in medical education of integrating the teaching of basic and clinical sciences. From their first year, medical students will be in contact with patients in different settings – ambulatory, hospital, long-term care and community settings.

Most of the teaching will be done in small groups and much of the clinical teaching will take place in doctors' offices, or in affiliated community health centers and hospitals that comprise the Consortium described beginning on page 40. The basic sciences subjects will be taught in current and new facilities and in laboratories being completed at the University.

The educational methodologies of the FIU School of Medicine will be based on the following concepts:

- An emphasis on the primacy of the patient interest over all other considerations.
- Use of "standardized patients" in teaching and testing.
- A concern for assuring a racially and ethnically diverse physician population to meet the needs of the medically underserved.
- Cultural diversity teaching incorporated as part of the curriculum.
- The use of learning objectives in curriculum design.
- Practice-based curriculum, emphasizing clinical practice.
- Learning programs planned around outcomes, making them more relevant.
- The use of educational outcomes as a component in the payment of faculty.
- Curriculum committees with new responsibilities in student evaluation.
- Medical education based on multi-site locations, supported by information technology.
- The migration of clinical teaching to ambulatory settings.
- The use of community physicians as teachers.
- The use of clinics and physicians' offices for teaching.
- Increased student exposure to managed care settings, nursing homes, hospices, homeless shelters, schools, free clinics, and any place where patient care is provided.
- Increased integration of, and more coordination between, disciplines associated with health.
- Curriculum that reflects effective, multi-professional learning.
- Interdisciplinary subjects integrated into the clinical curriculum.
- Centralized management and integrated institutional responsibility for the design and management of the curriculum.
- A shift from faculty-centered instruction to student-centered learning and self-directed learning.
- The requirement that students take both Step 1 and Step 2 of the U.S. Medical Licensing Examinations.
- The utilization of a final comprehensive clinical examination.
- Early contact with patients.
- An emphasis on good communication skills training.
- The application of computer technology to education.
- The use of distance learning.

- The use of OSCEs (objective structured clinical examinations).

Organizing the teaching of the last two years of the medical curriculum, usually called the clinical years, is probably the most challenging aspect of developing a new medical school. Students at this stage of their medical education typically receive instruction in hospitals and clinics, caring for a large number of diverse patients. Many medical specialists participate in clinical teaching which must be provided in a real working environment, with all of the pressures of delivering different types of patient care.

The exact models for providing clinical training vary among medical schools. In one model, medical schools build and use their own university hospitals to teach their students. Although the construction, ownership and management of university teaching hospitals are daunting propositions, about 53 medical schools have adopted this model. However, FIU does not consider this approach to be a viable option. The cost, the complexity of the health care market, and the certain opposition of the local health care organizations, call for other solutions to the problem of clinical care teaching.

A second model, the one proposed for FIU's new School of Medicine, calls for greater engagement with the community. It is a fairly common partnership or affiliation model, appropriate in the South Florida context, relying on affiliations among the School of Medicine and local health organizations that are owned and operated by different types of agencies.

The affiliation model is particularly apt for Miami-Dade County because of its plethora of high quality, technically sophisticated institutions that are interested in participating in the development of the new Medical School. Local health care organizations are eager to participate in clinical training with FIU because affiliation with a public university presents several advantages, including the following:

- Medical education in a hospital or a health center contributes to the improvement of the quality of patient care.
- A university-affiliated hospital has competitive advantages in attracting patients.
- Affiliation with a medical school facilitates the recruitment of professional staff for the hospital, particularly staff members who value the opportunities for professional promotion.

- Affiliation with a medical school facilitates the development and accreditation of residency programs.
- Many doctors are interested in education and research. Affiliation with a medical school provides the possibility of such activities for hospital staff.
- The ability to practice near a teaching hospital also attracts high quality community physicians and provides a strong incentive to remain in their local practices because the relationship fosters continuing education of practitioners and tends to strengthen quality of care.
- Affiliation with a public university can facilitate access to public funds available for residency and fellowship education, patient care and research.

The State of Florida has only six statutory teaching hospitals designated to serve the needs of medically indigent patients. These hospitals are:

- Jackson Memorial Hospital, Miami
- Orlando Regional Health Care System
- Tampa General Hospital
- Mount Sinai Medical Center, Miami
- Shands Health Center, Gainesville
- University Medical Center, Jacksonville

The FIU School of Medicine will facilitate the creation of new teaching hospitals in South Florida with considerable benefits for the quality of patient care and the ability to recruit qualified physicians.

FIU has consulted with the largest health care groups in the Miami-Dade County and has developed a hospital Consortium that now includes four institutions whose staff have been actively meeting with FIU to work on a feasibility plan for the new medical school. The Consortium institutions are:

- Mount Sinai Medical Center
- Miami Children's Hospital
- Mercy Hospital
- Baptist Health South Florida

These institutions have agreed to support the development of, and actively participate in, the operation of the new School of Medicine through their participation in the Consortium. Securing this support was an important

achievement, and was possible because of the acknowledgement that FIU, as a public university, can and should play a broader role in providing for the health and well-being of the people of South Florida.

FIU has initiated discussions to add a fifth member to the Consortium, the Health Choice Network. The Network is a community-based, not-for-profit, 501 (c)(3) organization representing a group of community health centers, providers and organizations committed to primary and preventive health care for underserved populations.

The role the Consortium will play in the School of Medicine is both educational and institutional. It will advise on matters relating to medical education and will provide institutional support to the new Medical School. Specifically:

- The clinical education of FIU medical students will be provided in the Consortium's hospitals by FIU faculty with staff appointments at those hospitals.
- Consortium hospitals will host the clinical departments of the proposed Medical School, providing them with space and infrastructure.
- Hospitals will participate in the recruitment and appointment of clinical faculty.
- The members of the Consortium will provide hospital privileges to FIU appointed faculty in accordance with their own internal credentialing rules and policies.

The Consortium, with its many hospitals and institutes, has a total of 3,349 beds, more than 4,600 medical doctors, and at least 11 health centers in South Florida. (Some of the hospitals, like Mercy, also have hospital-owned ambulatory facilities.) The formal mechanism of affiliation of these institutions with FIU will be developed once a decision is adopted concerning the School of Medicine. Current Consortium members are described briefly below.

Mount Sinai Medical Center and Miami Heart Institute

Mount Sinai Medical Center will be the primary affiliated hospital for the FIU School of Medicine. The Medical Center has four campuses – the north and south campuses in Miami Beach, and two others in Aventura and Miami. With assets of $100 million, it is one of the 6 designated statutory teaching hospitals in the state of Florida.

Mount Sinai Medical Center is the largest, independent, not-for-profit teaching hospital in South Florida, with 1,130 licensed acute and long-term beds and 1,116 physicians. It admits more than 20,000 patients a year and performs 16,700 surgeries annually. The Joint Commission on Accreditation of Healthcare Organizations, the Accreditation Council for Graduate Medical Education and the Accreditation Council for Continuing Medical Education all accredit Mount Sinai.

Mount Sinai Medical Center already participates in medical education. Through its Department of Medical Education and the Behrman Center for Medical Education, Mount Sinai offers University of Miami medical student electives in General Surgery, Internal Medicine Anesthesiology, Cardiology, Emergency Medicine, Gastroenterology, Infectious Diseases, Nuclear Medicine, Ultrasound, Pathology and Laboratory Medicine, Pulmonary Diseases, Radiology, and Thoracic and Cardiovascular Surgery. It also runs accredited residency programs in Internal Medicine, Surgery, Cardiology, Pathology and Laboratory Medicine.

Miami Children's Hospital

Miami Children's Hospital, located just outside of Coral Gables, was established in 1950. The Hospital gained early prominence as an international center for people suffering from poliomyelitis. Today, the hospital admits about 2,000 inpatients and serves about 200,000 clinic patient visits each year. It is licensed for 268 beds.

More than 650 physicians provide services at what are called "Centers of Excellence" in cardiology, hematology/oncology, neuroscience, pulmonology, preventive medicine, and intensive care – in all more than 40 pediatric specialties and subspecialties. The neonatology division admits more than 375 newborns each year.

Miami Children's Hospital currently trains 60 residents in specialty areas including critical care, anesthesia, emergency medicine, neurology, and pediatric surgery. Miami Children's also operates an extensive international tele-education program that reaches more than 70 sites in Latin American and Caribbean countries. Miami Children's Hospital is the site of collaborative research work in pediatric neurosurgery between the MCH Brain Institute and the FIU Center for Advanced Technology in Education.

