FIU
FLORIDA INTERNATIONAL UNIVERSITY
Miami's public research university

16 September 2011

Dr. Dorothy Minear
Senior Associate Vice Chancellor
Academic and Student Affairs
State University System of Florida
Board of Governors
325 West Gaines Street
Tallahassee, Florida 32399-0400

Dear Dr. Minear,

Florida International University respectfully submits to you the finalized program proposal for a PhD in Basic Biomedical Sciences, which was approved by the FIU Board of Trustees on 8 September 2011.

I appreciate that you accepted our preliminary proposal in August. The attached proposal is complete and now includes the following documents:

1) the proposal with the fully executed approval cover page/original signatures;

2) the external reviewer's report (the revised proposal incorporates the university's response to this report)

3) letters of support from other state university system institutions with similar programs.

Please advise if you or your staff have further questions before the presentation of this proposal to the Board of Governors in November.

Sincerely,

Douglas Wartzok
Provost & Executive Vice President

C: Richard Stevens, FLBOG

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Florida Board of Governors
Request to Offer a New Degree Program

Florida International University
University Submitting Proposal

Fall, 2012
Proposed Implementation Date

Herbert Wertheim College of Medicine
Name of College or School

Basic Science Departments
Name of Department(s)

Biomedical Sciences

Academic Specialty or Field

Ph.D. Program in Basic Biomedical Sciences (CIP code 26.0102)
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 resources and the criteria for establishing new programs have been met prior to the initiation of the program.

September 8, 2011
Date Approved by the University Board of Trustees

10.5.11
President Date

Signature of Chair, Board of Trustees 10/7/11 Date

5x11
Provost & Executive Vice President Date

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Student Enrollment (From Table 1)		Projected Program Costs (From Table 2)		
	HC	FTE	Total E&G Funding	Contract & Grants Funding	E&G Cost per FTE
Year 1	5	3.75	$261,187	$28,214	$69,650
Year 2	10	7.5			
Year 3	15	11.25			
Year 4	20	15			
Year 5	25	18.75	$934,881	$899,430	$49,860

Introduction

I. Program Description and Relationship to System-Level Goals

A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.

The proposed Ph.D. program in Basic Biomedical Sciences at the Florida International University (FIU) Herbert Wertheim College of Medicine (HWCOM) will be distinctive among FIU graduate programs by providing a curriculum in biomedical sciences different than other FIU colleges. A distinctive feature of the proposal for the Biomedical Sciences Graduate Program is that graduate students and medical students will sit side-by-side in the introductory basic sciences portion of the medical curriculum, providing the graduate students with an appreciation of the medical aspects of modern biosciences. This program will not only be essential for the development of the research capacity and the educational mission of FIU and the HWCOM, but also for the overall growth of the college and university. The HWCOM faculty will train biomedical scientists, preparing them for academic careers in medical research and for the flourishing biotechnology industry of the Miami-Dade region and the State of Florida. In addition, it will contribute to the training of generations of young scientists in the medical features of cell biology, pharmacology, biochemistry, molecular biology, cancer biology, human genetics, pathology, immunology, neurology, medical microbiology and infectious diseases. Thus, these FIU graduates will provide much needed trained Ph.D. biomedical scientists to supply the South Florida workforce. They will become the leaders of corporations, hospitals and research institutions state-wide and nationally. They will bring prominence to FIU and, as alumni, support the university in its future growth.

The HWCOM faculty members have expertise in the fields of cancer biology, cell biology, human genetics, pharmacology, neurosciences, immunology, biochemistry, molecular biology, medical microbiology and infectious diseases. Students in the Ph.D. program will benefit from the opportunity for research projects in basic, translational and clinical medical sciences.

The proposed Ph.D. program differentiates itself from other programs at FIU in its focus in training students in the biomedical sciences; hence, the focus of the program is specifically designed to prepare scientists in areas of biomedical research. Graduates of our program will have an exceptional ability to apply their research skills from bench to bedside, to translate fundamental discoveries into new treatments for human diseases and to improve the health of the citizens of Miami-Dade, the State of Florida and the US.

- **The HWCOM faculty will train biomedical scientists, preparing them for academic careers in medical research and for the flourishing biotechnology industry of the Miami-Dade region and the State of Florida.** The training will initially provide exposure to current areas of biomedical sciences in a medical school environment. The core of the Ph.D. Graduate Program will be composed of the Basic Science Departments in the HWCOM: the Department of Human and Molecular Genetics, the Department of Molecular Microbiology and Infectious Diseases, the Department of Cellular Biology and Pharmacology and the Department of Immunology. HWCOM faculty members participating in the Ph.D. programs are referred to as “core faculty”. Participation by faculty members with secondary appointments from the College of Arts and Science, the College of Engineering and Computing, the Robert Stempel College of Public Health and Social Work and other FIU divisions will provide additional depth to the Ph.D. program.
- Active recruitment is a vehicle for a successful graduate program. In addition to passive efforts such as construction of an effective web site and email campaigns, we will develop a multipronged approach to active recruiting:

- Job fairs at FIU and other Florida universities
- A recruiting week where interested students are brought to FIU for interviews and tours of laboratories
- Seminar trips to Florida universities subsidized by HWCOM with the expressed goal of meeting perspective graduate students
- Bringing faculty advisors from colleges and universities in Florida to meet our faculty and discover opportunities at FIU.
- Providing small but attractive competitive bonuses for recruitment of top students.

- The curriculum of the proposed Ph.D. program at the FIU HWCOM (Supplemental Table 1) is unlike those offered by other colleges at FIU or other Florida public universities. This program, in which graduate and medical students are initially educated together, will be essential for the development of the research capacity and the educational mission of HWCOM. Following are features that differentiate the proposed Ph.D. program in Biomedical Sciences at FIU's HWCOM from other graduate programs offered by other Florida public universities.
  - As noted above, the graduate students will study alongside medical students; both groups of students will attend the same basic courses lectures. No other doctoral program in Florida has these features. In addition, other courses of the HWCOM curriculum will be offered to graduate students as electives. Close collaboration with medical students and clinical faculty will help to ensure that students have not only the knowledge and skills necessary to be productive biomedical researchers but the understanding of the realities of the medical profession.
  - FIU's proposed program requires 81 post-baccalaureate credits, of which 24 hours are dissertation research.
  - The proposed program requires 11 mandatory credit hours (4 courses) in Genes, Cells and Molecules, Structure and Function, Microbiology, Infection and Immunology, and Epidemiology and Biostatistics. These courses will insure a solid basis for understanding of biomedical sciences.
  - The studies conducted in the laboratories of HWCOM are different from but complementary to existing research activities in other scientific centers in Florida. The specific skills obtained in FIU HWCOM laboratories will insure that our graduates will be competitive in the job market.
  - With the future growth of basic science faculty in the College of Medicine, we will expand the number of electives to reflect new research directions in focus areas distinctive to FIU HWCOM such as tropical medicine and molecular parasitology.
  - Students in the Ph.D. program will benefit from the opportunity for research projects in both basic and clinical medical sciences, integrating the graduate program curriculum and the medical school courses. Graduates of our program will have the ability to apply their research skills from bench to bedside, enhancing the health of our citizens.
  - Collaboration with faculty members from other FIU units including the College of Arts and Science, the College of Engineering and Computing, as well as the University of Miami will provide additional depth to the Ph.D. program in the form of course offerings and research interests. The number of collaborations between HWCOM faculty, those in other FIU colleges and other Florida universities, institutions and hospitals is growing daily. A few examples are:
    - Joe Leigh Simpson and Helen Tempest in HWCOM have a funded collaboration with Anthony McGoron and Chenzhong Li in the Department of Biomedical Engineering, College of Engineering and Computing. The project, entitled "*Biosensors to detect non-specific toxicant exposures*", is to develop novel biosensors able to detect real-time, non-specific, exposures to biological weapons and toxins. The goal is a portable device equal in sensitivity to current cytogenetic – technology, the latter

performed in a gold-standard cytogenetic lab constructed at FIU HWCOM. Their joint studies are funded by a $1,401,000 grant from the Department of Defense entitled *Mass Scale Biosensor Threat Diagnostic In-Theater Defense Utilization*.

- Barry P. Rosen in HWCOM and Yong Cai in the Department of Chemistry and Biochemistry, College of Arts and Sciences, have an active collaborative project on the identification of genes involved in degradation of herbicides used on Florida golf courses. This joint study resulted in a recent publication entitled "*Demethylation of methylarsonic acid by a microbial community*" in the journal Environmental Microbiology in May, 2011.
- Barry P. Rosen in HWCOM and Sylvia Daunert, Chair of the Department of Biochemistry and Molecular Biology at the University of Miami Miller School of Medicine, have an active research collaboration on the construction of biosensors to detect toxic heavy metals that has resulted in the publication of a number of joint publications.
- Kalai Mathee in HWCOM and Giri Narasimhan, School of Computing and Information Science in the College of Engineering and Computing have an active research collaboration with Adam Wanner, Division of Pulmonary and Critical Care Medicine, University of Miami, Miami, Florida, USA. In a project funded by the James Esther Foundation, they study the airway microbiome in chronic obstructive pulmonary disease (COPD), one of the most common lung diseases.

- Career development is an essential component of graduate education. Traditionally faculty advisors play a major role in mentoring the students on postdoctoral opportunities. In addition, a career office for graduation students will be established that will provide guidance and information about postdoctoral opportunities and career paths outside of academia. The office will sponsor workshops and job fairs, send students to meetings that offer job placement, and sponsor seminars by successful biomedical scientists. Finally, academic institutions in the Miami-Dade area and in the State of Florida provide numerous opportunities for postdoctoral training in the area of biomedical research for the graduates of HWCOM Ph.D. Program. This includes both public universities, the University of Miami Miller School of Medicine, UM Sylvester Comprehensive Cancer Center, Max Planck Florida Institute and the Scripps Research Institute Florida. Collaborative projects between HWCOM faculty and outside researchers, the requirements for peer-reviewed publications, and the requirement for non-FIU reviewers of the dissertation will promote the visibility of FIU graduates and facilitate their placement for postdoctoral training.

B. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which goals the program will directly support and which goals the program will indirectly support. (See the SUS Strategic Plan at http://www.flbog.org/about/strategicplan/)

- **The proposed graduate program is a response to the State University Strategic Plan and Guidance of 2005.** The Board of Governors encourages the advancement or establishment of world-class doctoral/research programs (p. 6). The new HWCOM Ph.D. graduate program will address the stated need of "**Meeting statewide professional and workforce needs (I.B. p.4, Appendix)"** and specifically in "**Critical needs: health care I.B.2."** In addition, programs in Biomedical Sciences have been identified as a goal of the SUS Strategic Plan on p. A8: 2. Set goals differently for different types of doctoral programs. a. Emerging Technologies Doctoral Degrees. iv. Give special emphasis to biological/biomedical sciences
- In the February, 2011 accreditation visit by **the Liaison Committee on Medical Education (LCME), the reviewers emphasized the requirement for a HWCOM graduate program in**

HWCOM to allow interaction between graduate and medical students and to fulfill our obligation for the research training of the medical students.

- **The proposed Ph.D. program is a response to one of the key strategic themes in the development of the University's educational and research program – the Health theme.** The program is directly aligned with goals of FIU's 5-year plan through fulfillment of its mission by imparting knowledge through excellent teaching, promoting public service, discovering new knowledge, solving problems through research, and fostering creativity. The impetus to become a tier-one research university while retaining its urban mission has made FIU an attractive center of learning for students at the state, national and international level. The HWCOM has raised the visibility and research potential of FIU by the successful recruitment of a number of outstanding educators and biomedical scientists committed to training students to the benefit of the South Florida community.
- Graduates of this program will fill a serious shortage of high-level biomedical scientists in the State of Florida. Their value to universities, hospital systems and to the local biotech and pharmaceutical industries is documented in letters of support (see appendix):
    - Raul Herrera, M.D., Chief Research Officer, Miami Children's Hospital, wrote "*Over the next decade we will have considerable growth and would anticipate employment opportunities for graduates of your program. We look forward to being able to recruit these students who are already long-term residents of southern Florida and are committed to enhancing the scientific prominence of the State*."
    - Joseph D. Rosenblatt, M.D., Interim Director, Sylvester Comprehensive Cancer Center, emphasized in his letter "*I believe that (your program) will become an excellent source of biomedical scientists who will contribute to the research and clinical programs in academia and clinical laboratories in South Florida… we anticipate filling at least 50-100 positions for research scientists with doctoral degrees. These would be best filled by individuals with strong ties to the Miami-Dade area such as FIU graduates* ".
    - Robert C. Goldszer, M.D., Senior Vice President and Chief Medical Officer of Mount Sinai Medical Center emphasized that "*There is a tremendous need for biomedical scientists in most regions of the U.S., especially in Florida. As you plan to recruit long-term residents of South Florida into your program, we can anticipate that many of your graduates will pursue careers in the Miami-Dade area. The collaboration with researchers at FIU and having Ph.D. students participate with our researchers should benefit our community, students and researchers*".
    - Russell Allen, President and CEO, BioFlorida, says "*We are confident that further expansion of this industry is forthcoming and these companies will be looking for qualified senior researchers and scientists such as will be coming from this program. We can also anticipate that with the growth of the FIU program, companies will find Florida even more attractive as a home for future bioscience research*.
    - Jeffrey Wolf, CEO, Heat Biologics, Inc. states "*This innovative curriculum will be an important source of biomedical scientists …. Since these students are already long-term residents of South Florida, we look forward to being able to recruit them* …"
    - Frank R. Nero, President and CEO of the Beacon Council wrote "… *this curriculum … will help attract new industry to the South Florida area … we are pleased to have FIU take the initiative on such a relevant and much needed effort*."
    - Yamilet Ceballo, Director of College Relations, Beckman Coulter said that "*Your new program would be a welcome source of biomedical scientists who could contribute to our research and clinical laboratories at Beckman Coulter. Our current supply of local applicants is not sufficient for staffing our Florida operations, and we are very supportive of your initiative to increase and improve the pool of Ph.D. scientists that will comprise the future workforce in South Florida*."

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.

Need for Ph.D. Program in Basic Biomedical Sciences in South Florida

The need for a Ph.D. Program in Basic Biomedical Sciences at the Herbert Wertheim College of Medicine is clear. First, it is a vital component of the FIU Strategic Plan, which states "*To leverage FIU's strength in health care instruction and research, FIU will make strategic investments in the following initiatives: 1) Create new degree programs to attract new students and ensure competitiveness of graduates in health fields. 2) enhance both the amount and visibility of health-related research and 3) strengthen partnerships with local and global community and governmental agencies, public entities, hospitals, and health care and social service agencies/providers."*

Second, it will supply much-needed biomedical scientists to the Florida workforce. According to the U.S. Department of Labor, employment opportunities for biological scientists will continue to grow in the 2008-2018 decade by 21 percent, a rate much faster than average (Bureau of Labor Statistics, U.S. Department of Labor, ***Occupational Outlook Handbook, 2010-11 Edition***, Biological Scientists, on the Internet at **http://www.bls.gov/oco/ocos047.htm** (visited ***February 10, 2010***). This report attributed the rapid rise in biological scientist jobs in part to the growth of the biotechnology industry. In addition, the report projected continued growth in positions for post-secondary educators in research and development in the physical, engineering and life sciences (29.6% between 2008 and 2018). While many opportunities exist in academia, hospital systems, biotech and pharmaceutical industries for graduates of biomedical sciences programs in the Miami area, in Florida and in the US, the lack of educational opportunities in the Miami area underscores the need for the proposed Ph.D. program. Letters of support from local biomedical employers for the proposed program demonstrating opportunities for the graduates of the HWCOM doctoral program are included as supplemental material in the Appendix. Moreover, the program has a different focus and will produce a different product than other programs at FIU. Finally, nationally there are many more applicants for programs in biomedical sciences than are available at public universities.

The FIU University Graduate School provided information on the 2009-2010 enrollment of Ph.D. programs in the Department of Biological Sciences (38 applied, 13 admitted, 12 enrolled), Department of Chemistry and Biochemistry (59 applied, 16 admitted, 16 enrolled), and the Department of Biomedical Engineering (36 applied, 20 admitted, 13 enrolled). Overall, this represents 30% of the applicants and 84% of the accepted students attending FIU programs. Even recognizing that not all applicants are qualified, these data plainly demonstrate that the applicant pool is more than sufficient to justify a new graduate program without competition for students with other current FIU programs. While that the Department of Chemistry and Biochemistry has initiated a new program in biochemistry that will admit students for the 2011-2012 academic year, this biochemistry program cannot serve the needs of the medical school, where the majority of existing HWCOM faculty and future recruits will be training students in medically-related areas other than biochemistry such as human genetics, immunology, neurology, cell biology, cancer biology,

infectious diseases, medical microbiology, pharmacology and physiology. Most HWCOM faculty would not qualify for appointment to the biochemistry program, and many of the student applicants to the HWCOM program would not have prerequisites for the biochemistry program such as a course in physical chemistry. Letters of support from the Deans of the College of Engineering and Computing, the College of Arts and Sciences, and the Robert Stempel College of Public Health and Social Work are attached.

Two U.S. medical schools that have biomedical Ph.D. programs that are larger but otherwise similar to the proposed HWCOM program are the Ohio State University and the University of New Mexico. From 2002 – 2009, the Biomedical Sciences Program at Ohio State University School of Medicine had 1321 applicants, admitted 521 and enrolled 237 (18% of applicants). From 2004 to 2008, the Biomedical Sciences Graduate Program at the University of New Mexico had 402 applicants, admitted 203 and enrolled 92 (23% of applicants). If the numbers of applicants to other biomedical doctoral programs are similar nationally, it would indicate that there are approximately five times as many potential students with a desire for a career in biomedical sciences than there are available places in Ph.D. graduate programs in U.S. medical schools.

In conclusion, these data demonstrate that there are many more applicants than public universities in the Florida or elsewhere in the U.S. can accommodate and signify an unmistakable need for a Ph.D. Program in Biomedical Sciences at FIU HWCOM.

B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.

Demand for Ph.D. Program in Basic Biomedical Sciences at the Herbert Wertheim College of Medicine

Surveys were conducted during the summer and fall of 2010 (see Appendix). An internal FIU survey was carried out by the FIU Office of Planning and Institutional Research. The survey was sent electronically to registered FIU students in the Departments of Biological Sciences, Chemistry and Biochemistry and Biomedical Engineering. The survey consisted of 5 questions, and 60 students responded:

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine? 78% replied *Yes*.
2. What is you current major/undergraduate degree? 53% Biology; 18% Chemistry; 17% Biomedical Engineering.
3. Where are you receiving your undergraduate education? 88% FIU
4. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

a.	Curriculum	Very important 81%; Important 17%
b.	The faculty	Very important 61%; Important 33%
c.	Research programs	Very important 70%; Important 20%
d.	Opportunity to learn with medical students	Very important 48%; Important 22%
e.	Opportunities for translational research	Very important 65%; Important 22%
f.	Future employment in the biomedical field	Very important 85%; Important 11%

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another university?

a.	Miami location	Very important 46%; Important 22%
b.	Curriculum	Very important 74%; Important 22%
c.	The faculty	Very important 59%; Important 35%
d.	Research programs	Very important 69%; Important 17%
e.	Opportunity to learn with medical students	Very important 52%; Important 19%
f.	Opportunities for translational research	Very important 63%; Important 22%
g.	Future employment in the biomedical field	Very important 85%; Important 9%

The FIU Office of Planning and Institutional Research conducted a second survey to which 24 students responded. In addition, two surveys were solicited from the outside company Survey Monkey. The survey was sent out to multiple lists, both inside and outside of FIU, and 24 individuals responded in one survey and 14 in the other. The questions for all surveys were the same, as were the responses. The large majority of respondents indicated a need for a graduate program that would provide opportunities for translational research leading to employment in the biomedical field.

Analysis: There is a clear demand by undergraduate science students for a Biomedical Sciences Program in the HWCOM. They are especially attracted by opportunities for translational research and future employment in the biomedical field, which are offered only in a limited basis by other FIU departments. Thus, this program is not only needed but will complement and not compete with other units in FIU (see letters in Appendix from the deans of other FIU colleges). The Miami location is also an attraction for many students, something that more distant Florida public universities cannot offer.

C. If similar programs (either private or public) exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of any communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). Provide data that support the need for an additional program.

The proposed doctoral program, if approved, will become the first public university Biomedical Science Ph.D. program in South Florida. There are 11 universities in the Florida State System. Of these, six, Florida International University, Florida State University, University of Central Florida, University of Florida, University of South Florida and Florida Atlantic University currently have medical schools. The Coral Gables campus of the University of Miami also offers a separate Ph.D. in Biomedical Sciences. The following table lists number of graduates programs in public universities that offer doctoral degrees in the related area:

University	**Doctoral Programs**
Florida International University	*Five programs*: Biological Sciences, Chemistry, Biochemistry, Biomedical Engineering, Physics
Florida Atlantic University	*Two programs*: Complex Systems and Brain Sciences; Integrative Biology
Florida State University	*Six programs*: Biological Sciences; Biomedical Engineering; Biomedical Sciences; Biostatistics; Molecular Biophysics; Neuroscience
University of Central Florida	*Two programs*: Biomedical Sciences; Chemistry

University of Florida	*Six programs*: Anatomy and Cell Biology; Biochemistry and Molecular Biology; Molecular Genetics and Microbiology; Microbiology and Cell Science; Pathology, Immunology and Lab Medicine; Biomedical Engineering
University of South Florida	*Ten programs*: Biology; Biochemistry; Biomedical Sciences and Biotechnology; Biomedical Engineering; Biostatistics; Cancer Biology; Cell and Molecular Biology; Chemistry; Neurocommunicative Sciences; Medical Sciences with various concentrations (Anatomy; Allergy, Immunology and Infectious Disease; Biochemistry and Molecular Biology; Molecular Medicine; Molecular Pharmacology and Physiology; Cognitive and Neural Sciences; Clinical and Translational Research; Microbiology and Immunology; Neuroscience; Pharmacology and Therapeutics; Pathology and Laboratory Medicine; Pathology and Cell Biology)

We requested information about the Ph.D. programs in biomedical sciences from the University of Florida, Florida State University and the University of Central Florida. Only the latter two responded. In 2009 FSU had 58 applicants, of which 14 were Florida residents, 21 were U.S. residents, and the remainder was international students. Of those, FSU accepted 9 (7 Florida residents), and 7 (6 Florida residents) matriculated (12% of applicants). During the period 2001- 2009, UCF had 250 applicants (an average of 31 per year), of which 155 were Florida residents, 66 U.S. residents and 184 international students. UCF accepted 126 (89 Florida residents), and 75 matriculated (66 Florida residents) – an average of 9 students per year (30% of applicants). We assume that the University of Florida statistics would be similar. Clearly there is need for additional capacity in the training of biomedical scientists in the State of Florida.

D. Use Table 1 (A for undergraduate and B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 40 credit hours per year and graduate FTE will be calculated as 32 credit hours per year. Describe the rationale underlying enrollment projections. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines that will likely occur.

The program will begin with five students, will have 25 students in the 5th year. The program may become larger in the future with growth of the number of participating faculty and availability of funding, e.g., an NIH training grant by the 6th year.

E. Indicate what steps will be taken to achieve a diverse student body in this program, and identify any minority groups that will be favorably or unfavorably impacted. <u>The university's Equal Opportunity Officer should read this section and then sign and date in the area below.</u>

Highly qualified students, both domestic and international, will be recruited into the program. A Graduate Recruiting Committee will be established consisting of five faculty member, one elected from each basic science department. The committee members will serve a five-year term. To allow for continuity of the committee, after the first year, four members will be reappointed, and one new member appointed each subsequent year. Active recruiting initiatives will include:

- Members of the committee will operate a table at the FIU Fall Graduate Open House.
- Members of the committee will visit local colleges/universities. They will offer to present a seminar and request to be allowed to discuss the HWCOM graduate program with interested students. Expenses for these visits will be paid by the HWCOM.
- Student advisors and faculty from local universities will be invited to visit FIU HWCOM to be informed about the graduate program.
- A Graduate Program web page has been added to the FIU COM web site, with content to be added. This site will contain information about the COM graduate program, its faculty and resources, as well as links to the UGS and application material.
- Information about the graduate program and application material will be mailed or emailed to graduate advisors/faculty at local colleges and universities, as well as nationally and internationally.
- The committee will arrange for an interview with applicants who meet all requirements. Whenever possible the on-site interviews will be conducted. Telephone or Skype interviews will also be used.
- A summer research program for 4 to 6 local undergraduates in their sophomore or junior years. Each student will be given a stipend of $4000, half of which will be provided by COM and the other half from faculty grants. Faculty members are limited to two summer students. The program will be advertised by mailing/emailing brochures and application material to local universities. Qualified local applicants will be invited for interviews.
- Special attention will be devoted to assure the diversity of the student body. The Basic Biomedical Sciences Program will work with The FIU Minority Biomedical Research Support (MBRS) Office to provide the opportunities to minority students including MBRS RISE, MBRS SCORE and MARC U-STAR and McNair Programs. The FIU MORE Program will be used by participating faculty to secure funding for minority students.
- Students from historically black colleges and universities in the US http://www.univsource.com/hbcu.htm will be actively recruited. For example, in Miami is Florida Memorial University http://www.fmuniv.edu/, and in Daytona is Bethune-Cookman University http://www.cookman.edu/. The committee will visit those universities for recruiting trips. Faculty members from science departments will be invited to HWCOM, as will students in their biology and chemistry clubs.
- For many years FIU has been a leader in educating Hispanic students. The creation of biomedical science Ph.D. program in South Florida would provide the opportunity for minority doctorial students.

(signed statement in Appendix)

_____ _____

Shirlyon McWhorter, Director — Date
Equal Opportunity Programs and Diversity

III. Budget

A. Use Table 2 to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the

proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)

First year students will participate in existing medical student courses which requires minimal additional effort on the part of existing faculty. This is reflected by E&G faculty salary and benefit costs of $73,666 and an E&G total program cost of $261,187 (Table 2). By the 5th year, E&G faculty salary and benefit costs will be $397,865 and an E&G total program cost of $934,881. A portion of these faculty costs in all years will be supported through contract and grants for the proportion of time the students are partnered with the faculty on their research projects.

In the 1st year, 10% of an A&P staff, for administrative assistance, and 10% of an USPS person, clerical assistance will be required to support the program. In subsequent years, this effort will increase by 10% per year to a rate of 50% for each in the 5th year (along with an annual increase of 1.5%).

For student expenses, the HWCOM is assuming that for the 1st year, five students will receive a stipend from the UGS as Graduate Teaching Assistants (GTA) (2012-13 estimate from UGS is $22,665 based on a 1.5% annual increase) and in-state graduate school tuition (2012-13 estimate from UGS at $9,833 based on a 15% annual increase). In the 2nd year, five returning students will receive stipends from the HWCOM as Graduate Research Assistants (GRA) and in-state tuition. In the 3rd year, returning students will be funded for both stipend and tuition from extramural research grants.

GTAs will support the COM faculty as follows:

a. Perform literature search and summarize the specific research topics.
b. Assist teaching faculty with technical aspects of PowerPoint and other presentations for lectures and seminars;
c. Assist faculty with other logistical and organizational matters.

Each GTA will work closely with one or more of the faculty members to help in preparation, presentation and discussion of the teaching material. HWCOM courses have small group discussion sections, where medical students discuss clinical or basic science topics that are often not covered in depth during the lectures. Preliminary research of these topics for faculty review will be immensely beneficial. Since small group sessions are not included in the graduate curriculum (see Supplementary Table I), no GTA will be involved in direct instruction or grading of medical students, with whom they share the core courses, preventing any conflict of interest. In subsequent years two factors will impact the duties of the GTA. First, the class size will increase from 80 to 120 medical students in 2012-2013. Second, the clinical faculty may have even greater need for graduate student assistance to include in their lectures new basic science topics, and, in turn, the education of the graduate students will be greatly enhanced by their assisting in the teaching of translational and clinical biosciences.

The College of Medicine considers the Ph.D. program in Biomedical Science to be one of its top priorities. The HWCOM will provide GRAs to all students in their second year, has committed to the allocation of assistantships from its OPS budget and to augment the number of faculty lines through future allocations. Requests for additional support will be considered on a case-by-case basis. Most of the courses and faculty are drawn from the existing programs, so the proposed program requires minimum additional allocation for initiation. Since the HWCOM is new, budgetary items for graduate education will be built into the budget without a need to shift funds from other programs. After the first year, the financial contribution by the HWCOM will exceed the funds requested from UGS, demonstrating the financial commitment of the HWCOM to this program.

B. If other programs will be impacted by a reallocation of resources for the proposed program, identify the program and provide a justification for reallocating resources. 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). 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).

There will be minimal reallocation of resources as shown in Table 3, but no new resources will be required. No undergraduate programs are involved.

C. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).

- There are no related programs at FIU. The HWCOM graduate program will serve the needs of students who wish to pursue careers in the biomedical sciences such as medical school faculty, hospital laboratories, biotechnology and health services industries, as opposed to the traditional areas served by the FIU science departments. It will draw from a different pool of students and will be complementary, not competitive, with programs in other FIU colleges such as the new Biochemistry Program offered by the Department of Chemistry. The programs in FIU science departments cannot serve the needs of the medical school. The majority of existing HWCOM faculty and future recruits will have research expertise in medically-related areas not represented in other FIU departments. They are human geneticists, immunologists, neurologists, cell biologists, infectious disease and medical microbiologists, pharmacologists and physiologists, and will provide education in areas otherwise not represented at FIU. Letters of support from the College of Engineering and Computing and Robert Stempel College of Public Health and Social Work are attached.

D. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.

- The HWCOM Research Office is in close contact with extramural funding agencies, both public and private, and helps and encourages faculty members to apply for funding. HWCOM is a member of BioFlorida, the voice of Florida's bioscience industry, attending meetings and giving presentations on faculty research and commercialization efforts. HWCOM is in contact with South Florida hospital systems and industries and has been establishing collaborative programs. For example, once HWCOM is allowed to establish a doctoral program in basic biomedical sciences, Mount Sinai Medical Center in Miami has expressed its intention to cooperate on establishing an MD-PhD program. In addition, all HWCOM basic science faculty members have had or currently have extramural funding from NIH and other sources, as presented in Supplemental Table 2.

IV. Projected Benefit of the Program to the University, Local Community, and State

Use information from Table 1, Table 2, and the supporting narrative for "Need and Demand" to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.

The proposed Ph.D. program at the FIU HWCOM will not only be essential for the development of the research capacity and the educational mission of FIU and the HWCOM, but also for the overall growth of the college and university. As mentioned above, it is in concert with FIU's strategic plan to create new degree programs to attract new students and ensure competitiveness of graduates in health fields, to enhance both the amount and visibility of health-related research and to strengthen partnerships with local and global community and governmental agencies, public entities, hospitals, and health care and social service agencies/providers. The HWCOM faculty will train biomedical scientists, preparing them for academic careers in medical research and for the flourishing biotechnology industry of the Miami-Dade region and the State of Florida. In addition, it will contribute to the training of generations of young scientists in the medical features of cell biology, pharmacology, biochemistry, cancer biology, molecular biology, human genetics, pathology, immunology, neurology, medical microbiology and infectious diseases. Thus, these FIU graduates will provide much needed trained Ph.D. biomedical scientists to supply the South Florida workforce. They will become the leaders of corporations, hospitals and research institutions state-wide and nationally. They will bring prominence to FIU and, as alumni, support the university in its future growth.

The need for a Ph.D. Program in Basic Biomedical Sciences at the HWCOM is clear. According to the U.S. Department of Labor, employment opportunities for biological scientists will continue to grow in the 2008-2018 decade by 21 percent, a rate much faster than average because of the growth of the biotechnology industry. While many opportunities exist in academia, hospital systems, biotech and pharmaceutical industries for graduates of biomedical sciences programs in the Miami area, in Florida and in the US, the lack of educational opportunities in the Miami area underscores the need for the proposed Ph.D. program. In 2009-2010 approximately 30% of applicants to doctoral programs were accepted, and only 84% of the accepted students matriculated. Even recognizing that not all applicants are qualified, these data plainly demonstrate that the applicant pool is more than sufficient to justify a new graduate program. Nationally there are many more applicants for programs in biomedical sciences than are available at public universities. For example, at two U.S. medical schools that have biomedical Ph.D. programs similar to the proposed HWCOM program are the Ohio State University and the University of New Mexico. Between 2002 and 2009, only 18-23% of the several thousand applicants matriculated. These data suggest that there are approximately five times as many potential students with a desire for a career in biomedical sciences than there are available places in Ph.D. graduate programs in U.S. medical schools. In addition, it will fulfill a requirement of the Liaison Committee on Medical Education (LCME), the national accrediting authority for medical schools, for medical students to have opportunities to learn in academic environments that permit interaction with students enrolled in other health professions, graduate, and professional degree programs.

To evaluate the demand for a Ph.D. Program in Basic Biomedical Sciences at the HWCOM, four surveys of undergraduates at FIU and elsewhere were conducted during the summer and fall of 2010 (the results are included in the Appendix). An internal FIU survey was carried out by the FIU Office of Planning and Institutional Research. Of the 122 respondents, the vast majority expressed a need for a graduate program that would provide opportunities for translational research leading to

employment in the biomedical field.

V. Access and Articulation – Bachelor's Degrees Only

Not applicable.

INSTITUTIONAL READINESS

VI. Related Institutional Mission and Strength

A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan.

The proposed Ph.D. program is a response to one of the key strategic themes in the development of FIU's educational and research program – the Health theme. The Program is directly aligned with goals of the 5-year plan through fulfillment of its mission by imparting knowledge through excellent teaching, promoting public service, discovering new knowledge, solving health problems through research, and fostering creativity. The impetus to become a tier-one research university while retaining its urban mission has made FIU an attractive center of learning for students at the state, national and international level. The HWCOM has raised the visibility and research potential of FIU by the successful recruitment of a number of outstanding educators and biomedical scientists committed to training students to the benefit of the South Florida community. The proposed graduate program is a response to the State University Strategic Plan and Guidance of 2005. Programs in Biomedical Sciences have been identified as a goal of the SUS Strategic Plan (p. A8 - give special emphasis to biomedical sciences).

B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.

The HWCOM is a new and dynamic unit of FIU. HWCOM has recruited a core of basic science scientists with active research programs supported by grants from National Institutes of Health and other outside agencies (Supplemental Table 2). These research programs will provide a robust educational environment for graduate students. The proposed graduate program will provide a supply of dedicated and intellectually curious students who will become the biomedical workforce of tomorrow. The proposed program is essential to the success of the College, its research efforts and its ability to attract, recruit and retain first-rate faculty.

C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology (table) of activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed program.

In 2006 the Board of Governors approved an establishment of a public College of Medicine in Miami at Florida International University under the leadership of Dean John A. Rock, M.D., who was recruited in 2007. In 2008 the college received preliminary accreditation from the Liaison Committee on Medical Education (LCME), which allowed the school to accept the first class of future doctors in the fall of 2009, and received provisional accreditation in 2011. In 2008-2009 the HWCOM recruited basic science scientists with active research programs supported by grants from National Institutes

of Health (Supplemental Table 2). The proposed Ph.D. Program in Basic Biomedical Sciences is a culmination of an effort that was initiated by a group of faculty in the Basic Sciences Department at HWCOM under the leadership of Barry P. Rosen, Ph.D., Associate Dean for Basic Research and Graduate Programs and Joe Leigh Simpson, M.D., Executive Associate Dean for Academic Affairs. The Graduate Program planning committee includes Alexander Agoulnik, Ph.D. (Feasibility Report Chair); Madhavan Nair, Ph.D.; Hiranmoy Bhattacharjee, Ph.D.; Lisa Schneper, Ph.D.; Ch Rao, Ph.D.(Curriculum Development Chair); Rita Mukhopadhyay, Ph.D.; Rene Herrera, Ph.D.; Kalai Mathee, Ph.D.; Helen Tempest, Ph.D., Jonathan Sussman, MSEE, MBA. The Curriculum Committee for graduate education is composed of Alexander Agoulnik, Ph.D., Chair, with Madhavan Nair, Ph.D. representing the Department of Immunology; Kalai Mathee, Ph.D. representing the Department of Molecular Microbiology and Infectious Diseases; Helen Tempest, Ph.D. representing the Department of Genetics, and Irina Agoulnik, Ph.D. representing the Department of Cellular Biology and Pharmacology.

Timetable:

Summer-Fall 2009	Initial planning of the proposed program
Fall-Winter 2009-2011	Development of curriculum, Assessment of need and demand survey and analysis, Preparation of the Feasibility Report
Spring 2011	Submission and approval of the Feasibility Report
Spring 2011	Submission of proposal to College Curriculum Committee
Spring 2011	Submission of proposal to University Curriculum Committee and Graduate Council
Spring 2011	Submission of the proposal to Faculty Senate
Fall 2011	Submission of proposal to the Provost and the President
Fall 2011	Submission of proposal to FIU Board of Trustees
Fall –Winter 2011/12	Submission of proposal to Florida Board of Governors
Spring 2012	Preparation for the recruitment and admission of students
Spring 2012	Students admitted to the program for the Fall 2012 term

VII. Program Quality Indicators - Reviews and Accreditation

Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.

- In February, 2011 the LCME reviewers emphasized the requirement for a HWCOM graduate program in HWCOM. They stressed the importance of interactions between graduate and medical students and the need research training of medical students. The LCME approved provisional accreditation for the college in July 2011. It would be supportive for accreditation if the HWCOM had a program in place for the October 2012 LCME assessment.

VIII. Curriculum

A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.

The proposed curriculum at HWCOM is designed to provide a broad and interdisciplinary education in biomedical and translational sciences utilizing the expertise of HWCOM faculty, who are immunologists, neurologists, cell biologists, cancer biologists, human geneticists, pharmacologists, physiologists, biochemists, medical and infectious disease microbiologists. The students will benefit from access to this diverse faculty of well-funded biomedical scientists, and the HWCOM faculty will benefit by having bright and energetic graduate students who will provide the effort to maintain research programs and bring in new grants. The curriculum differentiates itself from other graduate programs at FIU by offering students a dedicated biomedical curriculum focusing on training researchers to conduct independent and original research in the areas of biomedical sciences. The program requirements are designed to ensure a strong record of active participation in research seminars, meetings, conferences, active lectureship, publications in peer-review journals and preparation of research proposals. The duration of the studies is expected to be 5 years. The proposed sequence of study is delineated in the attached Appendix as Supplemental Table 1. The proposed program requires 81 post-baccalaureate credits, of which at least 24 hours are dissertation research. During the first year students will attend required and elective courses, participate in seminars, conduct research laboratory rotations and select the research advisor. At the end of the first year the Dissertation Committee will be formed and the students will submit preliminary research proposal. The students should demonstrate knowledge of the subject matter, problem solving ability, critical thinking, an ability to formulate scientific hypothesis and communication skills. The students will be engaged in a clearly defined hypothesis-driven and full-time research project in the dissertation advisor's laboratory. At the end of the second year students should complete all required and elective courses. Students should pass the Qualifying Examination, submit a NIH style pre-proposal and defend it in an open seminar before Dissertation Committee. Upon completion of dissertation research, the student will submit a written dissertation, present an open lecture to the university community and orally defend the dissertation in a private meeting with the dissertation committee.

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

ADMISSION STANDARDS: The HWCOM Graduate Program adheres to the general admission procedures as outlined by the FIU University Graduate School (UGS). Completed applications will be evaluated by an Admissions Committee designated by a Program Director appointed by the Dean.

- GPA/GRE: The minimum requirement is either a 3.0 GPA (on a 4 point scale) in the last 60 credits of an accredited undergraduate degree or an earned graduate degree. However, a GPA of 3.5 in either an undergraduate or graduate degree is typically expected for favorable consideration. Applicants should take general aptitude tests of the Graduate Record Exams. A minimum GRE score at the 70th percentile (1150) is expected for acceptance to the program. Optional submission of scores from the advanced test in Biology, Chemistry, or Cell and Molecular Biology will strengthen the application. International graduate student applicants whose native language is not English are required to submit a score for the Test of English as a Foreign Language (TOEFL) or for the International English Language Testing System (IELTS). A total score of 80 on the TOEFL iBT or 6.5 overall on the IELTS is required.
- Letters of recommendation: A minimum of three letters of recommendation should be submitted from undergraduate or research sponsors. Strong unequivocal letters attesting to the applicant's educational background, motivation, analytical skills, and promise as a research scientist are important considerations.
- Statement of purpose and curriculum vitae: The application should include curriculum vitae and a statement of purpose and future goals after obtaining the Ph.D.

GRADUATION REQUIREMENTS: Students must demonstrate graduate knowledge acquisition in four incremental stages in order to be awarded a Ph.D. in Biomedical Sciences:

1. Qualifying Examination. Students will be evaluated on the successfully passing a Qualifying Examination taken during the second academic year and no later than the end of that year. The exam is designed to test the student's knowledge of biomedical research, as well as assess creativity and rationality of research design. The exam is composed of two parts:
   a. An oral portion with questions based on coursework from the two years and reading assignments in areas selected by participating faculty members.
   b. The written examination will be prepared and graded by selected faculty members.
2. Doctoral Dissertation Proposal. After completion of the Qualifying Examination student must prepare a formal research proposal of the Ph.D. studies in the style of an NIH R01 investigator-initiated project.
3. Dissertation Proposal Seminar based on student proposal will be presented and graded by the Dissertation Committee.

The formal admission to Ph.D. candidacy occurs when the student successfully completes required courses and passes the Qualifying Exam, prepares a formal dissertation proposal, and successfully defends the content of the proposal before his/her advisory committee. Immediately following the proposal defense, the student's dissertation committee will vote to admit the student to candidacy, to have the student resubmit the proposal within six months, or to dismiss the student from the Ph.D. program. A student can only resubmit his/her proposal once. The dissertation committee should be comprised of at least five members, at least three of whom should be HWCOM graduate program faculty and at least one member who is not a member of the HWCOM faculty and who holds a Graduate Faculty appointment.