Miami Children's has the only freestanding pediatric cardiac intensive care unit and the only freestanding pediatric trauma center in the state of Florida. Miami Children's Hospital will assume responsibility for the teaching of pediatrics to the FIU medical students.

Mercy Hospital

Mercy Hospital is a comprehensive health care system with 512 beds, 900 physicians, and 28 medical specialties. It is a member of Catholic East, a network that has 33 acute care hospitals and 42 free standing and hospital based skilled nursing facilities from Maine to Florida. Mercy Hospital also includes a 120-bed Nursing Center, and centers in Rehabilitation, Oncology, and Cardiology.

Mercy Hospital opened its doors in 1950, and it is considered one of the most culturally sensitive health organizations in the area, serving the majority of the Hispanic population of the area. Mercy Hospital also is an important health care provider for international patients, mainly from Latin America and the Caribbean. Responding to a growing demand, Mercy is beginning construction of a four-story, 90,000 square feet building for an ambulatory care center and other outpatient programs.

Baptist Health South Florida

Baptist Health South Florida operates a total of 1,439 licensed beds. Prior to the acquisition of Doctors Hospital in October 2003, Baptist Health South Florida hospitals admitted more than 61,000 patients and provided more than 301,000 days of patient care. The system also performed 9,000 deliveries and 41,000 surgical cases.

Baptist Health South Florida facilities provide services ranging from primary to tertiary care, including rehabilitation. These services are provided by

nearly 2,000 physicians at multiple hospitals, some of which are located close to the University Park campus of FIU. The facilities include:

- Baptist Hospital of Miami
  - Baptist Children's of Miami
  - Miami Cardiac and Vascular Institute
- Doctors Hospital
- Homestead Hospital
- Mariners Hospital
- South Miami Hospital

In addition to inpatient services, Baptist Health South Florida also provides outpatient diagnostic and urgent care services via eight different sites throughout southern Miami-Dade County.

Baptist Health South Florida does not participate in the education of medical students at the present time, but it is building a new facility (West Kendall Baptist Hospital) in the vicinity of the FIU campus, and that facility will be Baptist Health System's primary training site for FIU medical students.

V. Assessment of Current and Anticipated Faculty

A. Use Table One to provide information about each existing faculty member who is expected to participate in the proposed program by the fifth year. Append to the table the number of master's theses directed, number of doctoral dissertations directed, and the number and type of professional publications for each faculty member.

A number of FIU's current faculty members have taught in medical education programs in the past, and some of them, as well as other faculty members, have expressed an interest in teaching in the new School of Medicine. Many of these individuals are likely to be given joint appointments in their present colleges and in the new Medical School. Ultimately, however, the School of Medicine Dean must have a high degree of autonomy and authority over the educational, research-related, and patient-care activities of his/her faculty. In fact, this level of responsibility is a precondition for accreditation from the LCME. As a result, the new dean and his or her department chairs will be responsible for determining the composition of the faculty of the School of Medicine.

The School of Medicine's faculty members will be chosen through a comprehensive search process (in all cases involving a national search), and selected on the basis of appropriate credentials and experience. Again, accreditation standards specify who must be responsible for the selection, supervision and control of medical school faculty. The principles they establish must be respected. Accordingly, the selection, appointment and supervision of all faculty members will be the responsibility of the medical school chairpersons, the associate deans and ultimately, the Dean of the Medical School.

B. Also use Table One to indicate whether additional faculty will be needed to initiate the program, their faculty code (i.e., A, B, C, D, or E as detailed in the lower portion of Table One), their areas of specialization, their proposed ranks, and when they would be hired. Provide in the narrative the rationale for this plan; if there is no need for additional faculty, explain.

The School of Medicine will require faculty members skilled in the basic medical and clinical sciences to teach the courses required for accreditation and a high quality medical education. We estimate that the School will have 116 new faculty members, including a dean, 3 associate deans, 2 assistant deans and 9 chairpersons. These individuals will come on board in advance of enrolling medical school classes, so that the full complement will be in place in the School's fifth year. Table One provides a timetable for hiring as the medical program builds.

The plan for these faculty members was developed based on the concept of a curriculum that is highly integrated between the basic and clinical sciences and that requires different recruiting patterns in the first 6 years than it does once fully established. Also, it takes into account the need for most medical school faculty members to divide their time among teaching, research and clinical practice.

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Dean	Medical Education	Professor		M.D.	2005	1.00
C	New Hire - Associate Dean	Medical Education	Professor		M.D./Ph D	2005	1.00
C	New Hire - Assistant Dean	Medical Education	Associate		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Anatomy	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Physiology	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Biochemistry	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Behavioral Sciences	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Pathology	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Internal Medicine	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Family Medicine	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Pediatrics	Professor		M.D./Ph D	2005	1.00
C	New Hire - Faculty	Med Ed	Professor		M.D./Ph D	2005	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Preventive Medicine	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Languages	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Informatics	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Micro-Immuno	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Pharmacology	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Psychiatry	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Ob & Gyn	Professor		M.D./Ph D	2006	1.00
C	New Hire - Faculty	Surgery	Professor		M.D./Ph D	2006	1.00
C	New Hire - Associate Dean	Medical Education	Associate		M.D./Ph D	2007	1.00
C	New Hire - Assistant Dean	Medical Education	Associate		M.D./Ph D	2007	1.00
C	New Hire - Faculty	Anatomy	Associate		M.D./Ph D	2007	1.00
C	New Hire - Faculty	Anatomy	Associate		M.D./Ph D	2007	1.00
C	New Hire - Faculty	Physiology	Associate		M.D./Ph D	2007	1.00
C	New Hire - Faculty	Physiology	Associate		M.D./Ph D	2007	1.00
C	New Hire - Faculty	Biochemistry	Associate		M.D./Ph D	2007	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Associate Dean	Medical Education	Associate		M.D./Ph D	2008	1.00
C	New Hire - Assistant Dean	Medical Education	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Biochemistry	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Preventive Medicine	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Preventive Medicine	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Informatics	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Informatics	Professor		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Lang	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Informatics	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Behavioral Sciences	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Behavioral Sciences	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Micro-Immunology	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Micro-Immunology	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Pathology	Associate		M.D./Ph D	2008	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Pharmacology	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Pathology	Assistant		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Anatomy	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Family Medicine	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Pediatrics	Associate		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Ob &Gyn	Professor		M.D./Ph D	2008	1.00
C	New Hire - Faculty	Physiology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Pharmacology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Pharmacology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Anatomy	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Anatomy	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Physiology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Physiology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Biochemistry	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Biochemistry	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Biochemistry	Assistant		M.D./Ph D	2009	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Prev Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Micro-Immunology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Micro-Immunology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Pathology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Pathology	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Family Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Family Medicine	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Psychiatry	Associate		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2009	1.00
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2009	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Surgery	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Micro-Immunology	Associate		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Pathology	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Pharmacology	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Pharmacology	Associate		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Behavioral Sciences	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Languages	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Psychiatry	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Psychiatry	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Pediatrics	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Informatics	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Ob & Gyn	Assistant		M.D./Ph D	2010	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Internal Medicine	Associate		M.D./Ph D	2011	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Fam Medicine	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Fam Medicine	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Pediatrics	Associate		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Ob &Gyn	Associate		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Ob &Gyn	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Psychiatry	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Psychiatry	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	General Surgery	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	General Surgery	Associate		M.D./Ph D	2011	1.00
C	New Hire - Faculty	General Surgery	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	General Surgery	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Medical Education	Associate		M.D./Ph D	2011	1.00
C	New Hire -Assistant Dean	Medical Education	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Fam Medicine	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Pediatrics	Assistant		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2011	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/ Specialty	Rank	(For Existing Faculty Only)		Initial Date for Participation in Proposed Program	5th Year Workload in Proposed Program (portion of Person-year)
				Contract Status (Tenure status or equivalent)	Highest Degree Earned		
C	New Hire - Faculty	Internal Medicine	Associate		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Informatics	Associate		M.D./Ph D	2011	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Internal Medicine	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Fam Medicine	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Fam Medicine	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Pediatrics	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Pediatrics	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Ob & Gyn	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	Ob & Gyn	Assistant		M.D./Ph D	2012	1.00
C	New Hire - Faculty	General Surgery	Associate		M.D./Ph D	2012	1.00
C	New Hire - Faculty	General Surgery	Assistant		M.D./Ph D	2012	1.00

Board of Governors Table One
FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR (cont.)