4. The dissertation and dissertation defense. The Dissertation Advisory Committee (DAC) will approve the major goals of the research project, monitor progress of student performance and approve a target date for the dissertation defense. A prerequisite for the dissertation defense is publication or submission of peer-reviewed papers. It is expected that the student will be first or senior author on at least one of the peer-reviewed publications. The format of the dissertation should follow UGS guidelines. The dissertation defense will take place after the dissertation is submitted in a final form and approved by the DAC. Changes recommended at the time of the defense may be incorporated subsequently. The dissertation should be submitted to the DAC at least four weeks prior to the expected defense date to permit the members adequate opportunity for review. Review of the dissertation by an outside reviewer is encouraged. The defense of the dissertation is governed by the regulations established by the UGS. The dissertation defense includes a public seminar followed by defense of the dissertation to the DAC in closed session. Following the examination, the DAC evaluates the performance in the candidate's absence and votes to pass or fail the candidate. The record of the vote is recorded on FIU University Graduate School Form Defense of Dissertation Results and submitted to the University Graduate School Office.

a. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.

The curriculum includes required courses fundamental for understanding biomedical and translational sciences, providing elective courses selected in consultation with the dissertation advisor and the Program Director. The program of study will require completion of required core and elective courses in the curriculum, for a total of 81 credits, as described in Supplemental Table I. Graduate students will take core medical courses side-by-side with the medical students, providing

a background in and appreciation of biomedical sciences not available in other FIU colleges.

- Laboratory research rotations

Newly matriculating students will perform research rotations in a minimum of three different faculty laboratories for four to six weeks each. Students will choose faculty laboratories with the consent of those faculty members. The purpose of the rotations is three-fold. First, each rotation period provides the student with an opportunity to evaluate the faculty member and laboratory. Second, the rotation provides the faculty member with an opportunity to evaluate the student. Third, rotations in diverse laboratories expose the student to a variety of methodologies and concepts. The rotation experience will be an approved course with credit, and students will receive a pass or fail grade based on an average of the evaluations of the three participating faculty members. Before beginning a rotation, students should discuss with the faculty member the expectations of the rotation and evaluation procedures. Rotations are available only in the laboratories of funded or new faculty members. In the event that the student cannot make a decision on a major advisor after three rotations, a fourth rotation will be allowed. If a student is initially supported on a research grant rather than FIU or HWCOM funds, the student can petition for a reduction in the number of required rotations by written request to the Program Director.

- Seminars and retreats
  - Faculty research presentations: In the first term, faculty members will describe their research interests to the students in a series of short presentations. Although there is no credit for attending these presentations, it is an integral part of the training program and provides information about faculty research activities that will aid the students in selection of rotations and dissertation advisors.
  - HWCOM seminars and conferences (1 credit): Participation in and attendance at the weekly HWCOM seminars are an important part of graduate training. Student attendance is mandatory throughout their term as graduate students.
  - Student journal club and research presentations: Annually each student will give a presentation to the students and faculty. Initially students will give literature presentations, but, once they have sufficient research results, they can present their own research.
  - HWCOM retreats: Students will be encouraged to give poster presentations on their research at an annual HWCOM retreat.
  - In addition to HWCOM seminars, other colleges sponsor seminars that would be of interest and educational value to the students. They will be notified by email, on the COM web site and by printed notices of seminars within the college. The FIU web site includes notices of all seminars and other educational opportunities within the university. Since the information is already available, the students will be provided with training in how to access the information. In addition, a web site specifically for graduate students will be constructed where course information, seminars and other information will be updated daily.

b. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program. The sequence of courses is given in Supplemental Table I.

c. Provide a one- or two-sentence description of each required or elective course. A brief description of each course is provided in Supplemental Table I.

d. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and identify if any industry advisory council exists to provide input for curriculum development and student assessment.

We consulted a number of hospital systems and biotechnology companies in South Florida. These organizations have advised us that there is a serious shortage of high-level biomedical scientists, both in the Miami-Dade area and in the State of Florida (see letters in the appendix). Our program was written in response to this demonstrated need for graduates of a program that specifically educates and trains students who will fill the workforce in local industries and medical centers. The creation of this FIU HWCOM graduate program will make South Florida even more attractive as a home for future biomedical and bioscience businesses.

e. **For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.** Not applicable.

f. **For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?** Not applicable.

g. **Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

The program will entail traditional delivery on the FIU Modesto A. Maidique Campus. All proposed required and elective courses are based in FIU HWCOM and other FIU colleges. All research activities, such as laboratory rotations, seminars, preparation of dissertation proposal and all research activities will be conducted in the research laboratories of the HWCOM. There are no specialized services or necessity to involve other universities.

c. Faculty Participation

a. **Use Table 4 to identify existing and anticipated ranked (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

The teaching faculty in the Ph.D. program will be comprised of HWCOM faculty and faculty members from affiliated departments with secondary appointments in HWCOM basic science departments. Table 4 lists the participating faculty in basic science departments of the College of Medicine. Secondary appointments in HWCOM basic science departments have been or soon will be granted to faculty from the College of Arts and Sciences and the College of Engineering and Computing (identified in Supplemental Table 2), and more secondary appointments will be made in the future. These faculty members will be eligible to teach in the graduate program. Faculty members eligible to serve as dissertation advisors must be tenured or on the tenure track with an

appointment (primary, joint or secondary) in a basic science HWCOM department and must receive dissertation advisor status from the UGS. Faculty members from HWCOM and other colleges with graduate faculty status from UGS but without dissertation advisor status, including non-tenure and clinical faculty, will be permitted to serve as members of the student's Dissertation Advisory Committee (DAC).

It should be noted that the student-to-faculty ratio does not take into account the mentoring contributions by faculty from other colleges with secondary appointments. In addition, HWCOM faculty were recruited primarily as researchers and have considerably more time to mentor students than do most faculty in other colleges. As a new college, HWCOM was able to recruit funded basic science faculty, which means more available student support per faculty member than in other colleges. This method will be used in future faculty recruiting.

b. Use Table 2 to display the costs and associated funding resources for existing and anticipated ranked faculty (as identified in Table 4). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.

One additional HWCOM basic science faculty member will be recruited prior to initiation of the program, at which point the basic science departments will have adequate numbers of faculty to provide a curriculum developed around their strengths. The first two years of coursework is comprised of basic medical courses, a feature of this graduate program that distinguishes it from other FIU programs. This allows HWCOM graduate students and medical students to learn side-by-side, providing a distinctive educational opportunity for both. Both graduate and medical students will attend many of the same pre-clinical courses, as listed in curriculum in Supplemental Table 1. Since the basic medical sciences courses are already being offered to the medical class, additional faculty will be added only as the medical class size increases. In addition to the substantial cadre of non-tenure track educators, HWCOM is recruiting seven more teaching faculty in 2011, so the teaching staff will be adequate for both medical and graduate courses at the initiation of the program. Some of these new faculty members will have appointments in basic science departments and an opportunity to participate in the graduate program. The HWCOM will generate a list of course offerings one year in advance. Teaching assignments to core and courtesy faculty members will be made by the chair of the appropriate HWCOM basic science department in consultation with the faculty and Program Director. The core courses in the HWCOM medical curriculum are already in place. **The planned expansion of the HWCOM and basic science departments will be an attraction to the recruitment of new research-active and funded faculty who will participate in the program as major advisors and DAC members.** The projected growth of the HWCOM faculty is shown in Table 4.

c. Provide the number of master's theses and/or doctoral dissertations directed, and the number and type of professional publications for each existing faculty member (do not include information for visiting or adjunct faculty).

Faculty Name	Theses	Dissertations	Professional Publications
Acuna, Juan	21	2	58
Agoulnik, Alexander	3	1	96
Agoulnik, Irina	0	0	32
Herrera, Rene	40	12	150
Mathee, Kalai	10	3	61
Mukhopadhyay, Rita	0	1	46
Nair, Madhavan	14	8	130
Rosen, Barry	3	20	281

Simpson, Joe Leigh	0	2	740
Tempest, Helen	0	0	25

d. 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 HC in major or service courses, degrees granted, external funding attracted, as well as qualitative indicators of excellence.

As the HWCOM is a new academic unit, there are limited data available for teaching activities. The research funding and productivity is shown in Supplemental Table 2.

d. Non-Faculty Resources

a. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved for all doctoral level proposals.

Medical Library – Herbert Wertheim College of Medicine

The Medical Library opened in July, 2009. Its purpose is to support the programs of the Herbert Wertheim College of Medicine with a primary objective of providing collections and services for the developing medical curriculum. It has 4.0 FTE professional librarians and 5.5 FTE support staff and student assistants. It is located on the third floor of the Green Library on the Modesto Madique Campus.

- *Books.* The Medical Library acquires one print copy of all curriculum-required textbooks. The library also acquires one copy of any recommended textbook that is not available electronically.. A nationally recognized 'core list' of books for medical libraries is used as a foundation tool to ensure broad subject coverage (Doody's Core Titles[1]). Each year, the Medical Library acquires new and updated editions to this core titles list. Beyond the core, medical librarians supplement the collection with additional titles to provide depth (e.g., *Thieme* online anatomy atlases). As of November 2010, the Medical Library held 1,025 books, including 532 in print and 493 electronic.
- *Journals.* To build a foundation journal collection, the Medical Library has ensured access to the top 500 medical journals. This target was comprised of the unique titles between the Abridged Index Medicus list, which represents the foremost medical journals in English in the PubMed database, and core journals for the post-print medical library as analyzed and reported in the literature by Shearer.[2] Of the top 500 titles, 404 were already available through the subscription programs of either the University Libraries or the Florida Center for Library Automation (FCLA). The Medical Library acquired the remaining 96. An additional 110 journals were acquired based on requests from faculty members, interlibrary loan request analyses, or by

1 "Doody's Core Titles" is the nationally recognized successor to the "Brandon-Hill selected list of print books and journals for the small medical library." URL: http://www.doody.com/dct/

2 Shearer BS, Nagy SP. Developing an academic medical library core journal collection in the (almost) post-print era: the Florida State University College of Medicine Medical Library experience. *JMLA* 2003;91:292-302.

their inclusion in vendor package. The combined subscriptions of the Medical Library, the University Libraries and FCLA, provide access to over 4,000 electronic journals in the biomedical and health sciences.

- *Databases.* Databases were selected for their coverage of medical knowledge resources and their provision of clinical tools commonly used by medical students. Further criteria included accessibility from both on and off campus locations, the vendor's reputation, and platform functionality and stability. The Medical Library subscribes to 16 medical databases. Besides these, access is available to an additional 83 biomedical/health science databases through the University Libraries and the FCLA. The list includes important databases such as *The Cochrane Library* and *PsychInfo*.
- *Self-instructional materials.* Library self-instructional materials are available electronically. They cover a broad array of information management skills on medical topics. They include tutorials on searching medical literature databases, finding and evaluating evidence-based medicine resources, copyright applications, and how to use clinical databases.

(signature provided in Appendix)

David W. Boilard, AMLS, MPH
Founding Director of the College of Medicine Library Date

b. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 3.

Required journals will be added when necessary. No other additional library resources will be needed to implement or sustain the program.

c. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.

The HWCOM has two lecture rooms, one of which holds 85 students and the other 135 students in which graduate students and medical students will take the core courses side-by-side. A third lecture room for 140 students will be available in 2013, when the new Science Classroom Complex is completed. The Ph.D. program is based on the research studies conducted by students in the laboratories of academic advisors. All advisors are required to have active extramurally funded research programs. The participating faculty members in the basic science departments of the HWCOM and the other colleges all have fully furnished laboratories that contain all the basic equipment necessary to carry out biochemical and molecular cell biology research.

d. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2. Do not include costs for new construction because that information should be provided in response to X (J) below.

No additional classroom or teaching laboratories will be required. New faculty will be allocated

adequate office and laboratory space. Each current core faculty member has excellent laboratory space with room for several students each. There is ample laboratory space in AHC3 to accommodate projected new faculty hires in years 1 and 2. In year 2 the new Science/Classroom building will be completed, providing laboratory and office space for faculty recruits through year 5.

e. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.

Each participating faculty member has a well-equipped laboratory. FIU HWCOM has a number of core research facilities that will be available for students. In addition, major equipment and core facilities are also available in the School of Computing and Information Sciences and the Department of Biomedical Engineering in the College of Engineering and Computing.

(1) **FIU HERBERT WERTHEIM COLLEGE OF MEDICINE FACILITIES**

- Histology laboratory for both paraformaldehyde-fixed and frozen tissue acquisition, processing and section preparation facility. Immunohistochemistry services will be provided for both animal and patient clinical samples.
- Microscopy room with an epifluorescence microscope to augment the FIU confocal facility.
- A transgenic core that can provide assistance in the design and production of genetically modified mice. This core will provide consultation and services to the FIU research community. After completion of the animal facility in the new Science Classroom Complex, this core will perform pronuclear microinjections, embryonic stem (ES) cell gene targeting, and targeted ES cell microinjections to produce transgenic and knockout mice.
- Cell Culture Facility will provide investigators with a diverse array of pathogen-free cell lines.
- HPLC-ICP-MS facility for trace metal analysis.
- Structural Proteomics Crystallization Facility for training students and other personnel in the art of crystallizing proteins for X-ray crystallography and structure determination.

(2) **FIU COLLEGE OF ENGINEERING AND COMPUTING FACILITIES**

- Bioinformatics Research Group
- Biosensors Center
- Center for Advanced Distributed System Engineering
- CREST Center of Emerging Technologies for Advanced Information Processing and High-Confidence Systems
- Distributed Multimedia Information Systems Laboratory
- High Performance Database Research Center
- Nanomaterials Center

(3) **FIU COLLEGE OF ARTS AND SCIENCES**

- Imaging Facility including confocal and atomic force microscopes, micro-PET/CT, fluorescence imaging, and proteomics/mass spectrometry
- Electron microscopy facility
- Small animal facility
- NMR facility
- DNA sequencing facility

f. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2. Not applicable**.**

g. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2. Not applicable.

h. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2.

The HWCOM has received generous funding from various sectors of the society. The first year support to cover the tuition and stipends will be provided by FIU University Graduate School in the form of five Graduate Teaching Assistantships per year. The second year will be provided for Graduate Research Assistantships by HWCOM funds. It is anticipated that core faculty members will have adequate grant support for stipends, fees and tuition for supported graduate students in the remaining years of studies. HWCOM faculty members who will participate in this program are funded through extramural agencies (NIH, DoD, HRSA, EPA, private foundations, etc.) that may provide graduate student support starting in their third year. A list of current faculty grants is provided in the Appendix as Supplemental Table 2. New faculty recruited in subsequent years will be expected to have or obtain extramural grants that can support students. After the fifth year of this program, it is anticipated that training grants will be submitted based on a successful track record of this curriculum. In addition, as this program evolves, collaborative partnerships will be created with local biomedical companies, institutes and hospital systems, who anticipate collaborating with our faculty and employing our graduates (see letters of support included in the Appendix). These organizations may also consider funding opportunities for research projects as well as training students as interns, research associates and eventually employing them. Thus the HWCOM Graduate Program will provide highly trained biomedical Ph.D. scientists to the South Florida workforce.

i. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5. Not applicable.

j. **If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Table 2 includes only Instruction and Research (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 below. It is expected that high enrollment programs in particular would necessitate increased costs in non-I&R activities.** Not applicable.

Appendix

- Required Tables 1-4
- Signed Diversity Statement
- Signed Library Assessment
- Supplemental Table 1. List of courses
- Supplemental Table 2. Extramural grant support in the HWCOM
- Assessment of Technology Capacity
- External Reviewer's Report
- Letters of support from Florida State University System institutions
    - Garnett Stokes, Ph.D., Provost and Executive Vice President for Academic Affairs, Florida State University
    - Ralph Wilcox, Ph.D., Provost and Executive Vice President, University of South Florida
    - Joseph Glover, Ph.D., Provost and Senior Vice President for Academic Affairs, University of Florida
    - Tony Waldrop, Ph.D., Provost and Vice President for Academic Affairs, University of Central Florida
- Letters of support from FIU colleges
    - Michele Ciccazzo, Ph.D., R.D., Interim Dean, Robert Stempel College of Public Health and Social Work
    - Kenneth Furton, Ph.D., Dean, College of Arts and Sciences
    - Amir Mirmiran, Ph.D., P.E., FASCE, FACI, Dean, College of Engineering and Computing
- Letters of support from South Florida biomedical organizations
    - Raul Herrera, M.D., Chief Research Officer, Miami Children's Hospital
    - Joseph D. Rosenblatt, M.D., Interim Director, Sylvester Comprehensive Cancer Center
    - Robert C. Goldszer, M.D., Senior Vice President and Chief Medical Officer of Mount Sinai Medical Center
    - Russell Allen, President and CEO, BioFlorida
    - Jeffrey Wolf, CEO, Heat Biologics, Inc.
    - Frank. R. Nero, President and CEO of the Beacon Council
    - Yamilet Ceballo, Director of College Relations, Beckman Coulter
- Supporting Information/Surveys of Need and Demand
- *Curriculum vitae* of participating faculty

TABLE 1-B
PROJECTED HEADCOUNT FROM POTENTIAL SOURCES
(Graduate Degree Program)

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	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
Students who transfer from other graduate programs within the university**	0	0	0	0	0	0	0	0	0	0
Individuals who have recently graduated from preceding degree programs at this university	2	1.5	3	2.25	4	3	6	4.5	8	6
Individuals who graduated from preceding degree programs at other Florida public universities	0	0	1	0.75	2	1.5	3	2.25	4	3
Individuals who graduated from preceding degree programs at non-public Florida institutions	0	0	0	0	0	0	0	0	0	0
Additional in-state residents***	2	1.5	5	3.75	8	6	10	7.5	11	8.25
Additional out-of-state residents***	0	0	0	0	0	0	0	0	0	0
Additional foreign residents***	1	0.75	1	0.75	1	0.75	1	0.75	2	1.5
Other (Explain)***	0	0	0	0	0	0	0	0	0	0
Totals	**5**	**3.75**	**10**	**7.5**	**15**	**11.25**	**20**	**15**	**25**	**18.75**

* List projected yearly cumulative ENROLLMENTS instead of admissions
** If numbers appear in this category, they should go DOWN in later years.
*** Do not include individuals counted in any PRIOR category in a given COLUMN.
** FTHC are students takng 9 credits per term (excluding summer); PTHC are students taking about half the number of credits taken
**** Students in program take 24 credits which relate to 24/32=0.75 FTE

TABLE 2
PROJECTED COSTS AND FUNDING SOURCES

Instruction & Research Costs (non-cumulative)	Year 1						Year 5				
	Funding Source						Funding Source				
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	Other New Recurring (E&G)	New Non-Recurring (E&G)	Contracts & Grants (C&G)	**Subtotal E&G and C&G**	Continuing Base** (E&G)	New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	**Subtotal E&G and C&G**
Faculty Salaries and Benefits	67,665	6,001	0	0	28,214	**$101,880**	373,863	24,002		280,630	**$678,495**
A & P Salaries and Benefits	0	6,594	0	0	0	**$6,594**	0	34,984	0	0	**$34,984**
USPS Salaries and Benefits	0	4,439	0	0	0	**$4,439**	0	23,499	0	0	**$23,499**
Other Personnel Services	0	0	0	0	0	**$0**	0	0	0	0	**$0**
Assistantships & Fellowships	0	113,325	0	0	0	**$113,325**	0	240,558	0	360,836	**$601,394**
Library	0	0	0	0	0	**$0**	0	0	0	0	**$0**
Expenses	0	14,000	0	0	0	**$14,000**	0	66,000	0	0	**$66,000**
Operating Capital Outlay	0	0	0	0	0	**$0**	0	0	0	0	**$0**
Graduate Asst Waivers	0	49,164		0	0	**$49,164**	0	171,976		257,964	**$429,940**
Total Costs	**$67,665**	**$193,522**	**$0**	**$0**	**$28,214**	**$289,402**	**$373,863**	**$561,019**	**$0**	**$899,430**	**$1,834,312**

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "other new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

Faculty and Staff Summary

Total Positions (person-years)	Year 1	Year 5
Faculty	0.45	2.85
A & P	0.1	0.5
USPS	0.1	0.5

Calculated Cost per Student FTE

	Year 1	Year 5
Total E&G Funding	$261,187	$934,881
Annual Student FTE	3.75	18.75
E&G Cost per FTE	$69,650	$49,860

TABLE 3
ANTICIPATED REALLOCATION OF EDUCATION & GENERAL FUNDS

Program and/or E&G account from which current funds will be reallocated during Year 1	Base before reallocation	Amount to be reallocated	Base after reallocation
555-555 World exploration fund (example)	0	0	**$0**
COM E&G Current	26,100,000	67,665	**$26,032,335**
	0	0	**$0**
	0	0	**$0**
	0	0	**$0**
	0	0	
Totals	$26,100,000	$67,665	**$26,032,335**

TABLE 4
ANTICIPATED FACULTY PARTICIPATION

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Speciality	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
A	Juan Acuna ,M.D. Genetics	Assoc. Prof	Tenured	Fall 2012	12	1.00	0.00	0.00	12	1.00	0.20	0.20
A	Alexander I. Agoulnik, Ph.D Genetics	Professor	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Irina Agoulnik, Ph.D. Cell Biology	Assoc. Prof	Ten Track	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Rene J. Herrera, Ph.D. Genetics	Professor	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Kalai Mathee, Ph.D. Microbiology	Professor	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Rita Mukhopadhyay, Ph.D. Microbiology	Assoc. Prof	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Madhavan Nair, Ph.D. Immunology	Professor	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Barry P. Rosen, Ph.D Biochemistry	Professor	Tenured	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
A	Joe Leigh Simpson, M.D. Genetics	Professor	Tenured	Fall 2012	12	1.00	0.00	0.00	12	1.00	0.05	0.05
A	Helen Tempest, Ph.D. Genetics	Asst. Prof.	Ten Track	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
B	New Hire, Ph.D. or M.D. Infectious Disease	Open	Ten Track	Fall 2012	12	1.00	0.10	0.05	12	1.00	0.20	0.20
B	New Hire, Ph.D. or M.D. Enviromental Toxicology	Open	Ten Track	Fall 2013	0	0.00	0.00	0.00	12	1.00	0.20	0.20
B	New Hire, Ph.D. or M.D. Reproductive Biology	Open	Ten Track	Fall 2014	0	0.00	0.00	0.00	12	1.00	0.20	0.20
B	New Hire, Ph.D. or M.D. Human Genetics	Open	Ten Track	Fall 2015	0	0.00	0.00	0.00	12	1.00	0.20	0.20
B	New Hire, Ph.D. or M.D. Immunology	Open	Ten Track	Fall 2016	0	0.00	0.00	0.00	12	1.00	0.20	0.20
	Total Person-Years (PY)							**0.45**				**2.85**

Faculty Code		Source of Funding	PY Workload by Budget Classsification Year 1		Year 5
A	Exisitng faculty on a regular line	Current Education & General Revenue	0.40		2.65
B	New faculty to be hired on a vacant line	Current Education & General Revenue	0.05		0.20
C	New faculty to be hired on a new line	New Education & General Revenue	0.00		0.00
D	Existing faculty hired on contracts/grants	Contracts/Grants	0.00		0.00
E	New faculty to be hired on contracts/grants	Contracts/Grants	0.00		0.00
		Overall Totals for	**Year 1** **0.45**		**Year 5** **2.85**

Worksheet Table 4 Faculty

A. Indicate what steps will be taken to achieve a diverse student body in this program, and identify any minority groups that will be favorably or unfavorably impacted. The university's Equal Opportunity Officer should read this section and then sign and date in the area below.

Highly qualified students, both domestic and international, will be recruited into the program. A Graduate Recruiting Committee will be established consisting of five faculty member, one elected from each basic science department. The committee members will serve a five-year term. To allow for continuity of the committee, after the first year, four members will be reappointed, and one new member appointed, and a new member appointed each subsequent year. Active recruiting initiatives will include:

- Members of the committee will operate a table at the FIU Fall Graduate Open House.
- Members of the committee will visit local colleges/universities. They will offer to present a seminar and request to be allowed to discuss the HWCOM graduate program with interested students. Expenses for these visits will be paid by the HWCOM and are included in Table 2.
- Student advisors and faculty from local universities will be invited to visit FIU HWCOM to be informed about the graduate program.
- A Graduate Program web page has been added to the FIU COM web site, with content to be added. This site will contain information about the COM graduate program, its faculty and resources, as well as links to the UGS and application material.
- Information about the graduate program and application material will be mailed or emailed to graduate advisors/faculty at local colleges and universities, as well as nationally and internationally.
- The committee will arrange for an interview with applicants who meet all requirements. Whenever possible the on-site interviews will be conducted. Telephone or Skype interviews will also be used.
- A summer research program for 4 to 6 local undergraduates in their sophomore or junior years. Each student will be given a stipend of $4000, half of which will be provided by COM and the other half from faculty grants (Supplemental Table 2). Faculty members are limited to two summer students. The program will be advertised by mailing/emailing brochures and application material to local universities. Qualified local applicants will be invited for interviews.
- Special attention will be devoted to assure the diversity of the student body. The Basic Biomedical Sciences Program will work with The FIU Minority Biomedical Research Support (MBRS) Office to provide the opportunities to minority students including MBRS RISE, MBRS SCORE and MARC U-STAR and McNair Programs. The FIU MORE Program will be used by participating faculty to secure funding for minority students.
- Students from Historically Black Colleges and Universities (HBCU) in the US http://www.univsource.com/hbcu.htm will be actively recruited. For example, in Miami is Florida Memorial University http://www.fmuniv.edu/, and in Daytona is Bethune-Cookman University. The committee will visit those universities for recruitment trips. Faculty members from science departments will be invited to HWCOM as will students in their biology and chemistry clubs.

- For many years FIU has been a leader in educating Hispanic students. The creation of biomedical science Ph.D. program in South Florida would provide the opportunity for minority doctorial students.

Shirlyon J. McWhorter, Director
Equal Opportunity Programs and Diversity

2/22/11
Date

A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved for all doctoral level proposals.

Medical Library – Herbert Wertheim College of Medicine

The Medical Library opened in July, 2009. Its purpose is to support the programs of the Herbert Wertheim College of Medicine with a primary objective of providing collections and services for the developing medical curriculum. It has 4.0 FTE professional librarians and 5.5 FTE support staff and student assistants. It is located on the third floor of the Green Library on the Modesto Madique Campus.

- *Books.* The Medical Library acquires one print copy of all curriculum-required textbooks. The library also acquires one copy of any recommended textbook that is not available electronically.. A nationally recognized 'core list' of books for medical libraries is used as a foundation tool to ensure broad subject coverage (Doody's Core Titles[1]). Each year, the Medical Library acquires new and updated editions to this core titles list. Beyond the core, medical librarians acquire supplements the collection with additional titles to provide depth (e.g., *Thieme* online anatomy atlases). As of November 2010, the Medical Library held 1,025 books, including 532 in print and 493 electronic.

- *Journals.* To build a foundation journal collection, the Medical Library has ensured access to the top 500 medical journals. This target was comprised of the unique titles between the Abridged Index Medicus list, which represents the foremost medical journals in English in the PubMed database, and core journals for the post-print medical library as analyzed and reported in the literature by Shearer.[2] Of the top 500 titles, 404 were already available through the subscription programs of either the University Libraries or the Florida Center for Library Automation (FCLA). The Medical Library acquired the remaining 96. An additional 110 journals were acquired based on requests from faculty members, interlibrary loan request analyses, or by their inclusion in vendor package. The combined subscriptions of the Medical Library, the University Libraries and FCLA, provide access to over 4,000 electronic journals in the biomedical and health sciences.

- *Databases.* Databases were selected for their coverage of medical knowledge resources and their provision of clinical tools commonly used by medical students. Further criteria included accessibility from both on and off campus locations, the vendor's reputation, and platform functionality and stability. The Medical Library subscribes to 16 medical databases. Besides these, access is available to an additional 83 biomedical/health science databases through the University Libraries and the FCLA. The list includes important databases such as *The Cochrane Library* and *PsychInfo*.

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[1] "Doody's Core Titles" is the nationally recognized successor to the "Brandon-Hill selected list of print books and journals for the small medical library." URL: http://www.doody.com/dct/

[2] Shearer BS, Nagy SP. Developing an academic medical library core journal collection in the (almost) post-print era: the Florida State University College of Medicine Medical Library experience. *JMLA* 2003;91:292-302.

- *Self-instructional materials.* Library self-instructional materials are available electronically. They cover a broad array of information management skills on medical topics. They include tutorials on searching medical literature databases, finding and evaluating evidence-based medicine resources, copyright applications, and how to use clinical databases.

David W. Boilard, AMLS, MPH
Founding Director of the College of Medicine Library

2/21/11
Date

Supplemental Table 1. HWCOM Curriculum. Part I: mandatory courses

Year	Semester	Ph.D. Schedule/Courses	Credits	HWCOM Courses	GS Forms
1	Fall	Genes, Cells and Molecules	4	BMS6001	
		Structure and Function	4	BMS6002	
		Microbiology, Infection and Immunology	2	BMS6300	
		Lab Rotation	1	BMS6XXX	
	Spring	Graduate Seminar	1	BMS6XXX	
		Epidemiology and Biostatistics	1	BMS6880	
		Lab Rotation	1	BMS6XXX	
		Supervised Teaching	1	BMS6XXX	
		Electives (see part II)	5		
	Summer	Formation of Committee: Appointment of Dissertation Committee: Preliminary proposal	1	BMS6XXX	D-1
		Research Credits	5	BMS6XXX	
2	Fall	Introduction to Scientific Writing	3	BMS6XXX	
		Graduate Seminar	1	BMS6XXX	
		Research Credits	6	BMS6XXX	
		Electives (see part II)	5		
	Spring	Research Credit	6	BMS6XXX	
		Graduate Seminar	1	BMS6XXX	
		Elective (Optional)			
	Summer	Elective (Optional)			
		Research Credit	6	BMS6XXX	
3	Fall	Qualifying Examination	5	BMS6XXX	
		Program for Doctoral Degree and Application for Candidacy			D-2

		Doctoral Dissertation Proposal (Formal Proposal NIH style)	3	BMS6XXX	D-3
		Dissertation Proposal Seminar	1	BMS6XXX	
		Research Credit	6	BMS7XXX	
		Dissertation Research Credits (total required: 24)	24	BMS7XXX	
Final		Dissertation Committee Report of Annual Dissertation Progress Conference			D-4
		Preliminary Approval of Dissertation and Request for Oral Defense			D-5
		Dissertation Defense Seminar	1	BMS7XXX	D-6
		Final Approval of Dissertation			D-7
		Total credits to graduate	**81**		

Course Descriptions: A unique feature of the Biomedical Sciences Graduate Program is that graduate students and medical students will sit side-by-side in the introductory basic sciences portion of the medical curriculum, as described below.

BMS6001 (Genes, Molecules and cells): This course covers fundamental principles of cell and molecular biology and human genetics and their role in clinical medicine as they relate to health and disease.

BMS6002 (Human Structure and function): This is an introduction to essential concepts of human structure and function with integration of the anatomical and physiological basis of several important clinical skills and procedures.

BMS6300 (Microbiology, Infection and Immunology): This course introduces the general principles of infections, host responses and pathogens evasive maneuvers relevant for a foundation in clinical medicine and important to human disease.

BMS6880 (Epidemiology and Biostatistics): This course introduces students to the study of biostatistics and descriptive epidemiology in order to prepare these students to give a scholarly analysis of medical and public health literature. Prerequisite: currently enrolled in the HWCOM Ph.D. program

Note: Graduate students will not attend small group discussion sessions with medical students. Instead they will utilize this time for working in the labs of faculty members or working on extra assignments given by the course directors.

BMS6XXX (Lab Rotation): 4 week rotation per lab. It will be for pass/fail. The course will be under the aegis of the graduate program director. Prerequisite: currently enrolled in the HWCOM Ph.D. program.

BMS6XXX (Supervised Teaching): Students will assist the faculty members who teach either graduate or medical students. Prerequisite: currently enrolled in HWCOM Ph.D. program.

BMS6XXX (Graduate Seminar): A weekly seminar/discussion course consisting of research presentations by students, faculty and visiting scientists in the area of biomedical sciences will form part of a recurring credit. The students have to register Fall and Spring semesters, present once per year and attend every seminar.

BMS6XXX (Formation of Committee, Proposal): This activity will be the appointment of the dissertation committee. Advisor: After a rotation by agreement between advisor and student with approval of graduate program director. Committee: Five committee members, three from HWCOM and two outside HWCOM. It is advised that one committee member should be from outside FIU. The choice of committee members is the decision of the Advisor and student. The HWCOM graduate committee can weigh in on the suitability of the outside members. Subsequently, the outside member will apply for graduate faculty status. The student submits 4-5 page proposal approved by her committee after his/her first committee meeting to the UGS.

BMS7XXX (Research Credits): Advanced research credits under supervision of advisor.

BMS6XXX (Introduction to Scientific Writing): The course will teach the principles of scientific writing, presentation and organization of scientific presentations. The students will analyze assigned papers. The students will be taught the basics of grantsmanship; they will write a NIH-style proposal.

BMS6XXX (Qualifying Examination): This will be a final exam in the spring of the second year after all the mandatory courses are completed. The overall theoretical knowledge of the student will be tested orally and written examinations. Prerequisite: currently enrolled in the HWCOM Ph.D. program and at least overall 70% score in all mandatory courses.

BMS6XXX (Doctoral Dissertation Proposal): A NIH style 12-page proposal will be submitted to the Dissertation Committee. Prerequisite: currently enrolled in the HWCOM Ph.D. program and permission of major professor.

BMS7XXX (Dissertation Proposal Seminar): The doctoral proposal will be presented by the candidate in the form of a public presentation to the Committee Members and all interested parties at FIU. Prerequisite: currently enrolled in the HWCOM Ph.D. program, completion of comprehensive examination and permission of major professor.

BMS7XXX (Dissertation Credits): Advanced research credits under the supervision of the dissertation advisor. Prerequisite: currently enrolled in the HWCOM Ph.D. program and admission to candidacy and permission of major professor.

BMS7XXX (Dissertation Defense Seminar): Presentation of doctoral defense seminar. Prerequisite: currently enrolled in the HWCOM Ph.D. program with admission to candidacy and permission of major professor and graduate committee.

Note: Exams for graduate students will be separate and given either at the end of the course or the semester.

Table 1. HWCOM Curriculum. Part II: elective courses

HWCOM		
Cellular and General Pathology	5	BMS6600
Pharmacology	3	BMS6400
Graduate Internship (1-9)	1-9	BMS7XXX

Course Descriptions

Electives from HWCOM

BMS6600 (Cellular & General Pathology): Cellular and General Pathology is designed for first year medical students as an introductory course in the study of disease emphasizing the general pathologic concepts and vocabulary.

BMS6400 (Pharmacology): This course introduces students to the basic principles of pharmacology and to the primary classes of drug therapy including the prototypic agents.

BMS7XXX (Graduate Internship): An internship in a laboratory/program outside FIU can be arranged under the supervision of host scientist and FIU faculty member. Prerequisite: currently enrolled in the HWCOM Ph.D. program with admission to candidacy and permission of major professor.

Potential Electives from Other FIU Departments (http://catalog.fiu.edu/index.php?id=769).

Prerequisites for any of the courses taken outside HWCOM: Approvals of the HWCOM Graduate Program Director, Host Department and the course instructor.

Department of Biological Sciences

MCB6935 (**Advanced Topics in Microbiology)**: An intensive study of particular microbiological topics not otherwise offered in the curriculum.

PCB6566 (Chromosome Structure and Function): Structural organization and function of the prokaryotic and eukaryotic chromosome: euchromatin/ heterochromatin, replication, repair, DNA sequence organization and changes during differentiation and development.

PCB6935 (Advanced Topics in Genetics): An intensive study of particular genetic topics not otherwise offered in the curriculum.

PCB7235 (Reproductive Immunology): Molecular and cellular interactions in early development, ontogenetics, and mother and fetus.

Department of Chemistry and Biochemistry

CHM5305 (Graduate Biological Chemistry). Structures of biological molecules; Biochemical reaction mechanisms; Enzyme kinetics; Biomolecular thermodynamics; Biomolecular spectroscopy.

CHM6382 (Advanced Biological Chemistry): In depth exploration of one or more biological chemistry areas, for example, use of multinuclear NMR in examining nuclear acids and proteins; biosynthesis of toxins, roles of porphyrins. Topics covered vary with instructor.

Department of Biomedical Engineering

BME5573 (Nanomedicine): This course was designed for the advanced undergraduate & graduate students at FIU. The course was developed and delivered for the first time in Spring 2008. The aim of the course is to acquire basic knowledge about nanomedicine in general, and about its applications in particular. Emphasis will be on the applications of nanotechnology in measurements and biosensors, therapy and diagnosis, surface biofunctionalisation, biocomponent assembly, drug design and drug deliveries, BioMEMS/NEMS, nanotoxicity, tissue engineering, medical imaging, entrepreneurship and environmental health.

BME6532 (Molecular Imaging): Production of PET and SPECT isotopes and radiopharmaceuticals, pharmacokinetics and experimental models of nuclear medicine tracer kinetics, imaging of molecular processes and function

BME6564 (Optical Imaging Biomedicine): Optical techniques for imaging the structure and function of biological tissues. Modeling of light transport in tissue (forward problem) and image reconstruction (inverse problem). The basic physics and engineering of each optical based imaging technique will be covered.

BME6565 (Quantitative Microscopy and Visualization): Practical and useful projects in optical, confocal, near field, scanning probe and other advanced microscopy and cytometry. Spatial and spectral quantitation of physiologic measures in living tissue.

BME6990/6545: (Biosensers&Nanobioelectronics): This course is meant to provide an overview of the field of Bioelectronics with a focus on the development of electrical biosensors. It covers the principles, technologies, methods and applications of biosensors and bioelectronics. After taking the course, the students are expected to understand the fundamentals of bioelectrochemistry, nanotechnology, biological recognition mechanism, principles of biosensors, and their application in medical applications.

Department of Computer Science

CGS5166 (Introduction to Bioinformatics Tools): Introduction to bioinformatics; analytical and predictive tools; practical use of tools for sequence alignments, phylogeny, visualizations, pattern discovery, gene expression analysis, and protein structure.

STA6176 (Biostatistics) Statistical analysis of data encountered in medical sciences. Analysis of count data, Kaplan-Meier survival analysis, Cox proportional hazards model, analysis of covariance, logistic regression, etc.

Supplemental Table 2: Extramural grant support in the HWCOM.

Faculty	Department	Open Grants	Award Amount	Duration	12 month annualized	Annualized Total		Peer Reviewed Articles
Joe Leigh Simpson	Genetics	C76HF14595	$235,620	7/09-6/11	$117,810			3
		W81XWH-10-1-0732	$1,401,000	9/10-9/12	$700,000	$817,810		
Barry P. Rosen	Biochemistry	R37GM055425	$5,000,000	9/10-8/15	$1,000,000	$1,000,000		9
Alexander I. Agoulnik	Genetics	R21HD059951	$404,220	2/9-12/11	$138,590			9
		R21HL093605	$178,500	8/09-6/12	$61,200			
		R03MH085705	$25,000	9/09-8/11	$12,500	$212,290		
Irina Agoulnik	Cell Biology	R21CA129265	$379,913	3/10-9/11	$182,358			3
		W81XWH-10-1-1022	$108,750	9/10-9/11	$108,750	$291,108		
Rene J. Herrera	Genetics	SC1GM083685	$1,400,095	5/08-3/12	$373,359	$373,359		12
Kalai Mathee	Microbiology	SC1AI081376	$1,376,800	8/08-7/12	$344,200			5
		M156626	$205,676	5/10-12/11	$137,117	$481,317		
Madhavan Nair	Immunology	R01MH085259	$1,687,310	7/10-2/15	$361,566			5
		R01DA021537	$1,734,382	9/06-8/12	$346,876			
		R37DA025576	$1,657,440	9/08-8/13	$331,488			
		R01DA027049	$3,300,000	8/09-5/14	$660,000	$1,699,931		
			$19,094,706			$4,875,815		46

Assessment of Technology Capacity

The Division of Information Technology provides and maintains a highly redundant and resilient network to allow users access to university resources and the Internet. The network supports 6,000 Voice over Internet Protocol (VoIP) phones, 25,000 end stations, the e-library, as well as all the student housing complexes. The Division provides detailed configuration information for connecting students' computers to the university's network. As a research university, FIU is a member of the high-speed network Internet2 and National Lambda Rail (NLR), an integration of Layer 3 Internet services that provides powerful research, financial support, and performance benefits. The Division provides a free high-speed wireless network to the university community from a variety of locations on campus, including common usage areas and all general-purpose classrooms. The wireless network allows students, faculty, and staff to gain access to the Internet without having to physically connect their computers with a network cable. The wireless capability in the classroom facilitates and enhances the faculty's use of technology in teaching.

The Division provides central resources, training, and services to support faculty, staff, and student access to technology and in the use of technology. Services are available through multiple channels including online, telephone, and in-person. The open and instructional labs provide access and support to students and faculty on specific and major computer applications. The Division provides instruction, consultation, and support in the use of multimedia equipment to faculty and students. Services include delivery of equipment to classrooms, labs and conference rooms; technical and set-up support for multimedia equipment use in classrooms and special events or presentations; short term loan of equipment for faculty and students; and project planning for multimedia equipment installations. The Division's Training Center offers training sessions and workshops that focus on the skills required to make the most effective and efficient use of computing resources and desktop applications. These courses improve the office automation skills and job performance of university personnel as well as enhance the instructional mission of the university by training the faculty in the use of technology in the classroom. The Division's Support Center provides online, telephone, and walk-in support to all faculty, staff, and students. Support to the desktop is available through the Division's Call Center. Students and faculty can either call, walk-in or send email at any time during business hours.

Proposed Ph.D. Program in Basic Biomedical Sciences in the

The Herbert Wertheim College of Medicine at

Florida International University

Consulting Report Date: August 9, 2011

Report Submitted By: Daniel A. Walz, Ph.D.

Associate Dean for Research and Graduate Programs and Professor of Physiology

Wayne State University School of Medicine

Detroit, MI 48201

Campus Visit: August 8-9, 2011

Summary: The College of Medicine proposes to establish a Ph.D. program in Basic Biomedical Sciences at Florida International University that will be multidisciplinary in nature and is designed to successfully recruit four highly qualified students per year over a five year period so that this doctoral program reaches a steady state of approximately 20-25 students. This program is designed to fulfill several critical needs of the College of Medicine including but not restricted to the essential need for the training of medical students with an exposure and functional experience in biomedical research as well as the ability to attract, sustain and retain biomedical research faculty to the College of Medicine. To fulfill these essential objectives Florida International University and its College of Medicine have promised financial assistance for each of these pre-doctoral students in the form of a combination of institutional, college and research investigator financial support for each student's tuition and stipend assistance that is offered at a regionally competitive level. The pre-doctoral students will receive their initial year of didactic education in a side-by-side relationship with the medical students to better introduce the pre-doctoral students to the basic medical sciences from a medical perspective and to promote the co-mingling of medical students with research students so that each student population can better learn with one another. The current faculty members of the College of Medicine each has an extramurally funded research program and, as such, has the capability of supporting individual students. The proposed program integrates well with offerings in the College of Arts and Sciences as well as the College of Engineering and Computing so that students from

each of these colleges can and likely will share didactic courses and research opportunities.