Faculty CODE	Corresponding Faculty Position Category in TABLE 3 for the Fifth Year	Proposed Source of Funding for Faculty	TOTAL 5th Year Workload by Budget Classification
A	Current General Revenue	Existing Faculty -- Regular Line	0.00
B	Current General Revenue	New Faculty -- To Be Hired on Existing Vacant Line	0.00
C	New General Revenue	New Faculty -- To Be Hired on a New Line	116.00
D	Contracts & Grants	Existing Faculty -- Funded on Contracts & Grants	0.00
E	Contracts & Grants	New Faculty -- To Be Hired on Contracts & Grants	0.00
		Overall Total for 5th Year	116.00

C. Use Table One to estimate each existing and additional faculty member's workload (in percent person-years) that would be devoted to the proposed program by the fifth year of implementation, assuming that the program is approved. (Note: this total will carry over to the summary of faculty positions on Table Four.) Discuss Table One.

It is anticipated that, on average, faculty member time will be distributed as follows: 40% instruction, 40% clinical practice, and 20% research.

D. In the case of Ph.D. programs, use Table Two to compare the number of faculty, research productivity and projected number of students to at least three peer programs outside Florida. For those disciplines that are included in the National Research Council (NRC) Research-Doctorate Programs in the United States and the National Science Foundation (NSF), please utilize the data from these two sources. NRC data is available on CD ROM and NSF data is available on-line at www.nsf.gov/sbe/srs/profiles/. For disciplines that are not included in these two sources, please utilize alternate sources to provide comparable data. Universities may choose to provide additional peer data comparisons that are not available from NRC or NSF, such as percent of graduate students supported by contracts and grants, and total contracts and grants for the most recent year.

This section is not applicable, since a Ph.D. program is not proposed.

VI. Assessment of Current and Anticipated Resources

A. In narrative form, assess current facilities and resources available for the proposed program in the following categories:

1. ***Library capacity—Provide a copy of the official Assessment of Library Collection for this discipline and related fields (assessment to be requested from and prepared by the Library).***

The Assessment of FIU's Library Collection is attached to this proposal as Appendix 3. FIU's Green Library has 15,000 square feet of space for the Medical School Library in the area now dedicated to the Law School Library. Once the Medical School building is constructed, the Medical

School Library will be moved into that space. In the report, Mr. Tony Schwartz, Associate Director for Collection Management of the FIU Libraries, also estimates that FIU's current library budget would have to be supplemented by roughly $300,000 in order to acquire the necessary core collection and augment the current journal collections in fields allied to medicine: biology, chemistry, biomedical engineering, nursing, and health.

2. ***Technology capacity—Provide a copy of the official <u>Assessment of Technology Capacity</u> (assessment to be requested from and prepared by University Technology Services). Include an assessment of FIU's technological capabilities to deliver the program through distance learning as well as the potential to do so through collaboration with other universities.***

The Assessment of Technology Capacity is attached to this proposal as Appendix 4. It is envisaged that the School of Medicine will feature ubiquitous computing with wireless, secure access. It will use the Internet as a communications medium, facilitating access to remote databases, educational forums, and on-line course materials for those at the Medical School, while giving the clinical faculty and students at remote sites equal access to those materials and data. The databases also will be available to other faculty members in the health sciences to facilitate their own work as well as cooperative work with the students and faculty of the School of Medicine. Additional funds ($1,000,000) are allocated in the first year of the program to increase the technology infrastructure for access and management of information resources.

3. ***Describe classroom, teaching laboratory, research laboratory, office, and any other type of space that is necessary and currently available for the proposed program.***

Some of the facilities that will be needed by the proposed School of Medicine were recently finished or are currently under construction. In June 2002, FIU completed the Health and Life Sciences I facility. It houses some of the academic units involved in health sciences activities such as the Departments of Dietetics and Nutrition, Physical Therapy, Occupational Therapy, and Communication Sciences and Disorders, as well as public health and biological science laboratories. This facility has biomedical research laboratories, faculty offices, conference rooms, and teaching

laboratories, and the facility will be used by some faculty members who will have joint appointments in the proposed School of Medicine, and for research that is conducted jointly by faculty members from health professions schools and faculty members from the School of Medicine.

Construction of the Health and Life Sciences II facility has begun and is expected to be completed in 2004. It will house the Stempel School of Public Health, the School of Nursing, and some of the research and training activities of the Department of Biological Sciences. Like the Health and Life Sciences I facility, this one will be used by faculty members who will have joint appointments in the School of Medicine, and for research that is conducted jointly with faculty members from the School of Medicine.

4. ***Equipment, focusing primarily on instructional and research requirements***

The University has budgeted $5.9 million for equipment and furnishings for the Health and Life Sciences III Building that will house the School of Medicine. The cost of instructional equipment is covered in the building furniture and equipment budget. Additional funding if needed for research equipment and a vivarium will be sought from federal sources through grant mechanisms. In addition, some equipment appropriate to the relevant disciplines will be purchased with start-up funds budgeted for new faculty members upon recommendation of those faculty members and approval by the dean. The University has planned for $500,000 in start-up money for each basic science faculty member in the proposed School of Medicine. Funds will be included in E&G budget lines through Year 4 of operations.

5. ***Fellowships, scholarships, graduate assistantships, and tuition waivers (List the number and amount allocated to the academic unit in question for the past year.)***

FIU will request $125,000 per year from the state for each Medical School class for fellowships and scholarships, so that in the first year of the Medical School's existence, when there is only a first year class, $125,000 will be requested and by the fourth year, when there are four classes, $500,000 will be requested .

6. Internship sites, if appropriate. Discuss clinical affiliation plan.

The clinical affiliation plan is described in section IV.E of this proposal. As described in that section, School of Medicine students will receive their clinical training through a network of hospitals, health centers and ambulatory care facilities in Miami-Dade County.

B. Describe additional facilities and resources required for the initiation of the proposed program (e.g., library volumes, serials, space, assistantships, specialized equipment, other expenses, OPS time, etc.). If a new capital expenditure for instructional or research space is required, indicate where this item appears on the University's capital outlay priority list. The provision of new resources will need to be reflected in the budget table (Table Four), and the source of funding indicated. Table Four includes only I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form. It is expected that high enrollment programs, in particular, would necessitate increased costs in non-I&R activities.

As described in subsection VI-A-1 and in Appendix 3 of this proposal, the medical program will require $300,000 in supplemental funding for the library collection. Of that total, roughly $200,000 will be directed to the core collection and $100,000 to periodical literature. These figures will be further refined once the curriculum is established. At least $1,000,000 in the first year will be required to develop the technology infrastructure to enable communications and sharing of information between FIU and affiliate sites. Additional resources from building funds and other sources will support continued investment in the technology infrastructure.

To initiate the medical program, the University proposes to construct a new building. This building is highest on the University's currently approved list of PECO projects. The building is sized in accord with benchmark medical schools and will house a 500-seat general-purpose classroom/auditorium, 3 classrooms of 100 seats each, and a fourth classroom with 70 seats. It also will contain seven teaching laboratories, an anatomy laboratory, 30 research laboratories, vivarium, administrative and faculty office, study and academic support spaces.

The total cost of this building, referred to in campus planning documents as the Molecular Biology Building, is expected to be $40 million. That funding is expected to come from PECO funding ($18 million), privately donated funds ($9 million), state matching funds ($9 million), and the federal government ($4 million).

The medical program will not have a high enrollment. Administrative and support costs have been calculated per 100 students in the program budget. Increased library costs are addressed above.

ACCOUNTABILITY

VII. Assessment of Need and Demand

A. What national, state, or local data support the need for more people to be prepared in this program at this level. (This may include national, state, or local plans or reports that support the need for this program; demand for the proposed program which has emanated from a perceived need by agencies or industries in your service area; and summaries of prospective student inquiries.) Indicate potential employment options for graduates of the program. If similar programs (either private or public) exist in the state, provide data that support the need for an additional program. <u>Summarize the outcome of communication with such programs.</u>

FIU's School of Medicine is designed to accomplish the following:

- Help address the region's current and anticipated physician shortages by increasing the number of culturally sensitive, under-represented minority physicians serving South Florida;
- Improve the quality of health care in South Florida;
- Provide an affordable, accessible medical school in South Florida that directly partners with community hospitals and health care clinics throughout the region;
- Advance biomedical and scientific knowledge through research, scholarship, and direct application to the health care needs and industrial opportunities of South Florida, the state, the nation, and the wider region served by FIU; and
- Contribute to the economic development of the region, the state and the nation.