The proposed program is very well designed, is well aligned with the mission of the college and university, and will significantly benefit the students, residents and businesses of the greater Miami area as well as the State of Florida. **It is thus without reservation that I strongly recommend the implementation of the proposal to establish a Ph.D. program in Basic Biomedical Sciences in the College of Medicine at Florida International University.**

This report has been crafted to emphasize the strengths and weaknesses, opportunities and threats (SWOT) of this proposed program

Strengths: As with any doctoral program, the strength resides in the faculty. In this proposed program that is equally true. Having spent two full days in meeting with a spectrum of constituents who will be a part of this program I have been impressed with the uniformity of enthusiasm for the program and the understanding of how the proposed program will enhance their own programs and interests. The faculty within the College of Medicine each brings a solid background of funded research to the program and an awareness of the importance of graduate students to the vitality and vibrancy of research. The College faculty also embraced the opportunity to have students discovering science as it has an impact on the human condition in a well-controlled laboratory environment. The research faculty members have very solid records of publication in peer-reviewed journals and the proposed curriculum is designed to require students to have at least three such publications completed prior to or immediately upon completion of their training. Such students will have a substantially enhanced attractiveness to employers. Highly trained students will similarly increase the likelihood that the faculty will retain a competitive advantage for continuous extramural support of their research, thereby enhancing the economic value of Florida International University to the region and the state. This program also integrates well with the university's mission to expand its research portfolio by increasing the role of the College of Medicine to represent at least 50% of the institution's overall funded research programs. In order to achieve this level of expectation the College of Medicine must have a graduate research program in addition to its medical education program.

There are well designed plans for a new research building adjacent to the research laboratories shared with the College of Arts and Sciences and the College of Public Health and Social Work. As described throughout the program visit, recruitment offers have already been extended to several faculty candidates and new, unassigned laboratory space is already in place for these recruitments. Thus present and future

capacity exists to accommodate the placement of four doctoral students in each of the next five years.

An additional strength resides in the rich and diverse population of potential students who reside in the greater Miami area as well as throughout the State of Florida. The area is especially fortunate to have immediate access to a numerically large and highly baccalaureate-educated population of Hispanic students. Florida International University has a well-established record of providing educational opportunities to many first-generation in college students and the opportunity will now exist to attract the best of these students into biomedical research careers at Florida International University while concurrently retaining their close proximity to home and family. This is an extraordinary and unique asset to the region and state.

Weaknesses: There are but a few weaknesses in the program. Since the program has yet to receive approval not all of the didactic courses to be offered have been fully developed. This will change as additional students are recruited. A well-articulated recruitment plan is not fully developed so that prospective students throughout the state and region become aware of this program. The proposal correctly places a significant emphasis on the value of these Ph.D. students to the local economy. However, career development in the life sciences most often is extended into at least one period of post-doctoral training and the proposal is silent on this topic. It should be noted that placement of Ph.D. students into post-doctoral positions has the added value of introducing the institutions of post-doctoral placement to Florida International University and is an additional recruitment opportunity for new Ph.D. applicants to locate in the Miami and Florida area.

As the program grows and is successful the university and its colleges will need to develop a robust mechanism to inform faculty and students from all of the life science programs as to seminars and other one-time educational offerings. The students indicated that they rarely learn of seminars in other colleges unless a colleague brings it to their attention.

The proposed didactic curriculum should consider adding a requirement that every student in the proposed program must take a course in computing and informatics, an offering sometimes referred to as bioinformatics. The complexity of gene and protein expression patterns, as but one example, requires very sophisticated computation analyses. Such a course will allow the student to read and interpret the scientific literature as well as to understand the body of data that is generated within their own research studies.

The proposal will benefit from several explicit examples of existing collaborations between faculty in the College of Medicine and other colleges within the university.

Opportunities: The greatest opportunity in this proposal lies in the ability to create a new and unique doctoral research program that transcends traditional departments and encompasses open-ended and highly adaptable research training for tomorrow's research investigators. Life science research is rapidly transitioning from a single investigator undertaking to one where collaboration and teams of experts come together to focus a problem that has a direct relationship to human health. This program fulfills such a need. By bringing faculty members and students of the Biomedical Engineering program with an interest in sensors together with faculty and students with expertise in computational science into a research relationship with faculty and students in the basic biomedical sciences complex problems can be better addressed and more quickly resolved by such a team.

As mentioned in the strengths section, the rich and diverse student population in the State of Florida represents an opportunity unavailable to many institutions anywhere else in the country. There are several NIH and NSF training programs that will be uniquely available to support the proposed program, especially if such applications focus on the recruitment and retention of Hispanic students into basic biomedical and bioengineering programs. Special consideration might also be given to the recruitment of female students since, among many diverse populations, females are significantly fewer in number in these programs.

The training of students seeking a combined M.D./Ph.D. degree, a high priority of the NIH, is completely dependent upon the establishment of this Ph.D. program in the basic biomedical sciences. Thus, as the college looks forward to attracting such students there first needs to be evidence of a solid and successful Ph.D. program. This proposal fulfills such a requirement.

Threats: No one has the ability to predict the future funding status of any researcher and this is particularly true in today's NIH environment. What can be stated with near-certainty is that without doctoral graduate students participating in these funded research programs such funded research is a significant risk. There is also the possibility that there will be a temporary interruption in a faculty member's funding; however the College of Medicine has provided written assurance within this proposal that every student will be financially supported throughout their training program.

Every institution faces the possibility that individual faculty members might be recruited to another institution and might also offer the opportunity for graduate students in the research-intensive phase of their training to accompany them. While this is a legitimate threat, it is balanced by the knowledge that newly recruited faculty will probably bring additional graduate students with them as they re-locate to Florida International University. The absence of a doctoral program would be a serious constraint on the recruitment of well-funded researchers who already have graduate students working and studying with them. So will it might be a threat when viewed from within, it is also an opportunity when perceived as a chance to recruit additional investigators.

Respectfully submitted,

Daniel A. Walz

August 9, 2011

FLORIDA STATE UNIVERSITY | OFFICE *of the* PROVOST

September 1, 2011

Dr. Douglas Wartzok
Florida International University
University Park
Miami, Florida 33199

Dear Doug:

I apologize for the lateness of this letter, but your request came just before I arrived at Florida State University and it has just come to my attention today.

Based on the information we have been provided, your proposal makes sense for a new medical school to develop a biomedical science research program. This program will provide the academic and research back drop for the medical school, to allow medical students to participate in basic science research as students and to have a place for their basic science faculty to grow their own careers.

I do not see any conflict and am supportive of Dean Rock's proposal. While FSU has a strong PhD program that is growing, we do not anticipate developing an MD / PhD track as described in the attachment. It is not consistent with our mission and it is not in our strategic plans.

Regards,

Garnett S. Stokes
Provost and Executive Vice President
for Academic Affairs

xc: Dorothy Minear
Richard Stevens

212 Westcott Building, Florida State University, Tallahassee, Florida 32306-1310
Telephone 850.644.1816, Fax 850.644.0172 • http://provost.fsu.edu/

USF
UNIVERSITY OF
SOUTH FLORIDA

August 30, 2011

Douglas Wartzok, PhD
Provost and Executive Vice President
Florida International University
Modesto A. Maidique Campus, PC 526
Miami, Florida 33199

Dear Provost Wartzok:

We are in receipt of the proposal for your new PhD program in Basic Biomedical Sciences through the Herbert Wertheim College of Medicine and pleased to inform you that we believe this degree program has the potential to make important contributions to the SUS and to the State of Florida.

The proposal has been shared with our Graduate School and the USF College of Medicine who report that this proposal demonstrates a quality program with a new approach to training doctoral students in the basic medical sciences through a "bench to bedside" focus. This will be effectively accomplished by training doctoral students alongside medical students and could lead to an enhanced team approach, integrating the basic and clinical sciences in terms of research and education.

We believe that this program will help meet important workforce needs of the State in terms of developing a cadre of high quality life science researchers for both academe and industry. This additional doctoral program will further strengthen the State's reputation in the medical sciences and is a valuable complement to existing doctoral programs at other state institutions. At this time we know of no conflict with the USF Ph.D. in Medical Sciences and look forward to future opportunities for collaboration.

We wish you the best of luck in your new endeavor, and if we can be of assistance, please feel free to contact me.

Sincerely,

Ralph C. Wilcox, Ph.D.
Provost and Executive Vice President

Office of the Provost and Executive Vice President
University of South Florida · 4202 East Fowler Avenue, CGS 401 · Tampa, Florida 33620-6100
(813) 974-2154 · FAX (813) 974-5093

UF UNIVERSITY of FLORIDA

Office of the Provost
and Senior Vice President

235 Tigert Hall
PO Box 113175
Gainesville FL 32611-3175
352-392-2404 Tel
352-392-8735 Fax

August 4, 2011

Douglas Wartzok, Ph.D.
Provost and Executive Vice President
Chief Operating Officer
Florida International University
Modesto A. Maidique Campus, PC 526
Miami, FL 33199

Dear Doug:

I am writing in response to your letter dated July 27, 2011 regarding FIU's proposed PhD in Basic Biomedical Sciences.

We do not see any conflict with UF graduate programs. Since we believe your program will further the state's goals to grow a STEM workforce with advanced training and to enhance an atmosphere attractive to high-tech industry, we endorse the creation of this new doctoral program.

Sincerely yours,

Joseph Glover
Provost

xc: Dean Michael Good

University of Central Florida

Office of the Provost and Vice President
for Academic Affairs

August 2, 2011

Dr. Douglas Wartzok
Provost and Executive Vice President
Florida International University
Office of the Provost
University Park
Miami, FL 33199

Dear Doug:

I shared your proposal to start a Ph.D. program in Basic Biomedical Sciences at Florida International University with Dr. Deborah German, Dean of our College of Medicine, and Dr. P. E. Kolattukudy, Director of the Burnett School of Biomedical Sciences in the College of Medicine. Both of them feel the addition of this program is appropriate for the Herbert Wertheim College of Medicine and that any impact on enrollment in UCF's Ph.D. program in Biomedical Sciences would be minimal. I concur with their assessment.

Best of luck with this new program. Please do not hesitate to contact me if we can help in any way.

Regards,

Tony G. Waldrop, Ph.D.
Provost and Vice President for Academic Affairs
Professor of Biomedical Sciences

c: Vice President and Dean Deborah German
Dr. P. E. Kolattukudy

P.O. Box 160065 • Orlando, FL 32816-0065 • (407) 823-2302 • FAX (407) 823-5407

FIU | FLORIDA INTERNATIONAL UNIVERSITY

February 9, 2011

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Barry:

I am very pleased that the Herbert Wertheim College of Medicine at Florida International University is planning to create a new doctoral program in biomedical sciences. The Robert Stempel School of Public Health and Social Work strongly supports your proposal. Such a program will serve a great need in the Miami area for biomedical scientists and will complement our graduate programs in Environmental and Occupational Health, Epidemiology and Dietetics and Nutrition.

I wish your program great success.

Sincerely,

Michele Ciccazzo, PhD, RD
Interim Dean

ROBERT STEMPEL COLLEGE OF PUBLIC HEALTH AND SOCIAL WORK
OFFICE OF THE DEAN

Dietetics & Nutrition • Epidemiology & Biostatistics • Environmental & Occupational Health • Health Policy & Management
Health Promotion & Disease Prevention • School of Social Work

11200 S.W. 8 Street, HLS II 390W2, Miami, FL 33199 • Tel: 305.348.4903 • Fax: 305.348.7782 • www.fiu.edu

FIU | FLORIDA INTERNATIONAL UNIVERSITY

2 August 2011

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Studies
Herbert Wertheim College of Medicine
AHC2, 673A
Florida International University

Dear Dr. Rosen:

The College of Arts and Sciences (CAS) and the School of Integrated Science & Humanity (SISH) look forward to working with the Herbert Wertheim College of Medicine (COM) faculty to educate students enrolled in the Ph.D. in Biomedical Sciences.

The Biomedical Science Ph.D. will present opportunities to enhance the collaboration between Arts & Sciences and Medicine in research and graduate education. Faculty in the COM are collaborators in the proposed CAS Institute of Biomolecular and Biomedical Sciences (IBBS).

Core facilities of the IBBS including an Imaging Facility (Confocal microscope, atomic force microscope, near infrared fluorescence imaging, micro-PET/CT) and a Proteomics/Mass Spectrometry Facility (ultra high speed centrifuge, mass spectrometer, HPLC) will be available for students in the Biomedical Sciences Ph.D. program. Core Facilities of the Biochemistry doctoral program that will be shared with the Biomedical Sciences Ph.D. program include Electron Microscope facilities (one in Biological Sciences and one in Earth Sciences); a DNA Sequencing facility: a Small Animal facility (Biological Sciences);and an NMR facility (Chemistry).

We look forward to working with the College of Medicine's proposed Biomedical Sciences Ph.D. program to our mutual benefit regarding doctoral student production and research collaboration.

Sincerely,

Kenneth G. Furton, Ph.D.
Dean

Suzanna Rose

Suzanna Rose, Ph.D.
Director, SISH

Office of the Dean
College of Arts and Sciences
11200 S.W. 8th Street, ECS 450 • Miami, FL 33199 • Tel: (305) 348-2864 • Fax: (305) 348-4172

FIU | FLORIDA INTERNATIONAL UNIVERSITY

February 17, 2011

Barry P. Rosen, PhD
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Barry,

I am very pleased that the Herbert Wertheim College of Medicine at Florida International University is planning to establish a new doctoral program in biomedical sciences. The College of Engineering and Computing strongly supports your proposal. Such a program will serve a great need in the Miami area for biomedical scientists and will complement our program in Biomedical Engineering.

I wish your program great success, and look forward to the opportunity to work together on this and future initiatives.

Sincerely,

Amir Mirmiran, PhD, PE, FASCE, FACI
Professor and Dean

CC: Douglas Wartzok, Executive Vice President and Provost
John Rock, Founding Dean, College of Medicine, and Senior VP for Medical Affairs
Ranu Jung, Chair, Department of Biomedical Engineering

OFFICE OF THE DEAN
COLLEGE OF ENGINEERING AND COMPUTING

10555 W. Flagler Street, EC 2430 Miami, FL 33174 • Tel: 305-348-2522 • Fax: 305-348-1401 • www.eng.fiu.edu

Raul Herrera, MD
Chief Research Officer
3100 SW 62nd Ave
Miami, FL 33155
Phone: 305-663-8542
Fax: 786-268-1801

January 11, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

The Miami Children's Hospital Research Institute is pleased to support your proposal for a new graduate program in biomedical sciences at Florida International University Herbert Wertheim College of Medicine.

Your new program would be a welcome source of biomedical scientists who could contribute to our research and clinical laboratories at Miami Children's Hospital.

Over the next decade we will have considerable growth and would anticipate employment opportunities for graduates of your program. We look forward to being able to recruit these students who are already long-term residents of southern Florida and are committed to enhancing the scientific prominence of the State.

Please count on our support for the proposal.

Sincerely,

Raul Herrera MD.

Raul Herrera, M.D.
Chief Research Officer
Miami Children's Hospital

SYLVESTER COMPREHENSIVE CANCER CENTER
UNIVERSITY OF MIAMI HEALTH SYSTEM
MILLER SCHOOL OF MEDICINE
UNIVERSITY OF MIAMI

Joseph D. Rosenblatt, M.D.
Professor of Medicine, Microbiology and Immunology
William J. Harrington Chair in Hematology
Chief, Hematology-Oncology Division
Associate Director for Clinical and Translational Research, SCCC

February 15, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

I am very pleased that the Herbert Wertheim College of Medicine at Florida International University is planning to create a new doctoral program in biomedical sciences. Such a program will serve a great need in the Miami area for biomedical scientists.

The Sylvester Comprehensive Cancer Center strongly supports your new graduate program proposal.

I believe that this will become an excellent source of biomedical scientists who will contribute to the research and clinical programs in academia and clinical laboratories in South Florida. The Sylvester Cancer Center would be very interested in recruiting future graduates of your program. Over the next decade I anticipate substantial growth in the Sylvester Cancer Center. Over the next five years we anticipate filling at least 50-100 positions for research scientists with doctoral degrees. These employment opportunities would be best filled by individuals with strong ties to the Miami-Dade area such as FIU graduates.

I wish your program great success.

Sincerely yours,

Joseph D. Rosenblatt, M.D.
Interim Director, Sylvester Comprehensive Cancer Center

Division of Hematology-Oncology
1475 NW 12th Avenue (D8-4), Suite 3300 | Miami, FL 33136
Phone: (305) 243-4860 | Fax: (305) 243-9161
jrosenblatt@med.miami.edu

Mount Sinai
MEDICAL CENTER

May 14, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

I am writing this letter on behalf of Mount Sinai Medical Center to offer our enthusiastic support for the creation for a new graduate program in biomedical sciences at Florida International University Herbert Wertheim College of Medicine. Your innovative curriculum is distinctive in training research students side-by-side with medical students under the guidance of research physicians. There is a tremendous need for biomedical scientists in most regions of the U.S., especially in Florida. As you plan to recruit long-term residents of South Florida into your program, we can anticipate that many of your graduates will pursue careers in the Miami-Dade area.

At Mount Sinai our mission is to provide excellent care to our community, educate the next generation of physicians and do research to help solve problems. Our collaboration with FIU provides opportunities for us to further our academic mission. Our researchers are currently focused on cardiac, neurologic, oncology, and pulmonary disease. The collaboration with researchers of FIU and having Ph.D. students participate with our researchers should benefit our community, students, and researchers.

We believe an M.D./Ph.D. initiative will have a positive impact on the training of future physician scientists for the State of Florida. We look forward to working with you and meeting the increased demand for biomedical and physician scientists.

Sincerely yours,

Robert C. Goldszer, MD, MBA
Senior VP, Chief Medical Officer
Mount Sinai Medical Center

BIOFLORIDA

Advancing Bioscience in Florida

January 26, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

BioFlorida is very excited that the Florida International University Herbert Wertheim College of Medicine is in the process of establishing a new doctoral program in biomedical sciences. We believe that this program should satisfy an important requirement for biomedical and life science companies not only in the South Florida area but for the state as a whole.

As the statewide trade association for the bioscience industry, BioFlorida was formed to advance Florida's life sciences cluster, and represents approximately 230 member companies, institutes and supporting organizations in the state of Florida.

We are confident that further expansion of this industry is forthcoming and these companies will be looking for qualified senior researchers and scientists such as will be coming from this program. We can also anticipate that with the growth of the FIU program, companies will find Florida even more attractive as a home for future bioscience research.

Again, we welcome the Herbert Wertheim College of Medicine biomedical science PhD program into the State of Florida and look forward to your graduates in our industry.

Sincerely yours,

C. Russell Allen
President and CEO

525 Okeechobee Blvd., Suite 1500, West Palm Beach, Florida 33401
Tel: (561) 653-3839 | Fax: (561) 653-3840 | www.bioflorida.com

Heat Biologics

January 27, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

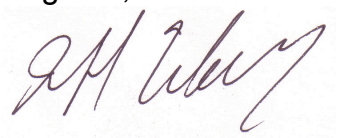
Heat Biologics is writing in support of the creation for a new graduate program in biomedical sciences at Florida International University Herbert Wertheim College of Medicine. We believe this initiative will have a large impact on sustaining the State's investment in Biomedical Technology.

This innovative curriculum will be an important source of biomedical scientists who could prosper in our research and clinical laboratories at Heat Biologics, a Miami-based biomedical spin-out from the University of Miami focused the development of immunotherapies for the treatment of a wide range of diseases..

We anticipate that over the next 5 to10 years, our business will have considerable growth and we expect employment opportunities for at least several graduates of your program. Since these students are already long-term residents of South Florida, we look forward to being able to recruit them in that they are already committed to enhancing the scientific prominence of the State.

Again, we look forward to joining with FIU on this effort and continuing our research collaborations.

Regards,



Jeffrey Wolf
CEO
Heat Biologics, Inc.

THE BEACON COUNCIL

Miami-Dade County's Official Economic Development Partnership

80 Southwest Eighth Street Suite 2400 Miami, Florida 33130 Telephone: 305.579.1323 Facsimile: 305.375.0475 www.beaconcouncil.com E-mail: fnero@beaconcouncil.com

Frank R. Nero President & Chief Executive Officer

April 5, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

As Miami-Dade County's official economic development partnership, the Beacon Council is charged with bringing new, job-generated investments to the community, while assisting existing businesses in their efforts to expand By doing this, The Beacon Council facilitates the creation of quality jobs for each and every resident of Miami-Dade County.