Physician Shortages

Over the past several years, recognition of a looming physician shortfall has been growing. Physician shortages already are prevalent in a number of medical specialties.[12] In February, 2004, Jordan J. Cohen, M.D., President of the American Association of Medical Colleges, warned that, "[T]he consequences for the public's health of a shortfall in physicians are obviously much more serious than those of an oversupply. Access to equitable health care is already tenuous for many of our countrymen; a paucity of physicians would compound this problem enormously."[13]

The American Medical Association (AMA) discussed this issue at its interim annual meeting in December, 2003. Until that meeting, the AMA's stated policies on physician workforce issues assumed physician surpluses. After careful analysis and in response to the concerns of many medical specialty societies, the AMA's Council on Medical Education, submitted to the AMA House of Delegates a request to abandon these policies and to adopt the following one:

> "In order to enhance the access to care, our AMA should collaborate with public and private sectors to ensure an adequate supply of physicians in all specialties and to develop strategies to mitigate the current geographic maldistribution of physicians"

The Council explained its request for this policy reversal by stating:

> "A number of recent studies on the physician workforce illustrate that this oversupply has not appeared. In at least two states (New York and California), the great majority of resident physicians completing training in specialties during 2001 did not have problems finding employment. In contrast, there have been a number of recent studies of specialty groups (for example intensivists/ pulmonologists) and state medical societies (for example Massachusetts) that concluded that there are imminent shortages in some specialties. Concerns also have

[12] See, for example, "Perception of Medical School Deans and State Medical Society Executives about Physician Supply." JAMA, December 10, 2003, Vol 290, No. 22]
[13] *AAMC Reporter,* 13:4 (Feb. 2004), p. 2.

> been raised about declines in the number of medical students choosing family medicine and generalist's disciplines. Richard Cooper, Executive Director, Medical College of Wisconsin, Milwaukee, using a new set of planning assumptions has predicted an impending shortage of physicians, including specialists."[14]

The Council's request was granted, and the AMA House of Delegates adopted the recommended policy. The Council went on to say that:

> "A report being developed by the Council on Graduate Medical Education, (discussed at its September 2003 meeting) is consistent with the above conclusions. Preliminary recommendations include increasing the output of US medical schools and the number of funded graduate medical education positions; conducting specialty-specific studies to determine appropriate specialty mix; and tracking supply, demand and need."[15]

The Council on Medical Education also raised a second important physician workforce issue – physician workforce composition. The Council observed that "The racial/ethnic and gender composition of the physician workforce does not approach that of the population as a whole. This has implications for access to care."[16] Only about 3.6% of the physician workforce are known to be African American, 4.9% Hispanic, and 25% female.[17] Yet, the Council reported, "Studies have shown that minority and women physicians are more likely to serve minority, poor, and Medicaid populations."[18] The Council found "a need to enhance underrepresented minority representation in medical schools and in the physician workforce, as a means to ultimately improve access to care for minority and underserved groups."[19] The AMA's House of Delegates adopted this recommendation as a new policy as well.

Both of these issues – the projected national physician shortage, and the racial/ethnic gender composition of the physician workforce – have a substantial impact on the State of Florida generally, and on South Florida in particular. At first glance, Florida does not appear to suffer from a serious

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[14] *Council on Medical Education Report 2-I-03*, AMA-Chicago, December 2003.
[15] Ibid.
[16] Ibid.
[17] Ibid.
[18] Ibid.
[19] Ibid.

physician shortfall, ranking 16th nationally in total physicians per 100,000 population.[20] However, this ranking is misleading since the underlying ratio does not take into account differences among physicians in terms of their productivity and qualifications, both of which have implications for access and quality of care, or in the characteristics of the state's population. For example, Florida has the oldest physician workforce in the country, with 26% of its physicians over 65 years of age and only 10% under 35 years of age.[21] The comparable national averages are 18% and 17%, respectively.[22] Ten percent of south Florida's medical doctors are 70 years of age or older.[23] This age structure is due mainly to the fact that many physicians move to Florida to retire and maintain valid licenses, although they may not practice or do so in a limited way.

South Florida physicians also have a very low level of specialty certification. This low specialty certification rate is, in part, related to age, but even more to a very high proportion of foreign trained physicians in South Florida. (Nationally, 24% of physicians are foreign trained and so are 35% of Florida's physicians, [24] while 47% of South Florida's physicians are foreign trained[25]). Furthermore, because the number of foreign trained physicians is highly dependent on a continuous flow of foreign medical graduates, which, in turn, is influenced by the availability of visas and medical residencies required for licensing, Florida and especially South Florida are exceptionally vulnerable to any downturn in the number of foreign medical graduates.

Two characteristics of Florida's population exacerbate the problems associated with physician shortages. First, the proportion of Florida's population that is over 65 is 17.6%, higher than the national average of 12.4%.[26] On average, individuals who are over 65 are much heavier users of physicians services than those who are under 65. BlueCross BlueShield of Florida's latest standard assumes individuals 65 and over use 3.5 times more physician services than do those under 65.[27]

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[20] American Medical Association, Physician Characteristics and Distribution in the U.S., 2003-2004 edition (Chicago: 2003), p. 340.
[21] Council of Florida Medical School Deans, "An Overview of Medical Education and the Physician Workforce in Florida." January 22, 2004.
[22] Ibid.
[23] Elizabeth Greb, unpublished analysis of South Florida doctors' license data, May 2004.
[24] American Medical Association , Physician Characteristics and Distribution in the USA, 2001-2002.
[25] Elizabeth Greb, unpublished analysis of South Florida's doctors' license data, May 2004.
[26] http://quickfacts.census.gov/qvd/states/12000.html
[27] Melvyn R. Fletcher, M.D., Vice President Care and Quality Management, interview with Thomas A. Breslin, March 9, 2004.

Second, health care delivery in South Florida operates within a complex context that includes a large, racially, and ethnically diverse population. South Florida, comprised of just four counties (Palm Beach, Broward, Miami-Dade, and Monroe), is the most populous region in Florida, accounting for 31.8% of the total population of Florida. During the past decade, the region has experienced a population explosion, resulting in three of the four counties (Palm Beach, Broward, and Miami-Dade) being named among the top twelve fastest-growing, large counties in the United States (ranking 3, 5, and 12 respectively).[28]

Some of the characteristics of South Florida's population that bear on the issue of physician supply (both in terms of the numbers of physicians and their specialties and training) include the following:

- Over one half of the population of Miami-Dade County is Hispanic or Latino (57.3%), an increase of 111.2% in the last decade. Broward County also has a large percentage of Hispanic or Latino community members (16.7%).
- Broward, Miami-Dade, Monroe, and Palm Beach counties, together, account for slightly over one-quarter (26.8%) of the uninsured in Florida and the number of uninsured and underinsured persons in South Florida is expected to grow.
- According to the Health Council of South Florida, Inc., "There is a paucity of community-based primary care centers/programs in the western portion of the [Miami-Dade] county, especially in the areas west of the Florida Turnpike" as well as in the Southern section of the county. Geographically, those areas that lack community-based primary care centers also are the areas that include "large populations of new immigrants and lower-income persons."[29]

A detailed study, prepared in 1999, for the Florida Board of Regents by MGT of America Inc. (the "MGT Study"), which culminated in the recommendation for the creation of a new medical school in Northern Florida, made the following observations about Florida's physician workforce:

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[28] Designation based on reports of the fastest growing U.S. counties with populations over 1 million. http://www.miami.com/herald/news/census2000/docs./100759.htm accessed on January 19, 2002.
[29] Health Council of South Florida, Inc., *Comprehensive Health Plan for Miami-Dade and Monroe Counties, 2000-2002,* Miami, FL, 2000, Chapter 3, p. 35.

- Florida will need 3,000 new physicians per year, over the next decade, to catch up with other states. Presently, Florida licenses only 2,500 doctors annually.
- A large portion of the state currently faces a significant shortage of physician services
- Florida must depend heavily on international medical graduates to provide medical services for the state's population.
- If the federal government follows existing recommendations to limit the number of foreign medical graduates, Florida will suffer serious consequences.
- The number of medical school graduates from Florida's medical schools falls far short of the state's needs for new physicians each year.
- The cost of physician services is higher in Florida than in any other state within the United States.

A medical school at FIU can help address physician shortages by graduating M.D.s who stay in the area, and by facilitating the creation of new residency positions for physicians who stay in the area after completion of their training. In medicine, there is a natural chain of events that determines a career pattern. Many students attend their local educational institutions. Once in college, students tend to study medicine in the same University, if there is an accessible program. The same medical students do rotations in the University-affiliated hospitals, and once they graduate they tend to do their residency training in the same place were they did their rotations. And after they have completed their training, physicians tend to stay in the communities where they were residents. Nationally, about 50 to 65 percent of all physicians practice within a 75-mile radius of where they completed their graduate medical training.[30]

This pattern is likely to hold at FIU where 85% of FIU's alumni remain in the state and 80% remain in South Florida. Certainly, it is reasonable to expect that the majority of graduates from the FIU School of Medicine and FIU's health professional programs will remain in the region as well. In Detroit, for example, more than sixty-five percent of the physicians

[30] Graduate Medical Education Committee, "Annual Report on Graduate Medical Education in Florida" January 2004, p.3.

practicing in the Greater Detroit region are graduates of the Wayne State Medical School or residents who completed their training in the area.