Miami-Dade County is home to approximately 1,600 Life Sciences companies. These companies employ about 15,000 workers and generate more than $1.2 billion in total annual revenue. Florida International University (FIU) has been an excellent economic development partner, offering an urban, multi-campus, research university serving South Florida, the state, the nation and the international community. It fulfills its mission by imparting knowledge through excellent teaching, promoting public service, discovering new knowledge, solving problems through research, and fostering creativity.

This letter confirms our support for the proposed Ph.D. program in Biomedical Sciences at the FIU Herbert Wertheim College of Medicine. The Beacon Council is prepared to work closely with FIU in promoting this curriculum which will help attract new industry to the South Florida area as well as expanding the current workforce base. We are confident about the potential impact of this program on the local economy and on the Life Science industry in general, and we are pleased to have FIU take the initiative on such a relevant and much needed effort.

Sincerely,

Frank R Nero

Frank R. Nero
President & CEO, The Beacon Council

FRN/jd/ge

BECKMAN COULTER

April 30, 2010

Barry P. Rosen, Ph.D.
Associate Dean for Basic Research and Graduate Programs
Herbert Wertheim College of Medicine
Florida International University
11200 S.W. 8th Street, HLS 673
Miami, FL 33199

Dear Professor Rosen:

Beckman Coulter is pleased to support your proposal for a new graduate program in biomedical sciences at Florida International University Herbert Wertheim College of Medicine.

Your new program would be a welcome source of biomedical scientists who could contribute to our research and clinical laboratories at Beckman Coulter. Our current supply of local applicants is not sufficient for staffing our Florida operations, and we are very supportive of your initiative to increase and improve the pool of Ph.D. scientists that will comprise the future workforce in South Florida.

The Miami campus of Beckman Coulter develops and manufactures medical diagnostic and research products for Cellular analysis. Our portfolio comprises hematology analyzers, particle analyzers, flow cytometers and flow sorter instrumentation, along with the reagents and chemistry needed for their operation, including high volume buffers, stabilized cell controls, fluorescent beads, antibodies coupled to fluorescent dyes, and sample preparation technologies. Our equipment and reagents support many diverse fields of research and medicine, including hematology, hemostasis, immunology, cell signaling, molecular biology, biopharma, cell biology, cancer biology, stem cell biology, regenerative medicine, and cell therapy. We are actively expanding our R&D capabilities in all of these areas and recruiting talented and motivated young scientists, and supporting their education and training to become world class scientists and clinicians is very important to us.

Over the next decade we will have considerable growth and would anticipate employment opportunities for at least 20 graduates of your program. We look forward to being able to recruit students who are already long-term residents of South Florida and are committed to enhancing the scientific prominence in the local area and in the State of Florida. In addition, we believe these students would also be attracted to other company-wide job positions here locally, as well as other locations within Florida and throughout the country.

Beckman Coulter , Inc.
11800 S.W. 147th Avenue
Miami, FL 33196-2500

Mailing Address:
11800 S.W. 147th Avenue
P.O. Box 169015
Miami, FL 33116-9015

Customer Service: (800) 526-7694
Product Information: (800) 526-6932
(800) 327-6531 (305) 380-3800
Internet: www.beckmancoulter.com

BECKMAN COULTER

Again, we look forward to partnering with FIU on this endeavor and continuing our research collaborations.

Regards,

Michael R. Reed, PhD

Director, Scientific Affairs
Cellular Analysis Business Group
Beckman Coulter Inc
11800 SW 147th Ave, M/S 32-C05
PO Box 169015
Miami, FL, 33196-2500

Office: +1 305 380 4072
Mobile: +1 305 401 5008
Email: mreed@beckman.com

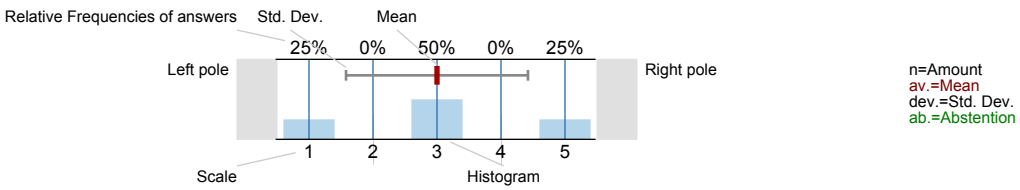
IR Survey Program Survey() No. of responses = 60

Overall indicators

Survey Results

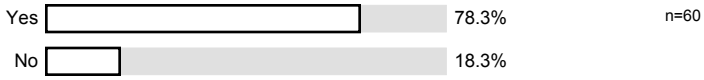
Legend

Question text



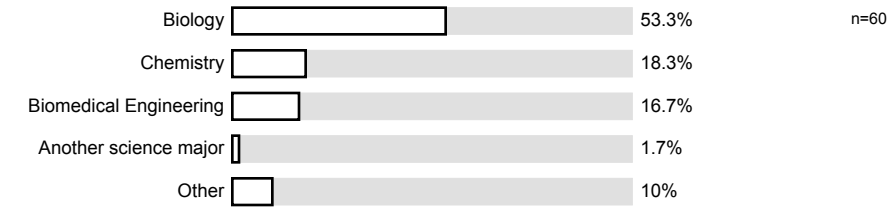
1. Please answer the following questions

1.1) 1. Would you be interested obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

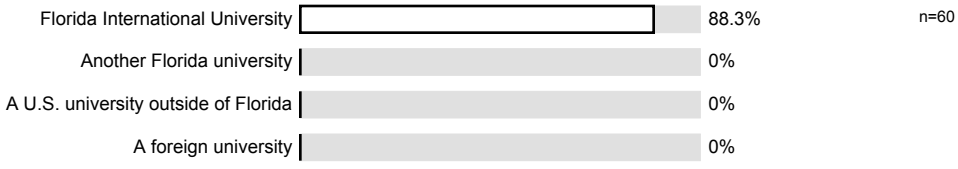


2. If you answered yes to the question above, please answer the rest of the questions.

2.1) 2. What is your current major/under graduate degree?

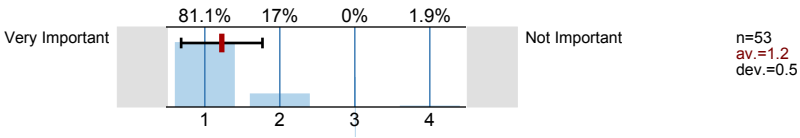


2.3) 3. Where are you receiving your undergraduate education?

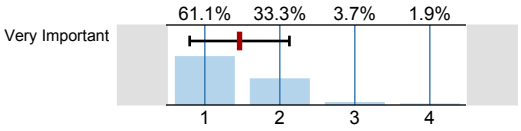


3. 4. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

3.1) Curriculum



3.2) The faculty



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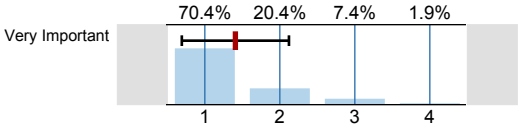
3.3) Research programs



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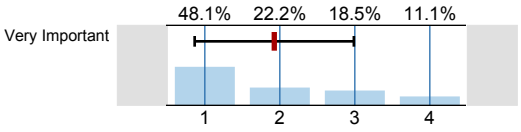
3.4) The opportunity to learn with medical students



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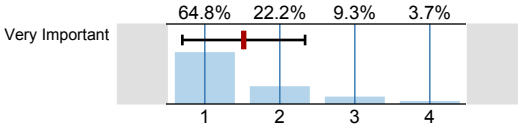
3.5) Opportunities for translational medical research



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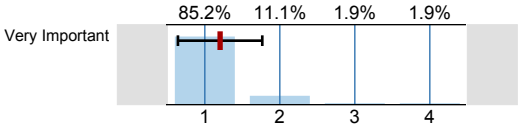
3.6) Future employment in the biomedical field



n=54
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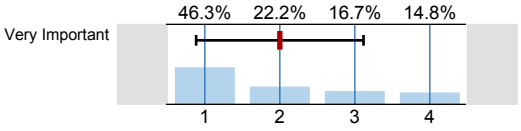
dev.=0.6

4. 5. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

4.1) Miami location



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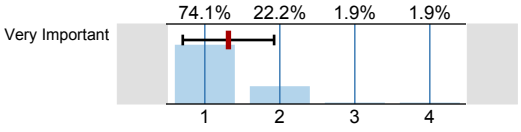
dev.=1.1

4.2) Curriculum



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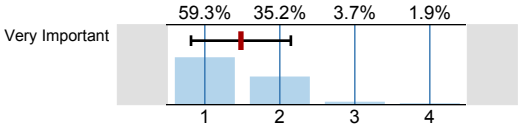
4.3) The faculty



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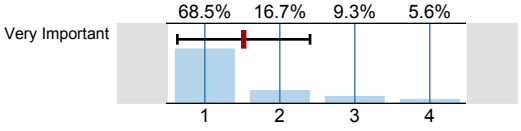
4.4) Research programs



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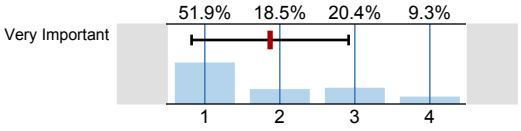
dev.=0.9

4.5) The opportunity to learn with medical students



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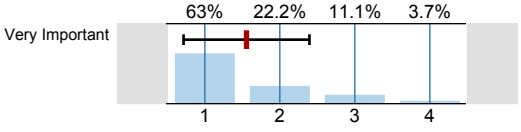
4.6) Opportunities for translational medical research



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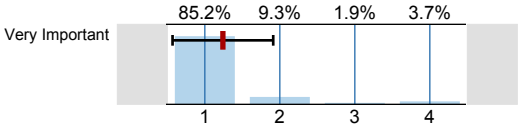
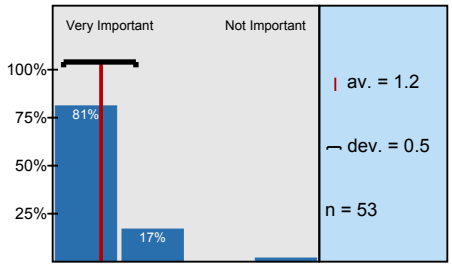
4.7) Future employment in the biomedical field



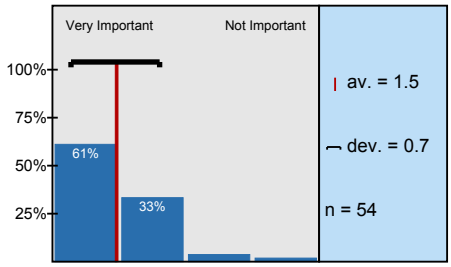
n=54
av.=1.2
dev.=0.7

Histogram for scaled questions

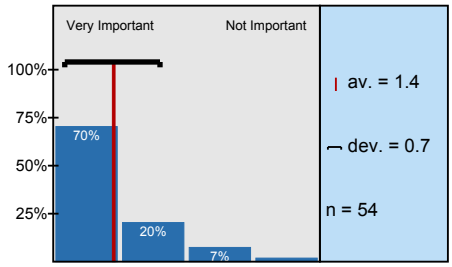
Curriculum



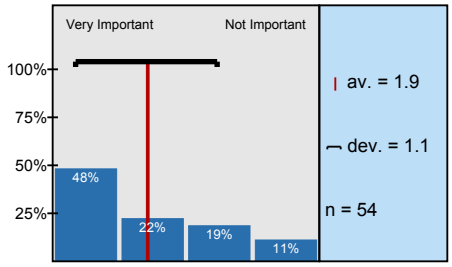
The faculty



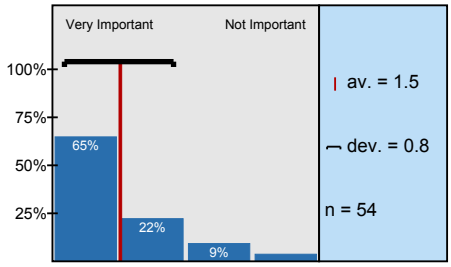
Research programs



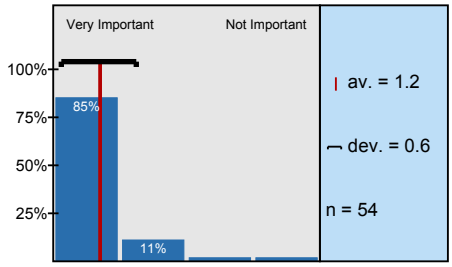
The opportunity to learn with medical students



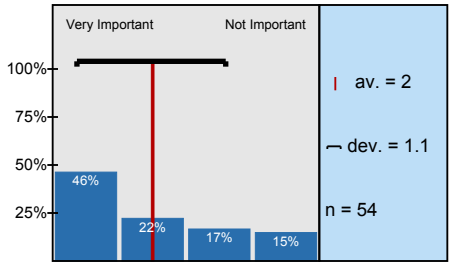
Opportunities for translational medical research



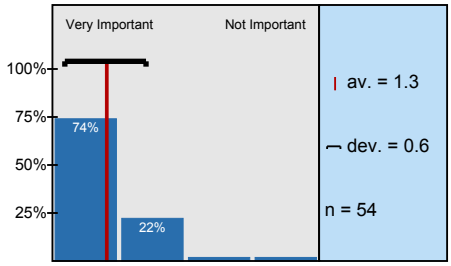
Future employment in the biomedical field



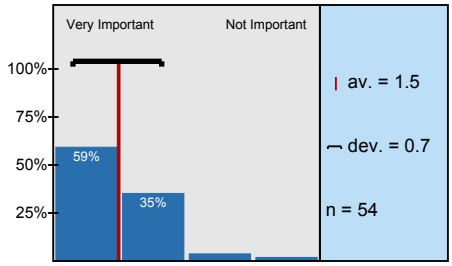
Miami location



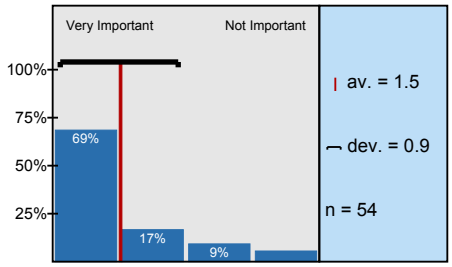
Curriculum



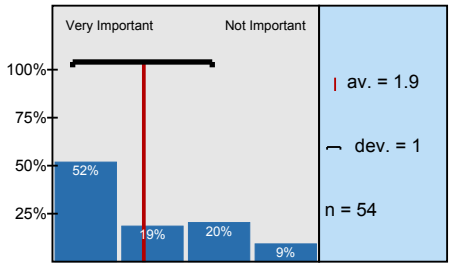
The faculty



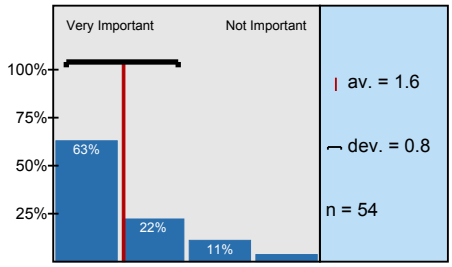
Research programs



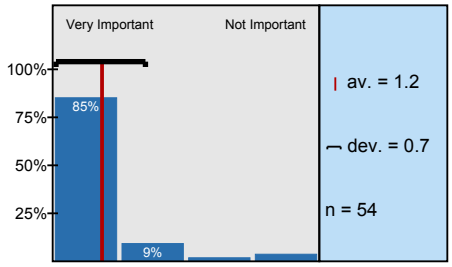
The opportunity to learn with medical students



Opportunities for translational medical research

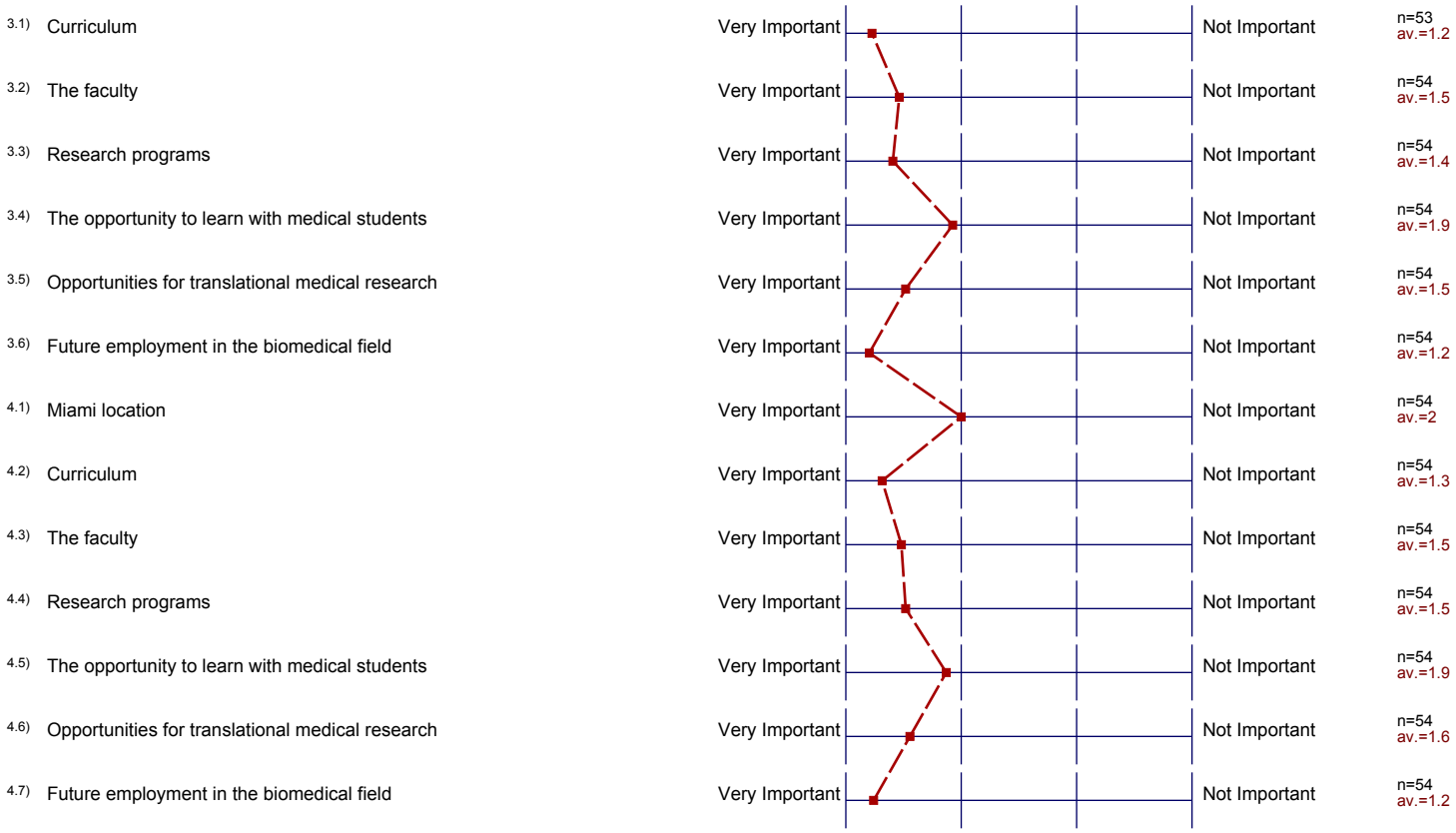


Future employment in the biomedical field



Profile

Subunit: IR Surveys
Name of the instructor: IR Survey
Name of the course: (Name of the survey) Program Survey



Presentation template

Program Survey
IR Survey
No. of responses = 60

Comments Report

2. If you answered yes to the question above, please answer the rest of the questions.

2.2) If "other" was selected, please specify:

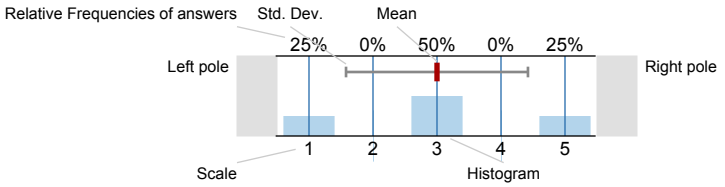
- Environmental Studies
- Health Sciences major with Chemistry minor
- Information Technology
- International Relations minor in Biology
- Psychology (2 Counts)
- test

IR Survey Program_Survey() No. of responses = 24

Survey Results

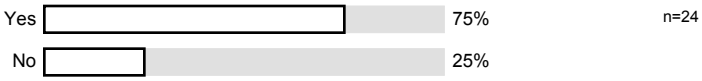
Legend

Question text

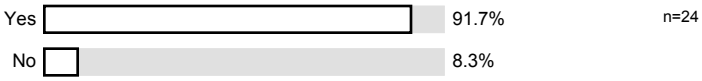


1. Please answer the following questions:

1.1) Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

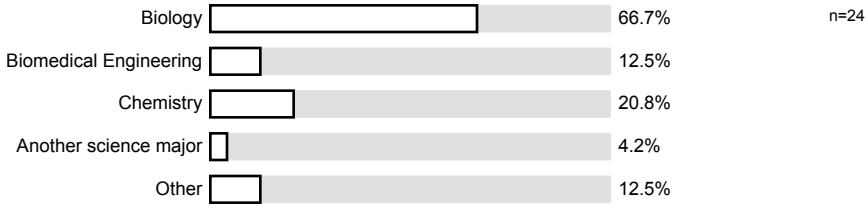


1.2) Would you be interested in obtaining a joint M.D./Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

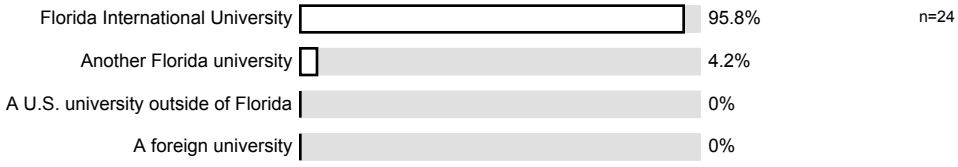


2. If you answered yes to the question above, please answer the rest of the questions:

2.1) What is your current major/undergradute degree?