Quality of Care

In order to meet the state's growing demands for high quality health care, Florida needs to license more physicians who are qualified to participate in the delivery of modern health care services, particularly in culturally diverse South Florida. The state currently licenses approximately 2,500 new physicians per year but, according to the MGT Study mentioned earlier, it will need to license roughly 3,000 each year in order to keep up with the demand for healthcare services. Florida's medical schools only graduate about 500 doctors per year, some of whom leave the state. An even smaller cohort is trained to provide the type of care required by our region's culturally diverse population. There is evidence linking poor health status to gaps in cultural understanding among service providers.[31] Since 57% of Miami-Dade County's population is Hispanic or Latino, and 20% is African-American, this is a matter of serious concern to the people of Florida's most populous county.[32]

A medical school at FIU can help address issues related to healthcare quality in South Florida in several ways. First, the M.D. program is designed to prepare healthcare practitioners for practice in the 21st century by utilizing existing community-based resources and addressing critical community health needs. Florida International University is already educating many health professionals, and the development of a new School of Medicine combined with recent innovations in medical education provide a unique opportunity to integrate as much as possible the curriculum and the learning practices of all the health professionals. This will be particularly valuable in the areas of cultural sensitivity, bioethics, and communication with patients.

In the context of an academic health center providing an integrated health care education, research, and delivery system, the FIU medical degree program will increase the number of qualified under represented minority professionals entering the health care delivery network. This is particularly important in light of evidence that links poor health status to gaps in cultural understanding among service providers.

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[31] Board on Health Sciences Policy, Institute of Medicine of the National Academies, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,* March 2002.
[32] http://quickfacts.census.gov/qfd.states/12/12086.html.

Florida International University is a diverse institution. In 2003-2004, 52.96% of its students were Hispanic, 13.56% African American, and 3.65% Asian American. FIU's medical students are likely to be similarly diverse, and FIU expects that the majority of its graduates from the Medical School and its health professional programs will remain in the region. Already 80% of FIU alumni reside in South Florida, and there is evidence to suggest that FIU will achieve similar results with its School of Medicine alumni.

In addition to the formal degree programs, doctors require high quality professional continuing education. Licensing and certification are time-limited. A medical doctor needs many hours of continuing education to obtain and maintain certification. These opportunities are limited and could be provided by FIU through its current and proposed academic units. These curricular offerings will also provide a solution to a serious regional problem, namely, the low proportion of doctors in South Florida with specialty certification. The objective will be to raise the proportion of Board certified medical practitioners in South Florida to the levels expected of high quality tertiary care institutions (nationally, more than 80% of doctors are certified).

Florida's Capacity to Train Medical Doctors and Provide Access to Medical Education

The State of Florida has three fully accredited allopathic schools of medicine (University of Miami School of Medicine, University of Florida College of Medicine, University of South Florida College of Medicine) and a fourth that has applied for full accreditation (Florida State University College of Medicine). The state also has one osteopathic medical school (Nova Southeastern University College of Osteopathic Medicine) and a branch of the Lake Erie College of Osteopathic Medicine will open in Bradenton, Florida.

The state admits and graduates fewer medical students, proportionally, than most other states (according to the MGT Study, Florida would need 400 additional first-year medical students to match the national average of the number of medical students per 100,000 of population), and a smaller proportion of those students enter primary medical care than the national average. Moreover, those who do enter the profession do not reflect the demographic and ethnic characteristics of the state's population.

Equity and access to medical education for Florida residents are important issues as well. Every year more than 2,000 Floridians sit for the Medical College Admissions Test, but only about 410 seats are available in all of Florida's medical schools, and only 260 in Florida's public medical schools. The ratio of Florida applicants to available space is 4.3:1; almost double the national average of 2.2:1. The state would need an additional 400 slots for first-year students to match comparison targets with other states.

Some of the relevant statistics for Florida medical students are as follows:

- Of the 1,515 Florida residents who applied to medical schools in 2002, 39.8% matriculated out of the state.
- Only 10.9% of the medical students who matriculated in the state of Florida were Hispanic or African American although more than 30% of the state's population is Hispanic or African American.
- Approximately 500 medical students graduate every year from state medical schools. On a per capita basis, Florida ranked 41st out of the 46 states with medical schools.
- 97.7% of the students admitted to Florida medical schools are residents of the state.
- 24% of Florida's medical school graduates enter primary care specialties, below the national average of 27%.
- Florida has 2,700 allopathic physicians in training as residents, ranking 43rd among all states on a per capita basis. The per capita number of residents declined by 3.8% between 1989 and 1999, while the number of residents increased nationally by 3.9%.

In a January 2004 presentation to the Subcommittee on Medical Education of the Strategic Planning/Educational Policy Committee of the Florida Board of Governors, Board staff presented the following information:

> "Florida ranks 37th nationally in allopathic (M.D.) medical school enrollment per 100,000 state population, 12th nationally in osteopathic (D.O.) medical school, enrollment and 37th nationally in total (M.D. & D.O.) medical school enrollment per 100,000 population. Florida would need to add approximately 4,500 additional M.D. and D.O. students to meet the national ratio of medical students per 100,000 population."

In addition to the relatively low number of medical school slots in Florida, the state also has a deficit of residency programs. A report from the Graduate Medical Education Study Committee (1999) (prepared in response to a legislative proviso in appropriation Item # 191 of the General Appropriations Act[33]) emphasized the need for GME/residency program development in Florida: "Although the state has traditionally depended on physicians educated elsewhere to provide an adequate physician workforce, our rapidly growing population, the large number our citizens who are elderly, and the number of inner city and rural communities that are medically underserved, indicates that Florida must now take a more aggressive role in assuring the continued viability of its GME program." Florida is ranked 44th out of the 46 states with medical schools in the number of residency positions per 100,000 population.

FIU plans to develop and sponsor new residency training programs at Mercy Hospital, Baptist Health South Florida and Health Choice Network, and faculty members from the FIU School of Medicine will direct and lead these programs. The FIU School of Medicine also will facilitate the expansion of existing residency programs in the area. The number of residents approved by the GME accreditation body (ACGME) for any institution is based upon the adequacy of resources for resident education, including the quality and volume of patients and related clinical material, the faculty-residents ratio, and the quality of faculty lecturing. There is, therefore, a direct and mutually beneficial relationship between medical schools and residency programs. While South Florida hospitals may have sufficient patients and resources, (and residency programs can and are in many circumstances free standing), affiliation with the FIU School of Medicine would help them fulfill one of the most important requirements of residency program relating to the number and quality of the faculty and faculty development. One reason for the shortage of graduate medical education positions in Florida is that hospitals lack sufficient numbers of qualified faculty and educational experience.

Hospitals with residency programs also will benefit from an association with FIU's School of Medicine since this affiliation will bolster their continuing education capabilities and provide their attending physicians with new professional opportunities (e.g., education for specialty certification).

[33] Section 27 of Chapter 2000-163, Laws of Florida.

Affiliation also makes a hospital more attractive to other doctors, and improves its ability to attract the highest quality medical graduates.

Finally, FIU also will be instrumental in helping to increase the physician board certification rates of the hospitals and the community in general, by providing the academic environment that facilitates education for board certification.

Biomedical and Scientific Research

The School of Medicine will contribute substantially to FIU's research enterprise and to the biomedical and research and healthcare resource dollars coming into the region. A recent RAND study shows that 45% of all federal R&D funds to universities went directly to medical schools in FY 2002, even though only a relatively few of the nation's hundreds of universities and colleges have medical schools.[34]

By creating partnerships between the public medical school and local health care providers and advocacy organizations, more medical research and health care resources can be brought into the region. Development of such partnerships will facilitate securing grants from the federal, state, and local governments, foundations, and other philanthropic organizations to support health care initiatives in the region.

The School of Medicine will also lead to increased research collaborations with the local biotechnology industry. The University's bioengineering program already is very close to the local biotechnology industry for which it has developed technology and a highly trained workforce. The endowment of the program by the Wallace H. Coulter Foundation is testimony to this close relationship. Establishment of a medical school at FIU will broaden the base for collaboration between the University and the local biomedical and biotechnological industry.

[34] D. Fossum, et al., Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges (Santa Monica, CA: RAND Corporation, 2004), p. xii.

Contributions to Economic Development

The location of a public medical school in Miami-Dade County will provide a boost to the local pharmaceutical and medical device industries. For the past decade, Miami-Dade has been highly ranked among American counties for employment in these industries. A 2002 Brookings Institution Study identified the Miami-Ft. Lauderdale metropolitan area as one of two in Florida with a median level of biotech research and commercialization.[35] (The other was Tampa-St. Petersburg-Clearwater.) A medical school with its associated biomedical and bioengineering research and training programs would provide the additional mass needed to boost employment in these industries beyond current levels and provide conditions for industrial expansion.

In addition to spurring additional growth in the local biomedical and biotechnological industries, medical schools are powerful magnets for federal research funding, as mentioned above. The School of Medicine will contribute to the local and regional economy first by attracting federal and other research funding (whose impact will be magnified as the dollars spent are cycled through the local economy), and also by generating new knowledge and intellectual property that can form the bases for new products. Also, the School will train students who can then become the highly skilled workforce needed for industrial development.

Benefits of the Medical School to the Community and the State

South Florida, with a population of more than 5.3 million people, has only one private allopathic medical school (University of Miami) and no public medical school. Other states recognize the importance of educating medical doctors at their publicly supported urban universities. Examples include Chicago, Cincinnati, Detroit, Kansas City, Louisville, Los Angeles, Pittsburgh, Richmond, San Francisco, San Diego, and Philadelphia, the latter being exemplary because the publicly supported university medical school in Philadelphia joins three other accredited private university medical schools. Florida's only urban public medical school is located in Tampa.

[35] Joseph Cortright and Heike Meyer, *Signs of Life: The Growth of Biotechnology Centers in the U.S.* (Washington, D.C., The Brookings Institution Center on Urban and Metropolitan Policy, 2002), Table 17.

Of the top twenty-five largest metropolitan areas in the United States, only three are without a publicly supported university medical school. These three are Boston (ranked 7th in size) with three private university medical schools, Miami (ranked 12th in size) with one private university medical school, and St. Louis (ranked 18th in size) with two private university medical schools. States can use the resources of their publicly funded universities to produce medical doctors and to address the broad spectrum of health care issues in urban areas, and, for the reasons described above, we believe the time is ripe for Florida to do so as well.

FIU's School of Medicine would help relieve some of the health care access and quality issues by:

- Increasing the number of physicians in the region and the state;
- Increasing the diversity of health care professionals;
- Increasing educational opportunities for health professionals;
- Educating physicians on the basis of the needs of the local communities; and
- Facilitating the creation of new residency programs and the expansion of existing ones.

It also would improve access to medical education for Florida residents, and in particular to underrepresented minorities. The focus of the new School of Medicine would be *multicultural*, reflecting the very diverse South Florida region; *international*, reflecting the mission of the University and much of the economic activity of South Florida (particularly the marketing of South Florida medical services to Latin Americans); and *public*, allowing access to medical education for persons typically not able to afford private medical education.

A new, public medical school with its full array of services, community outreach, educational programs and biotechnology investments, will have a positive influence on the supply of qualified health care professionals, on biomedical and life sciences research, and on economic development in the region and the state.

For more than a year, FIU and USF have been discussing ways in which the two institutions might collaborate to improve the high school and college pipelines that go into medical education, with the goal of increasing the proportion of minorities in medical schools. These conversations culminated

in an agreement signed in June, 2004, under which the two institutions will collaborate in the development of a program to facilitate the admission of qualified FIU students to USF's medical school. This program will allow some FIU college students who are participating in FIU's new pre-medical major program, to spend their senior year at USF medical school, in the equivalent of a first year program at the medical school (in a 3+4 program of medical education). These students, who are guaranteed admission to USF's medical school so long as they maintain a specified grade point average, will be able to complete their medical education a year earlier than they would have done in a traditional baccalaureate/medical program. FIU is now exploring the development of a similar program with the University of Miami. Despite these proposed collaborations, however, there are programmatic and physical constraints on the capacity of these programs to absorb significant numbers of FIU students. For example, USF is able only to accommodate a maximum of 8 FIU students each year in the pre-medical major program.

FIU officials have discussed the School of Medicine with officials from a number of the other medical schools and universities in Florida, and, in particular with officials from the University of Florida and University of Miami medical schools. These discussions were very helpful and provided FIU with information on those institutions' applicant pools, graduate medical education plans and other relevant matters. Also, over the past year, FIU representatives participated in a number of Florida educational forums where workforce issues and Florida medical education were discussed and they discussed FIU's plans for a new medical school in those venues. Educators attending those conferences expressed great interest in the FIU proposal, and particularly in the goals and objectives of the School of Medicine, its general philosophy, its proposed institutional affiliations, the pool of qualified students, the issue of minority recruitment, the numbers and type of faculty to be appointed and the development of residency programs.

B. Use Table Three to indicate the number of students (full-time and part-time headcount and FTE) you expect to be enrolled in the proposed program during each of the first five years of implementation, categorizing them according to their primary sources. In the narrative following Table Three, the rationale for enrollment projections should be provided and the estimated headcount to FTE ratio explained. If, initially, students within the

institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines, which will likely occur.

Table Three - A provides a summary of the student headcount and FTE by year. All of the medical students will be full-time and will enroll in each of the three terms commencing with the fall term. Students will complete approximately 15 hours in each of the academic terms and 12 hours during the summer. Therefore, each will generate approximately 1.05 FTEs. The medical education program will admit 36 students in the first class, 48 in the second, 60 in the third class, 90 in the fourth and fifth classes. Since retention is very high in quality medical schools, it is anticipated that at least 79 of the first two cohorts and 143 of the remaining cohorts will graduate in the four-year period.

Board of Governors Table Three - A
Number of Anticipated Majors from Potential Sources*

PROFESSIONAL DEGREE PROGRAM

NAME OF PROGRAM: M.D. in Allopathic Medicine

CIP CODE: 51. 1201

ACADEMIC YEAR	YEAR 1 2006/2007		YEAR 2 2007/2008		YEAR 3 2008/2009		YEAR 4 2009/2010		YEAR 5 2010/2011	
Source of Students (Non-Duplicative Count)**	**HC**	**FTE**	**HC**	**FTE**	**HC**	**FTE**	**HC**	**FTE**	**HC**	**FTE**
Individuals drawn from agencies/ industries in your service area (e.g., older returning students)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Students who transfer from other graduate programs within the university	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Individuals who have recently graduated from preceding degree programs at this university	15	14.06	34	37.13	57	65.44	105	119.06	141	166.31
Individuals who graduated from preceding degree programs at other SUS universities	15	14.06	32	35.25	50	58.13	75	89.06	85	102.19
Individuals who graduated from preceding degree programs at non-SUS Florida colleges and universities	3	2.81	8	8.63	13	15.91	17	20.44	20	24.00
Additional in-state residents	2	1.88	6	6.38	11	12.56	16	19.32	19	23.06
Additional out-of-state residents	1	.94	2	2.25	7	7.31	10	11.25	12	14.25
Additional foreign residents	00	0	0	0	0	0	0	0	0	0
Other (Explain)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	**36**	**33.75**	**82**	**89.63**	**138**	**158.63**	**223**	**258.94**	**277**	**329.81**

* List projected yearly enrollments instead of admissions.

** Do not include individuals counted in any PRIOR category

C. Use Table Three-B to indicate the number of students you expect to graduate from the program in years two through seven after implementation of the program.

Board of Governors Table Three - B
Number of Anticipated Graduates

GRADUATE DEGREE PROGRAM						
NAME OF PROGRAM:			**M.D. in Allopathic Medicine**			
CIP CODE:			**52.1201**			
	Year 2	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
NUMBER OF GRADUATES	0	0	36	43	57	86

D. For all programs, indicate what steps will be taken to achieve a diverse student body in this program. Please create a place for signature at the end of section VII.D, and have your University's Equal Opportunity officer read, sign, and date this section of the proposal.

South Florida's growing population includes an increasing number of racially and ethnically diverse communities, and FIU draws the vast majority of its students from the South Florida area. The demographics of its student body reflect this cultural diversity, and nearly two thirds of FIU's students are underrepresented minorities. The School of Medicine will draw heavily from FIU's own undergraduate students. As a result, the School of Medicine is expected to achieve a diverse student body as well.