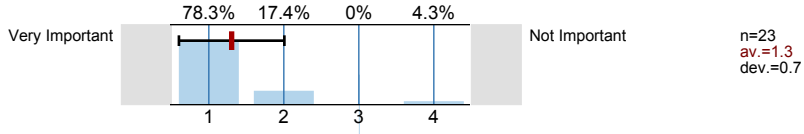


2.3) Where are you receiving your undergraduate education?

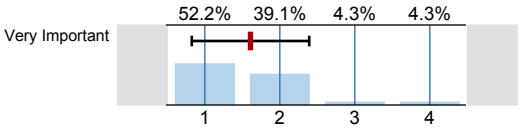


3. How important are the following factors in influencing your choice of Biomedical Sciences program in the HWCOM versus a graduate program in another FIU college?

3.1) Curriculum



3.2) The Faculty



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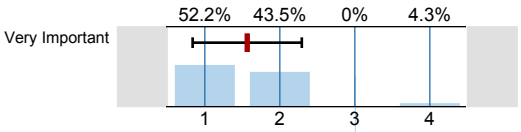
3.3) Research programs



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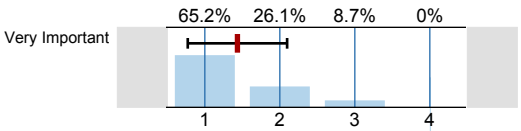
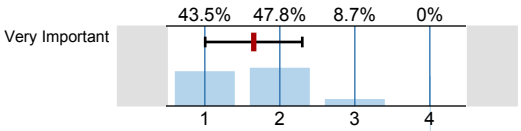
av.=1.6
dev.=0.7

3.4) The opportunity to learn with medical students



n=23
av.=1.4
dev.=0.7

3.5) Opportunities for translational medical research



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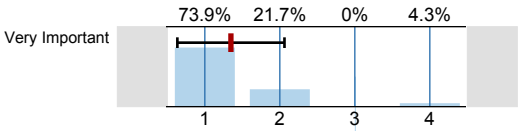
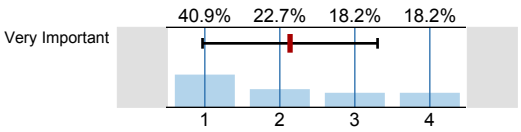
3.6) Future employment in the biomedical field



n=23
av.=1.3
dev.=0.7

4. How important are the following factors influencing your choice of the FIU HWCOM Biomedical sciences degree program versus a program at another university?

4.1) Miami location



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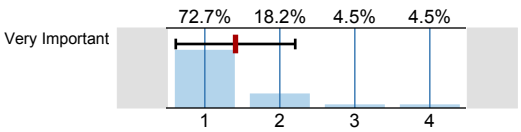
4.2) Curriculum



n=22
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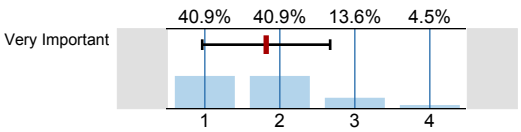
dev.=0.8

4.3) The Faculty



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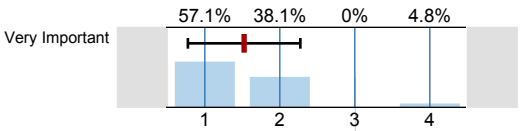
4.4) Research programs



n=21
av.=1.5
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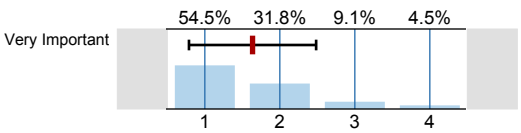
4.5) The opportunity to learn with medical students



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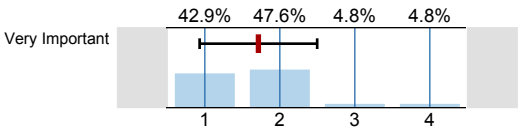
4.6) Opportunities for translational medical research



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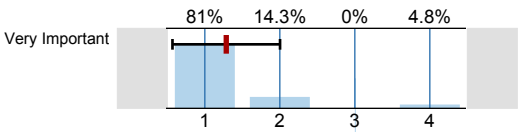
4.7) Future employment in the biomedical field



n=21
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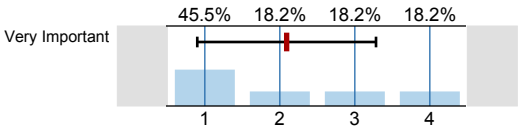
5. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

5.1) Miami location



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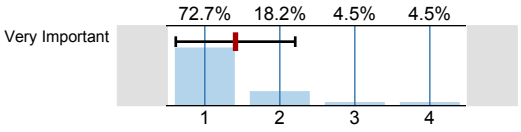
5.2) Curriculum



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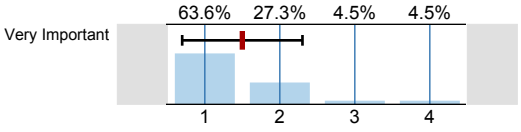
5.3) Research Programs



n=22
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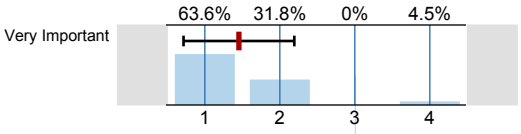
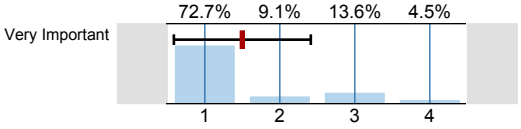
dev.=0.8

5.4) Opportunities to do clinical/translational research with FIU HWCOM faculty



n=22
av.=1.5
dev.=0.7

5.5) Future employment as a physician scientist



n=22
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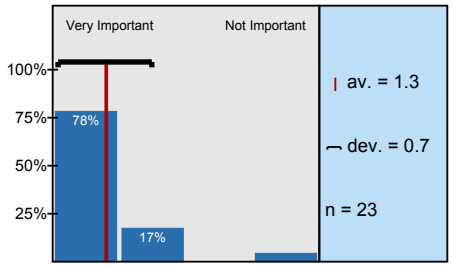
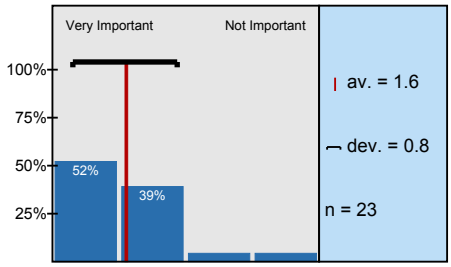
Histogram for scaled questions

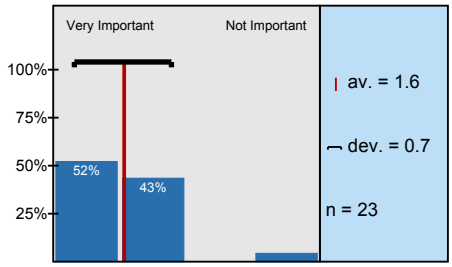
Curriculum



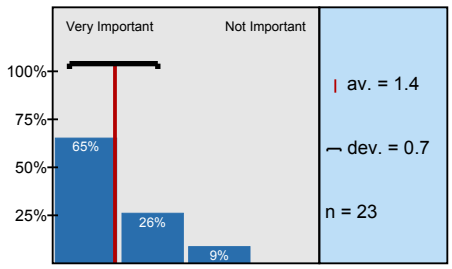
The Faculty



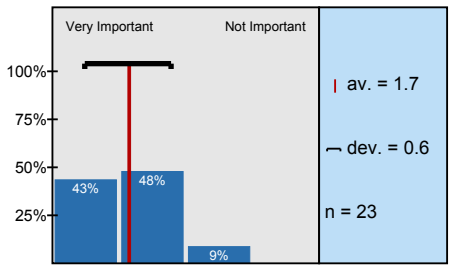
Research programs



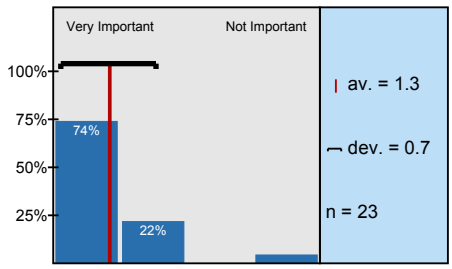
The opportunity to learn with medical students



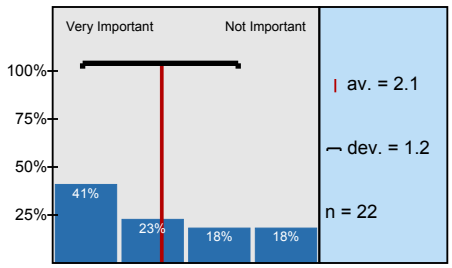
Opportunities for translational medical research



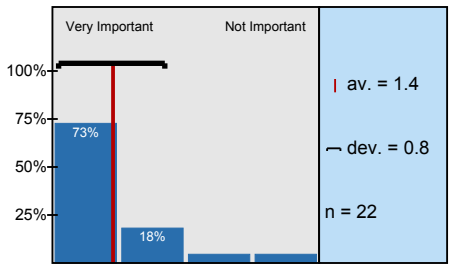
Future employment in the biomedical field



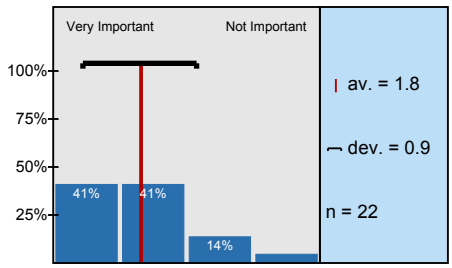
Miami location



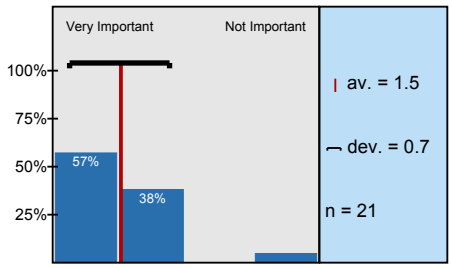
Curriculum



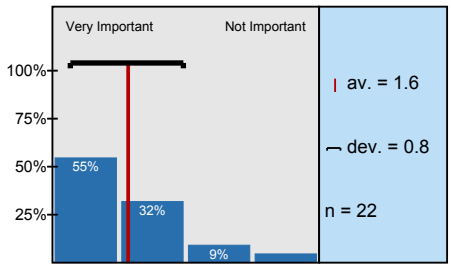
The Faculty



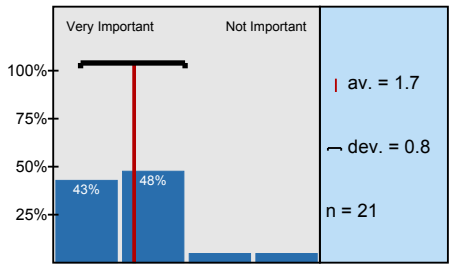
Research programs



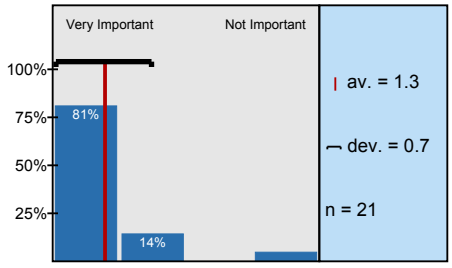
The opportunity to learn with medical students



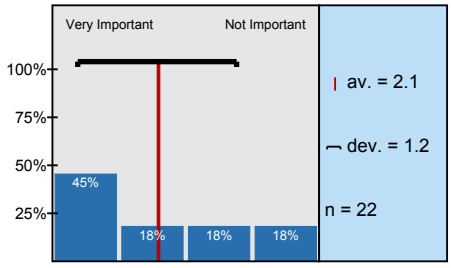
Opportunities for translational medical research



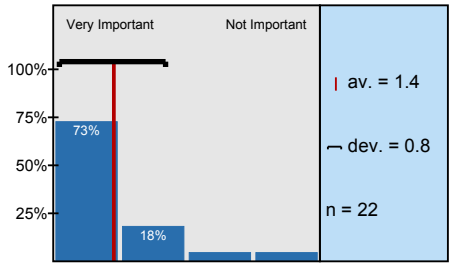
Future employment in the biomedical field



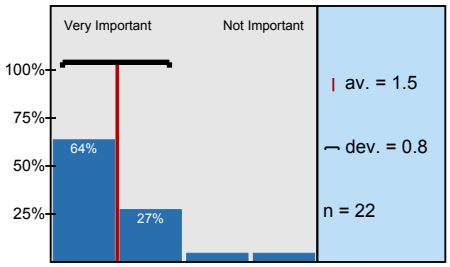
Miami location



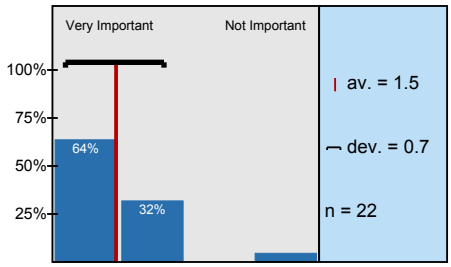
Curriculum



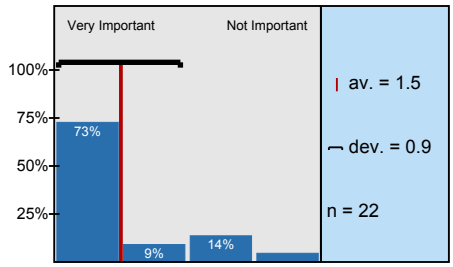
Research Programs



Opportunities to do clinical/translational research with FIU HWCOM faculty

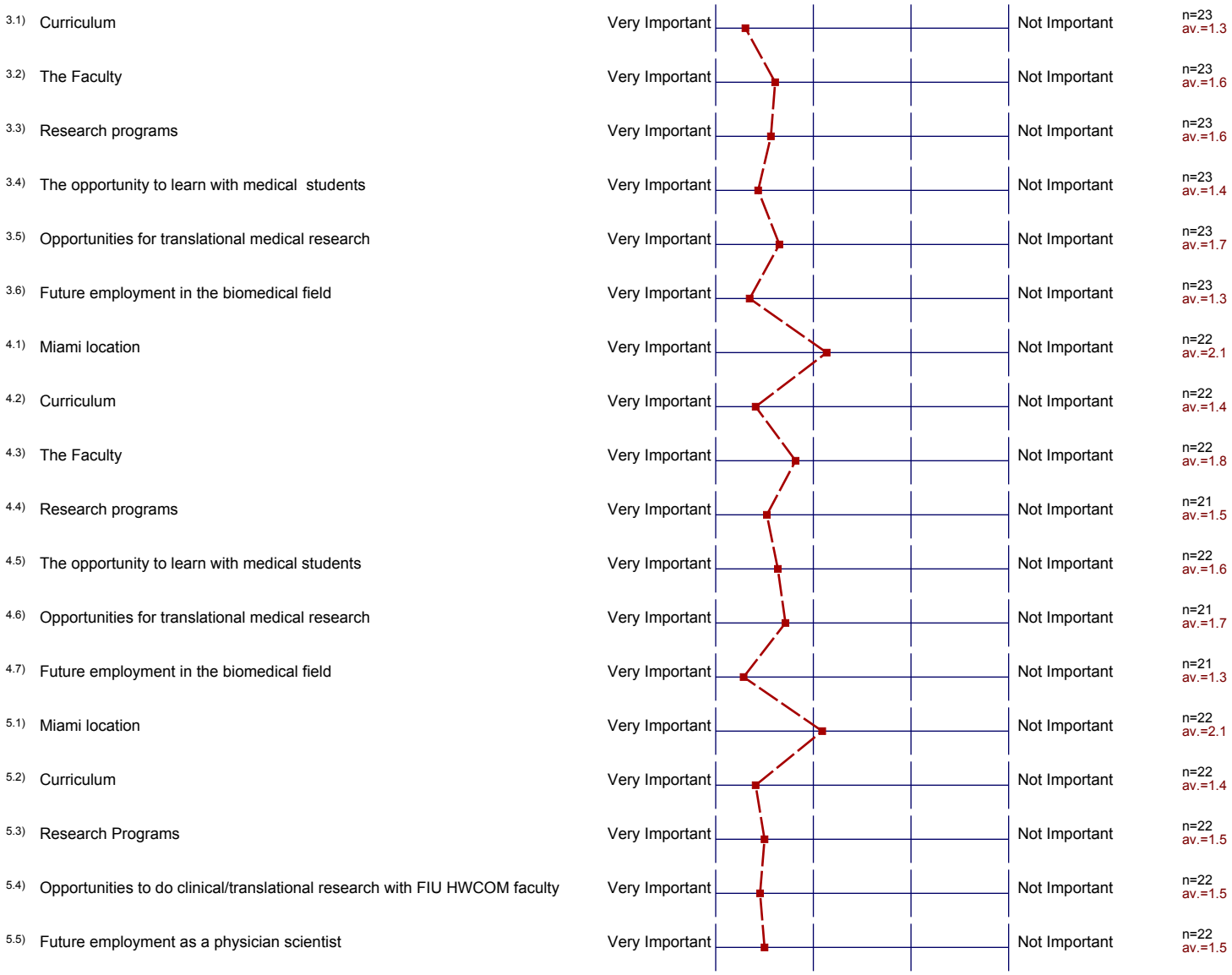


Future employment as a physician scientist



Profile

Subunit: IR Surveys
Name of the instructor: IR Survey
Name of the course: (Name of the survey) Program_Survey



Comments Report

2. If you answered yes to the question above, please answer the rest of the questions:

2.2) If 'Other" was selected, please specify:

- English, but it will probably change back to science soon.
- Pre-Med
- Psychology (2 Counts)

Default Report

Displaying **1** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.34.24

Response Started:
Wednesday, September 1, 2010 9:18:41 AM

Response Modified:
Wednesday, September 1, 2010 9:20:15 AM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

research programs

the faculty

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students		X		
Opportunities for translational medical research	X			
Future employment in the biomedical field		X		

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)

Miami location	X		
Curriculum	X		
The faculty	X		
Research programs	X		
The opportunity to learn with medical students			X
Opportunities for translational medical research		X	
Future employment in the biomedical field		X	

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **2** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.193.229

Response Started:
Wednesday, September 1, 2010 11:35:00 AM

Response Modified:
Wednesday, September 1, 2010 11:36:24 AM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

research programs

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty		X		
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		

Curriculum	X
The faculty	X
Research programs	X
The opportunity to learn with medical students	X
Opportunities for translational medical research	X
Future employment in the biomedical field	X

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **3** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
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IP Address:
131.94.22.46

Response Started:
Wednesday, September 1, 2010 2:30:07 PM

Response Modified:
Wednesday, September 1, 2010 2:32:12 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **4** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
99.35.175.62

Response Started:
Monday, September 13, 2010 2:37:06 PM

Response Modified:
Monday, September 13, 2010 2:39:51 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
The faculty	X			
Research programs		X		
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
Research Programs		X		
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **5** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
75.74.182.57

Response Started:
Monday, September 13, 2010 3:02:51 PM

Response Modified:
Monday, September 13, 2010 3:04:43 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students		X		
Opportunities for translational medical research			X	
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **6** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.186.10

Response Started:
Monday, September 13, 2010 3:04:29 PM

Response Modified:
Monday, September 13, 2010 3:06:05 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

research programs

the faculty

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum		X		
The faculty		X		
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location				X

Curriculum		X
The faculty		X
Research programs	X	
The opportunity to learn with medical students	X	
Opportunities for translational medical research	X	
Future employment in the biomedical field	X	

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location				X
Curriculum		X		
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **7** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.186.20

Response Started:
Monday, September 13, 2010 3:09:05 PM

Response Modified:
Monday, September 13, 2010 3:15:16 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

No

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

research programs

obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum		X		
The faculty			X	
Research programs	X			
The opportunity to learn with medical students				X
Opportunities for translational medical research		X		
Future employment in the biomedical field		X		

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)

Miami location		X			
Curriculum		X			
The faculty			X		
Research programs	X				
The opportunity to learn with medical students					X
Opportunities for translational medical research		X			
Future employment in the biomedical field		X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum		X		
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **8** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.31.223

Response Started:
Monday, September 13, 2010 3:38:56 PM

Response Modified:
Monday, September 13, 2010 3:40:19 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field		X		

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field		X		

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum		X		
Research Programs		X		
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist		X		

Default Report

Displaying **9** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
76.108.13.92

Response Started:
Monday, September 13, 2010 3:43:57 PM

Response Modified:
Monday, September 13, 2010 3:45:58 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

research programs

the faculty

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum		X		
The faculty	X			
Research programs	X			
The opportunity to learn with medical students		X		
Opportunities for translational medical research		X		
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)