The Association of American Medical Colleges recognized the deficit of minorities in medical education several years ago when it launched a new initiative called "3000 by 2000" which aimed to increase the number of underrepresented minorities enrolled in medical school to 3000 by the end of the century. Unfortunately, the goal was not achieved. The FIU Medical School will help address this issue by developing a program similar to one at the University of South Florida that guarantees medical school admission to academically-talented high school students upon entering the university, provided they complete the pre-medical curriculum with the desired GPA and achieve the desired MCAT score. Based on the number of academically talented Hispanic and African-American students entering FIU at the current

time, the University is confident that a substantial number of minority students will enroll in and complete such a program at FIU.

FIU has been taking steps to ensure a large and growing pool of under-represented minorities with the necessary background in math and science to be admitted to the School of Medicine program. Its approach is two-pronged – one at the middle and high school level and one at the baccalaureate level.

At the middle and high school level, the University has focused on working with entire feeder patterns in the Miami-Dade County Public School System to improve instruction in reading, math and science. The College of Engineering began this systematic effort with the Coral Park Senior High School feeder pattern, a successful program that is being replicated in Homestead. Over 13,000 students are supported directly or indirectly through these pre-engineering efforts supported by the National Science Foundation and the Kellogg Foundation. As a result of this program, the University graduates more Hispanic engineers than any other university in the continental United States.

In FY 2004, the Colleges of Education and Arts & Sciences, with support from University Technology Services extended and broadened this model to the Varela High School feeder pattern. This effort focuses on math and the physical sciences and discussion are under way to extend it to other feeder patterns. As part of this National Science Foundation-funded multi-year, multi-million dollar effort, math and science instruction will be combined both in the public schools and in the freshman and sophomore years at FIU. The number of math and science majors among underrepresented minorities is expected to rise significantly as a result. At the Biscayne Bay Campus the first pilot summer program in marine and environmental sciences was launched in Summer 2003. The program there is tied to the medical science magnet program at North Miami Beach High School and there is growing collaboration between that program and the FIU program.

To improve further the recruitment of minorities in medical education, FIU is considering a new certificate and degree program at the baccalaureate level (articulated with local high schools and special minority programs noted above) to assist students who apply to health professional education programs. Recently, FIU developed an Honors pre-med program jointly with the University of South Florida where students after a three-year

program at FIU will transfer to USF to complete their undergraduate education and admission to the USF medical school.

FIU awards more than twice as many degrees to all minorities as any other university in Florida. In 2003-2004, 52.96 % of FIU students were Hispanic, 13.56 % African American, and 3.65 % Asian American. According to the Fall 2002 employment data available from the Florida Education and Training Placement Information Program (FETPIP), 71% of FIU health care graduates tend to remain in the state. Furthermore, because FIU alumni cluster in South Florida, we anticipate that a majority of graduates from the FIU School of Medicine will remain in the region. The development of a new medical school and the proposed innovations in medical education offer a unique opportunity to be innovative in the teaching of population medicine for the improvement of health care for all of our residents.

FIU, with its high number of minority students matriculated and the development of its special programs to aid students in their basic preparation, is in an ideal situation to lead the country in the recruitment of URMs for health professions education. In 2001-2002, the most recent year for which data are available, FIU was the twentieth largest source of baccalaureate degrees conferred on African-Americans and the largest source of baccalaureate degrees conferred on Hispanics. In the health sciences and related professions it was the fifth largest source of Master's degrees conferred on African Americans and tied as the largest source of Master's degrees conferred on Hispanics.[36]

[36] *Black Issues in Higher Education*, Vol. 20: 8, pp. 35, 39; Vol. 20:10, pp. 56-7.

Equal Opportunity Impact Study

Summary and Endorsement Form

Date: _____ **University**: Florida International University

College/School: **Department**:

Name and level of degree program to which this EO Impact Study applies:

Doctor of Allopathic Medicine (M.D.)

For actions related to academic programs (establishment of new degree programs, modification/expansion or termination of degree programs):

Check type of action proposed:

_X__ New Program ___Terminated Program ___Modified Program

Summary of Equal Opportunity Impact Study:

The local population and the student body served by the University are predominantly composed of groups underrepresented in Florida's physician work force. The University has developed extensive outreach programs in the local public schools to enlarge the pool of local students especially qualified in math and science and thus able to study for the engineering and scientific, including medical, professions. The University is also strengthening its pre-medical program so that more of its student body qualifies for entrance to medical school. The FIU undergraduate pre-medical program is expected to be a major source of students enrolled in this program. Consequently, the University expects that this program will draw heavily from and reflect Southeast Florida's predominantly minority population and thus diversify Florida's physician work force. Pursuant to State law, the University has established a plan that includes strategies to increase employment of women and racial/ethnic minorities in ranked faculty positions. The challenge at the current time is to ensure that instructional faculty reflects the diversity of the student body.

Prepared by:

_____ _____
Project Director Date

_____ _____
Provost/Academic Vice President Date

_____ _____
University EO Director Date

VIII. BUDGET

The School of Medicine will be funded with a combination of E&G, grant and contract, clinical revenue, private gifts, and student tuition. The philosophy will be fundamentally mission based. The research, service, and educational components will be supported by appropriate revenue sources. During the first six years FIU will be building the educational components for the Doctor of Medicine program and for residency programs in collaboration with our clinical affiliations. FIU anticipates that the M.D. educational program will reach a steady state by the end of the sixth year while the residency programs will continue to expand beyond the sixth year. The research component will develop rapidly over the first seven years and continue to grow steadily thereafter.

The various members of our hospital Consortium will share their existing facilities, technology and equipment for the clinical education of medical students. Clinical teaching will be concentrated in the Greater Miami geographical area. This will facilitate a more efficient utilization of administrative resources. Fortunately, the very large numbers and varied case mix of patients at the associated health care institutions, concentrated in the Miami-Dade area, offer excellent and comprehensive opportunities for students' and residents' education.

The University already has many resources that will be shared with the new medical school, including its rich medical sciences library collection at the Green Library (see attached appendix), laboratories and educational spaces in the new health sciences buildings under construction, and numerous well-qualified faculty members to participate in the new multidisciplinary educational program.

Most medical schools in this country have faculty practice plans (FPP) to generate operating revenue, incentives for faculty to develop clinical research and to combine teaching with patient care. An FPP consists of a medical school faculty members organized to provide medical care services to the community.

The FIU budget model includes the development of an FPP. The development of the faculty practice plan has taken into consideration that these types of administrative arrangements tend to grow slowly over time. However, FIU believes that FPP income will become a significant source of

funds for the School of Medicine, facilitating faculty participation in research, education, and service. FPP revenues are listed as "clinical" in the proposed budget.

The FIU School of Medicine budget also includes an important research component. The estimates presented are conservative, since it is assumed that there will be a lag time between the appointment of faculty and the attainment of full research funding productivity. We project that, by Year 6 of operation of the School of Medicine, clinical income and grant and contracts will generate 26% of its revenues.

A. Assuming no special appropriation or new Academic Affairs/University allocation for initiation of the program, how would resources within the College/School be shifted to support the new program?

The proposed School of Medicine only will be developed if special appropriations or new allocations are made. No shifting of resources within the University is contemplated at this time.

B. Use Table Four - Parts A and B to display dollar estimates of both current and new resources for the proposed program for the first five years of the program. In narrative form, identify the source of both current and any new resources to be devoted to the proposed program. If other programs will be negatively impacted by a reallocation of resources for the proposed program, identify the program and provide a justification. Transfer the budget totals for years one and five to the appropriate lines in the table on the cover page.

The resources for the support of the School of Medicine will come from a variety of sources, including: (1) General Revenue special appropriations; (2) FTE-based General Revenue appropriations; (3) tuition and student fees; (4) clinical income; (5) contract and grant revenues; and (6) philanthropy. FIU expects the clinical revenue generated by the School of Medicine to grow over time, especially past the initial six year implementation period. In addition, FIU will seek private gifts to supplement the start up costs of the new School of Medicine.

Board of Governors Table Four-A Costs for Proposed Program								
	First Year				Fifth Year			
Instruction & Research	General Revenue		Contracts & Grants	Summary	General Revenue		Contracts & Grants	Summary
	Current	New			Current	New		
Position (FTE)								
Faculty	0.00	27.00	0.00	27.00	0.00	116.00	0.00	116.00
A&P	0.00	9.00	0.00	9.00	0.00	22.00	0.00	22.00
USPS	0.00	9.00	0.00	9.00	0.00	34.00	0.00	34.00
Total	0.00	45.00	0.00	45.00	0.00	172.00	0.00	172.00
Salary Rate								
Faculty	$0	$4,940,000	$0	$4,940,000	$0	$16,510,000	$0	$16,510,000
A&P	$0	$405,000	$0	$405,000	$0	$990,000	$0	$990,000
USPS	$0	$270,000	$0	$270,000	$0	$1,020,000	$0	$1,020,000
Total	$0	$5,615,000	$0	$5,615,000	$0	$18,520,000	$0	$18,520,000
I&R								
Salaries & Benefits	$0	$7,018,750	$0	$7,018,750	$0	$23,150,000	$0	$23,150,000
OPS Graduate Assistants	$0	$0	$0	$0	$0	$0	$0	0
Other Personnel Services	$0	$550,000	$0	$550,000	$0	$742,000	$0	$742,000
Expenses	$0	$2,900,000	$0	$2,900,000	$0	$450,000	$0	$450,000
Graduate Assistant Waivers	$0	$0	$0	$0	$0	$0	$0	0
Operating Capital Outlay	$0	$410,000	$0	$410,000	$0	$140,000	$0	$140,000
Electronic Data Processing	$0	$1,000,000	$0	$1,000,000	$0	$0	$0	0
Library Resources	$0	$300,000	$0	$300,000	$0	$350,000	$0	$350,000
Special Categories	$0	$325,000	$0	$325,000	$0	$886,550	$0	$886,550
Total I & R	$0	$12,503,750	$0	$12,503,750	$0	$25,718,550	$0	$25,718,550

Board of Governors Table Four-B
Five-Year Budget Detail Projected Costs for Proposed Program
2 planning years and first 2 years
M. D. Estimated Expenditures and Estimated Revenue by Category and Year

I & R Estimated Expenditures	**Planning year 1**	**Planning year 2**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Current E & G (I&R)	$0	$0	$0	$0	$0	$0	$0	$0
New E & G (I&R)	$7,587,500	$12,221,250	$12,503,750	$20,296,875	$24,652,453	$25,095,425	$25,718,550	$28,449,175
Total E & G	***$7,587,500***	***$12,221,250***	***$12,503,750***	***$20,296,875***	***$24,652,453***	***$25,095,425***	***$25,718,550***	***$28,449,175***
Clinical	*$0*	*$0*	$750,000	$750,000	$1,087,500	$2,325,000	$3,112,500	$5,025,000
C & G	***$0***	***$0***	$462,500	$696,875	$1,262,500	$1,778,125	$1,984,375	$2,084,375
Total Expenditure	**$7,587,500**	**$12,221,250**	**$13,716,250**	**$21,743,750**	**$27,002,453**	**$29,198,550**	**$30,815,425**	**$35,558,550**
Projected Enrollment								
Headcount	0	0	36	82	138	223	277	320
FTE	0	0	33.75	89.62	158.63	258.94	329.81	386.25
Estimated Revenue								
G. R. Special Appropriation	$7,587,500	$12,221,250	$10,019,858	$12,107,871	$13,599,617	$5,724,719	$1,231,381	$0
Headcount G. R. Appropriation*	$0	$0	$2,700,000	$6,334,500	$10,980,315	$18,275,859	$23,382,446	$27,822,578
Tuition	$0	$0	$526,392	$1,234,974	$2,140,722	$3,563,063	$4,558,642	$5,424,290
Clinical	$0	$0	$1,092,000	$1,092,000	$2,028,000	$2,904,000	$3,768,000	$6,084,000
C & G	$0	$0	$725,000	$1,455,000	$1,905,000	$2,407,500	$3,867,000	$5,698,500
Total revenue	**$7,587,500**	**$12,221,250**	**$15,063,250**	**$22,224,345**	**$30,653,654**	**$32,875,141**	**$36,807,468**	**$45,029,368**
General Revenue Appropriation per headcount			$75,000	$77,250	$79,568	$81,955	$84,413	$86,946
Annual Tuition			$14,622	$15,061	$15,512	$15,978	$16,457	$16,951

Board of Governors Table Four-C
Health and Medical Sciences Facilities Plan and Budget

Building	Gross Footage	Furniture	Equipment	Construction	Total cost
Health and Medical Science Education Bldg (Health & Life Science III/Biomolecular Sci)	151,496	$1,900,000	$4,000,000	$34,100,000	$40,000,000
Health and Medical Sciences Research Bldg Phase I	100,000	$1,500,000	$5,000,000	$33,500,000	$40,000,000
Health and Medical Sciences Research Bldg Phase II	100,000	$1,500,000	$5,000,000	$33,500,000	$40,000,000

Funding Sources

Building	PECO	Private	State Match	Federal grants	Total
Health and Medical Science Education Building	$18,000,000	$9,000,000	$9,000,000	$4,000,000	$40,000,000
Health and Medical Sciences Research Bldg Phase I	$12,500,000	$11,750,000	$11,750,000	$4,000,000	$40,000,000
Health and Medical Sciences Research Bldg Phase II	$12,500,000	$11,750,000	$11,750,000	$4,000,000	$40,000,000
Academic Health Center		All Private			$100 to 250 M

C. Describe what steps have been taken to obtain information regarding resources available outside the University (businesses, industrial organizations, governmental entities, etc.). Delineate the external resources that appear to be available to support the proposed program.

As noted above, clinical training will be done at existing healthcare facilities under affiliation agreements with local hospitals and community-based clinics. FIU's former Vice President for Research established through a visit to the National Institutes of Health, National Center for Research Resources, Division of Research Infrastructure that up to $2 million in federal matching funds would be available to FIU for construction of a vivarium to support an expanded biomedical research program. Division officials reviewed and commented favorably on the University's preliminary plans for such a facility.

In late October 2003, the University began researching federal funding opportunities in the health and biomedical areas. Of particular interest is the Centers of Excellence Program under the Health Resources and Services Administration (HRSA), which provides almost $30 million to strengthen the national capacity to educate underrepresented minority students in the health professions by offering special support to institutions that train a significant number of URM individuals. FIU continues to monitor the federal budget for funding opportunities in the health and medical fields.

Another source of research funding for medical school comes from clinical trials and South Florida's diverse local population will make it an attractive venue for such trials.

a. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants) and explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting edge research, improved labs and library resources).

The business plan and staffing model adopted for the M.D. program are designed to avoid a dilution of the related undergraduate programs. Staffing patterns call for the strengthening of basic science programs. Linkages with local health care providers will increase supervised service learning activities available to undergraduate students in the health-related disciplines. Increased laboratory capacity and contract and grant revenues, which can be expected to at least double over a fifteen to twenty year time span, will allow a commensurate doubling of research opportunities for undergraduates.

The FIU Health and Medical Education Initiative and the implementation of the Allopathic Medicine program will have a positive impact on the health and medical programs currently offered at FIU. In addition to implementing the medical program, the Initiative involves restructuring of health education programs, creating partnerships with a full spectrum of health service providers in greater Miami and creating a multidisciplinary and interdisciplinary research consortium. The Initiative is focused on community health and leadership in healthcare reform to meet the needs of the community for this 21st century. It is responsive to specific and urgent needs in the Southern Florida community and is informed by the emerging, essential restructuring of health education and healthcare nationally. The outcome of the Initiative will be a more efficient, effective health and medical education delivery system that addresses quality health care delivery for all segments of the community.

The existence of a School of Medicine at FIU is likely to increase the number of academically talented students who attend the university. Ultimately, not all of those initially attracted to a career as a physician will decide to pursue that path – some may elect to pursue other programs

offered at the University thus raising standards of excellence across the University.

b. Describe any other projected impacts on related programs, such as prerequisites, required courses in other departments, etc.

The M.D. program in and of itself will not require substantial changes in related programs. However, the program is a critical component of the University's Health and Medical Education Initiative, and that Initiative will involve the development of an integrated lower division health professions education program, and upper division joint learning and community service activities. In addition, students will be expected to achieve competency in Spanish, a subject taught in the Department of Modern Languages which has additional capacity available. The Initiative also will feature a strengthened pre-medical advisement program and a strengthened bioethics program. It is anticipated that there will be additional demand for undergraduate biology, chemistry, organic chemistry, biochemistry, and physics courses.

IX. Productivity

Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student headcounts in major or service courses, degrees granted, and external funding attracted, as well as qualitative indicators of excellence.

Not applicable.

APPENDICES

APPENDIX 1. Physician Workforce Issues in the Nation and in Florida

APPENDIX 2. Feasibility Reports, Volume 1 and 2

APPENDIX 3. Library Report

APPENDIX 4. Technology Report

APPENDIX 5. Reference List

APPENDIX 2