Miami location		X	
Curriculum		X	
The faculty	X		
Research programs	X		
The opportunity to learn with medical students		X	
Opportunities for translational medical research		X	
Future employment in the biomedical field	X		

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum		X		
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty		X		
Future employment as a physician scientist			X	

Default Report

Displaying **10** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
99.112.92.44

Response Started:
Monday, September 13, 2010 4:26:54 PM

Response Modified:
Monday, September 13, 2010 4:28:53 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

other
Biology and Chemistry

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical

Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **11** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.55.35

Response Started:
Monday, September 13, 2010 5:25:01 PM

Response Modified:
Monday, September 13, 2010 5:27:30 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist	X			

Default Report

Displaying **12** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
75.74.101.201

Response Started:
Monday, September 13, 2010 5:32:19 PM

Response Modified:
Monday, September 13, 2010 5:33:57 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum
research programs
the faculty
obtaining a degree in biomedical sciences

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum		X		
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum		X		
The faculty	X			
Research programs	X			
The opportunity to learn with medical students	X			
Opportunities for translational medical research	X			
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

Yes

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location		X		
Curriculum		X		
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty	X			
Future employment as a physician scientist		X		

Default Report

Displaying **13** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
65.34.156.10

Response Started:
Wednesday, September 15, 2010 4:16:07 AM

Response Modified:
Wednesday, September 15, 2010 4:18:03 AM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

No

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum	X			
The faculty		X		
Research programs			X	
The opportunity to learn with medical students		X		
Opportunities for translational medical research			X	
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			

The faculty		X		
Research programs			X	
The opportunity to learn with medical students		X		
Opportunities for translational medical research			X	
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

No

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location	X			
Curriculum	X			
Research Programs			X	
Opportunities to do clinical/translational research with FIU HWCOM faculty		X		
Future employment as a physician scientist	X			

Default Report

Displaying **14** of **14** respondents

Response Type:
Normal Response

Collector:
New Link
(Web Link)

Custom Value:
empty

IP Address:
131.94.186.10

Response Started:
Friday, September 17, 2010 12:43:24 PM

Response Modified:
Friday, September 17, 2010 12:45:53 PM

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

No

2. What is your major/undergraduate degree?

Biology

3. Where are you receiving your undergraduate education?

Florida International University

4. What criteria are important for your choice? Check all that apply.

curriculum

research programs

the faculty

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Curriculum		X		
The faculty	X			
Research programs	X			
The opportunity to learn with medical students				X
Opportunities for translational medical research				X
Future employment in the biomedical field	X			

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)

Miami location				X
Curriculum	X			
The faculty	X			
Research programs	X			
The opportunity to learn with medical students				X
Opportunities for translational medical research				X
Future employment in the biomedical field	X			

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

No

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

	Very Important (1)	Important (2)	Somewhat Important (3)	Not Important (4)
Miami location				X
Curriculum		X		
Research Programs	X			
Opportunities to do clinical/translational research with FIU HWCOM faculty				X
Future employment as a physician scientist				X

SurveyMonkey

Ph.D. in Biomedical Sciences Edit

Default Report + Add Report

Response Summary

Active Crosstab: New Crosstab

Total: 14 Edit

Crosstabbed: 14 Unapply

PAGE: HERBERT WERTHEIM COLLEGE OF MEDICINE GRADUATE PROGRAM SURVEY

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)? Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Yes	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	**78.6% (11)**
No	23.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	21.4% (3)
answered question	13	0	0	0	1	**14**
					skipped question	**0**

2. What is your major/undergraduate degree? Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Biology	**100.0% (13)**	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	**92.9% (13)**
Chemistry	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Biomedical engineering	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
another Science major	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	7.1% (1)
Other (please specify)	0 replies	0 replies	0 replies	0 replies	1 reply	1

answered question	13	0	0	0	1	**14**
					skipped question	**0**

3. Where are you receiving your undergraduate education? Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Florida International University	**100.0% (13)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	**100.0% (14)**
Another Florida university	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
A U.S. university outside of Florida	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
A foreign university / other	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Other (please specify)	0 replies	0 replies	0 replies	0 replies	0 replies	0
answered question	13	0	0	0	1	**14**
					skipped question	**0**

4. What criteria are important for your choice? Check all that apply. Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
curriculum	**92.3% (12)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	**92.9% (13)**
research programs	**92.3% (12)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	**92.9% (13)**
the faculty	76.9% (10)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	78.6% (11)
obtaining a degree in biomedical sciences	53.8% (7)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	57.1% (8)
answered question	13	0	0	0	1	**14**
					skipped question	**0**

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college? Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Curriculum	**61.5%**	0.0%	0.0%	0.0%	**100.0%**	

	Very Important	**(8)**	(0)	(0)	(0)	**(1)**	
	Important	38.5% (5)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.38 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.36 (14)
The faculty	**Very Important**	**69.2% (9)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	23.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.38 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.36 (14)
Research programs	**Very Important**	**92.3% (12)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.15 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.14 (14)
The opportunity to learn with medical students	**Very Important**	**53.8% (7)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	30.8% (4)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.77 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.71 (14)
Opportunities for translational medical research	**Very Important**	**61.5% (8)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
		7.7%	0.0%	0.0%	0.0%	0.0%	

	Not Important	(1)	(0)	(0)	(0)	(0)	
	rating average	1.69 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.64 (14)
Future employment in the biomedical field	**Very Important**	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	23.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.23 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.21 (14)
	answered question	13	0	0	0	1	**14**
						skipped question	**0**

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university? Create Chart Download

		What is your major/undergraduate degree?					
		Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Miami location	**Very Important**	30.8% (4)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	**53.8% (7)**	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	2.00 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.93 (14)
Curriculum	**Very Important**	**69.2% (9)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	30.8% (4)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.31 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.29 (14)
The faculty	**Very Important**	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	

	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.31 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.29 (14)
Research programs	**Very Important**	**84.6% (11)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.23 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.21 (14)
The opportunity to learn with medical students	**Very Important**	**61.5% (8)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.77 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.71 (14)
Opportunities for translational medical research	**Very Important**	**61.5% (8)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	23.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.62 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.57 (14)
Future employment in the biomedical field	**Very Important**	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	23.1% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.23 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.21 (14)

answered question	13	0	0	0	1	**14**
					skipped question	**0**

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)? Create Chart Download

	What is your major/undergraduate degree?					
	Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Yes	**84.6% (11)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	**85.7% (12)**
No	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	14.3% (2)
answered question	13	0	0	0	1	**14**
					skipped question	**0**

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university? Create Chart Download

		What is your major/undergraduate degree?					
		Biology	**Chemistry**	**Biomedical engineering**	**another Science major**	**other**	**Response Totals**
Miami location	**Very Important**	38.5% (5)	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	**46.2% (6)**	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.92 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.86 (14)
Curriculum	**Very Important**	**53.8% (7)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	46.2% (6)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.46 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.43 (14)
Research Programs	**Very Important**	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	

	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.31 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.29 (14)
Opportunities to do clinical/translational research with FIU HWCOM faculty	**Very Important**	**76.9% (10)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.38 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.36 (14)
Future employment as a physician scientist	**Very Important**	**69.2% (9)**	0.0% (0)	0.0% (0)	0.0% (0)	**100.0% (1)**	
	Important	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Somewhat Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	Not Important	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	
	rating average	1.54 (13)	0.00 (0)	0.00 (0)	0.00 (0)	1.00 (1)	1.50 (14)
	answered question	13	0	0	0	1	**14**
						skipped question	**0**

SurveyMonkey

Ph.D. in Biomedical Sciences Edit

Default Report + Add Report

Response Summary

Total Started Survey: 14
Total Completed Survey: 14 (100%)

PAGE: HERBERT WERTHEIM COLLEGE OF MEDICINE GRADUATE PROGRAM SURVEY

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)? Create Chart Download

	Response Percent	Response Count
Yes	78.6%	11
No	21.4%	3
answered question		14
skipped question		0

2. What is your major/undergraduate degree? Create Chart Download

	Response Percent	Response Count
Biology	92.9%	13
Chemistry	0.0%	0
Biomedical engineering	0.0%	0
another Science major	0.0%	0
other	7.1%	1
Show replies Other (please specify)		1
answered question		14
skipped question		0

3. Where are you receiving your undergraduate education? Create Chart Download

	Response Percent	Response Count
Florida International University	100.0%	14
Another Florida university	0.0%	0
A U.S. university outside of Florida	0.0%	0
A foreign university / other	0.0%	0
Other (please specify)		0
answered question		14
skipped question		0

4. What criteria are important for your choice? Check all that apply. Create Chart Download

	Response Percent	Response Count
curriculum	**92.9%**	**13**
research programs	**92.9%**	**13**
the faculty	78.6%	11
obtaining a degree in biomedical sciences	57.1%	8
answered question		**14**
skipped question		**0**

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college? Create Chart Download

	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Curriculum	**64.3% (9)**	35.7% (5)	0.0% (0)	0.0% (0)	1.36	14
The faculty	**71.4% (10)**	21.4% (3)	7.1% (1)	0.0% (0)	1.36	14
Research programs	**92.9% (13)**	0.0% (0)	7.1% (1)	0.0% (0)	1.14	14
The opportunity to learn with medical students	**57.1% (8)**	28.6% (4)	0.0% (0)	14.3% (2)	1.71	14
Opportunities for translational medical research	**64.3% (9)**	14.3% (2)	14.3% (2)	7.1% (1)	1.64	14
Future employment in the biomedical field	**78.6% (11)**	21.4% (3)	0.0% (0)	0.0% (0)	1.21	14
answered question						**14**
skipped question						**0**

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university? Create Chart Download

	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Miami location	35.7% (5)	**50.0% (7)**	0.0% (0)	14.3% (2)	1.93	14
Curriculum	**71.4% (10)**	28.6% (4)	0.0% (0)	0.0% (0)	1.29	14
The faculty	**78.6% (11)**	14.3% (2)	7.1% (1)	0.0% (0)	1.29	14
Research programs	**85.7% (12)**	7.1% (1)	7.1% (1)	0.0% (0)	1.21	14
The opportunity to learn with medical students	**64.3% (9)**	14.3% (2)	7.1% (1)	14.3% (2)	1.71	14
Opportunities for translational medical research	**64.3% (9)**	21.4% (3)	7.1% (1)	7.1% (1)	1.57	14
Future employment in the biomedical field	**78.6% (11)**	21.4% (3)	0.0% (0)	0.0% (0)	1.21	14
answered question						**14**
skipped question						**0**

7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)? Create Chart Download

	Response Percent	Response Count
Yes	85.7%	12
No	14.3%	2
answered question		14
skipped question		0

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university? Create Chart Download

	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Miami location	42.9% (6)	42.9% (6)	0.0% (0)	14.3% (2)	1.86	14
Curriculum	57.1% (8)	42.9% (6)	0.0% (0)	0.0% (0)	1.43	14
Research Programs	78.6% (11)	14.3% (2)	7.1% (1)	0.0% (0)	1.29	14
Opportunities to do clinical/translational research with FIU HWCOM faculty	78.6% (11)	14.3% (2)	0.0% (0)	7.1% (1)	1.36	14
Future employment as a physician scientist	71.4% (10)	14.3% (2)	7.1% (1)	7.1% (1)	1.50	14
answered question						14
skipped question						0

1. Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

	Response Percent	Response Count
Yes	**78.6%**	**11**
No	21.4%	3
answered question		**14**
skipped question		**0**

2. What is your major/undergraduate degree?

	Response Percent	Response Count
Biology	**92.9%**	**13**
Chemistry	0.0%	0
Biomedical engineering	0.0%	0
another Science major	0.0%	0
other	7.1%	1
Other (please specify)		1
answered question		**14**
skipped question		**0**

3. Where are you receiving your undergraduate education?

	Response Percent	Response Count
Florida International University	**100.0%**	**14**
Another Florida university	0.0%	0
A U.S. university outside of Florida	0.0%	0
A foreign university / other	0.0%	0
Other (please specify)		0
answered question		**14**
skipped question		**0**

4. What criteria are important for your choice? Check all that apply.

	Response Percent	Response Count
curriculum	**92.9%**	**13**
research programs	**92.9%**	**13**
the faculty	78.6%	11
obtaining a degree in biomedical sciences	57.1%	8
answered question		**14**
skipped question		**0**

5. How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Curriculum	**64.3% (9)**	35.7% (5)	0.0% (0)	0.0% (0)	1.36	14
The faculty	**71.4% (10)**	21.4% (3)	7.1% (1)	0.0% (0)	1.36	14
Research programs	**92.9% (13)**	0.0% (0)	7.1% (1)	0.0% (0)	1.14	14
The opportunity to learn with medical students	**57.1% (8)**	28.6% (4)	0.0% (0)	14.3% (2)	1.71	14
Opportunities for translational medical research	**64.3% (9)**	14.3% (2)	14.3% (2)	7.1% (1)	1.64	14
Future employment in the biomedical field	**78.6% (11)**	21.4% (3)	0.0% (0)	0.0% (0)	1.21	14
				answered question		**14**
				skipped question		**0**

6. How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?

	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Miami location	35.7% (5)	**50.0% (7)**	0.0% (0)	14.3% (2)	1.93	14
Curriculum	**71.4% (10)**	28.6% (4)	0.0% (0)	0.0% (0)	1.29	14
The faculty	**78.6% (11)**	14.3% (2)	7.1% (1)	0.0% (0)	1.29	14
Research programs	**85.7% (12)**	7.1% (1)	7.1% (1)	0.0% (0)	1.21	14
The opportunity to learn with medical students	**64.3% (9)**	14.3% (2)	7.1% (1)	14.3% (2)	1.71	14
Opportunities for translational medical research	**64.3% (9)**	21.4% (3)	7.1% (1)	7.1% (1)	1.57	14
Future employment in the biomedical field	**78.6% (11)**	21.4% (3)	0.0% (0)	0.0% (0)	1.21	14
				answered question		**14**
				skipped question		**0**

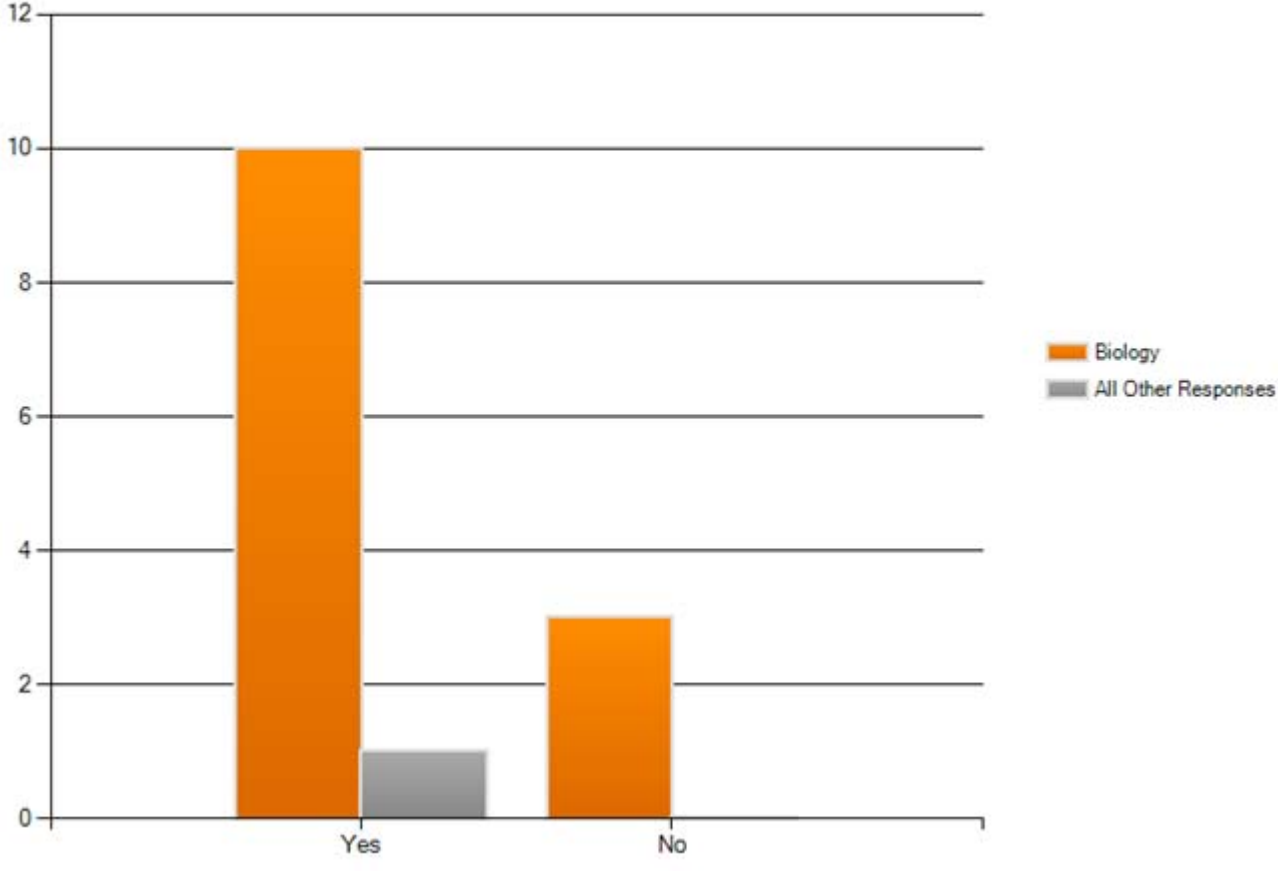
7. Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

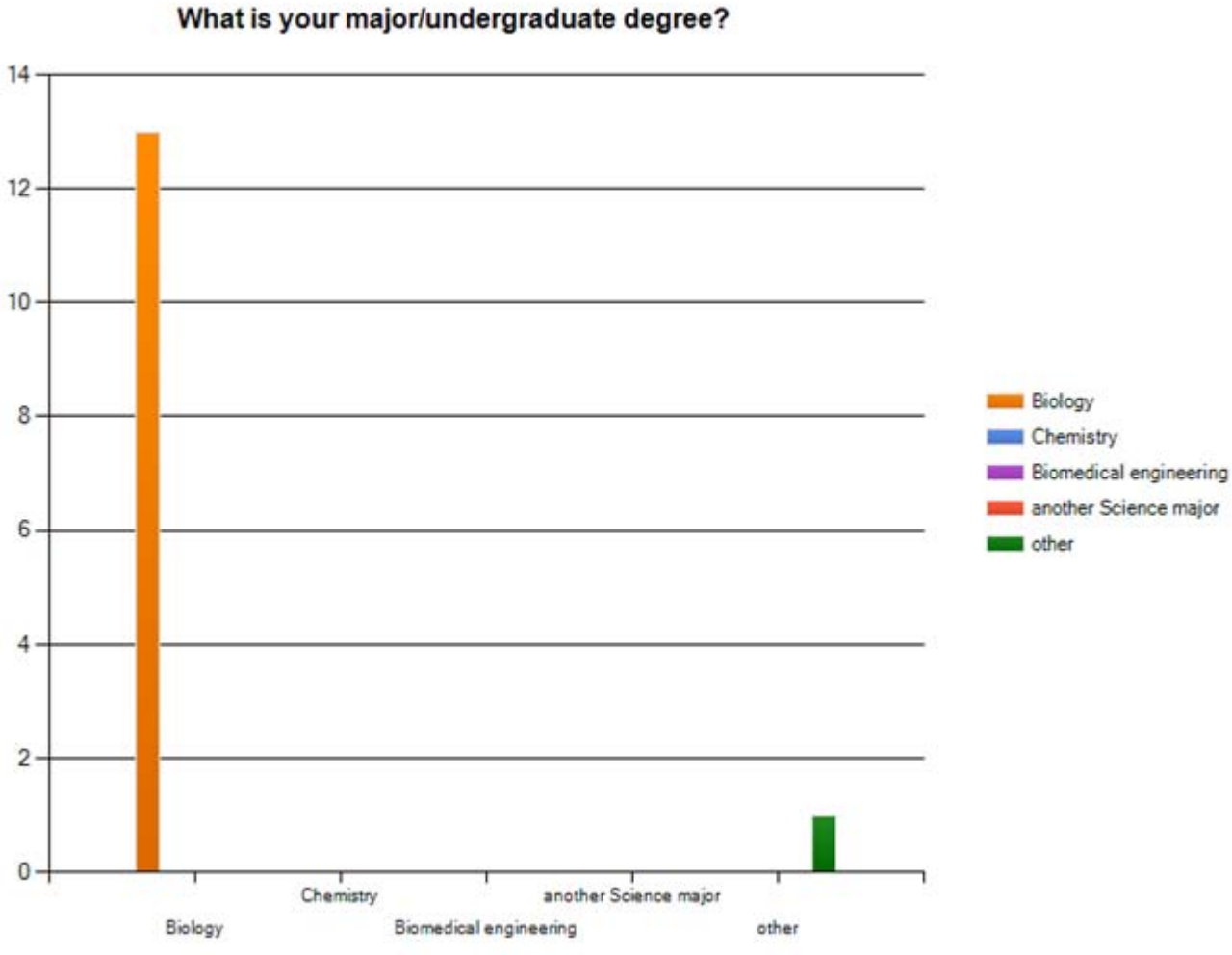
	Response Percent	Response Count
Yes	**85.7%**	**12**
No	14.3%	2
	answered question	**14**
	skipped question	**0**

8. How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?

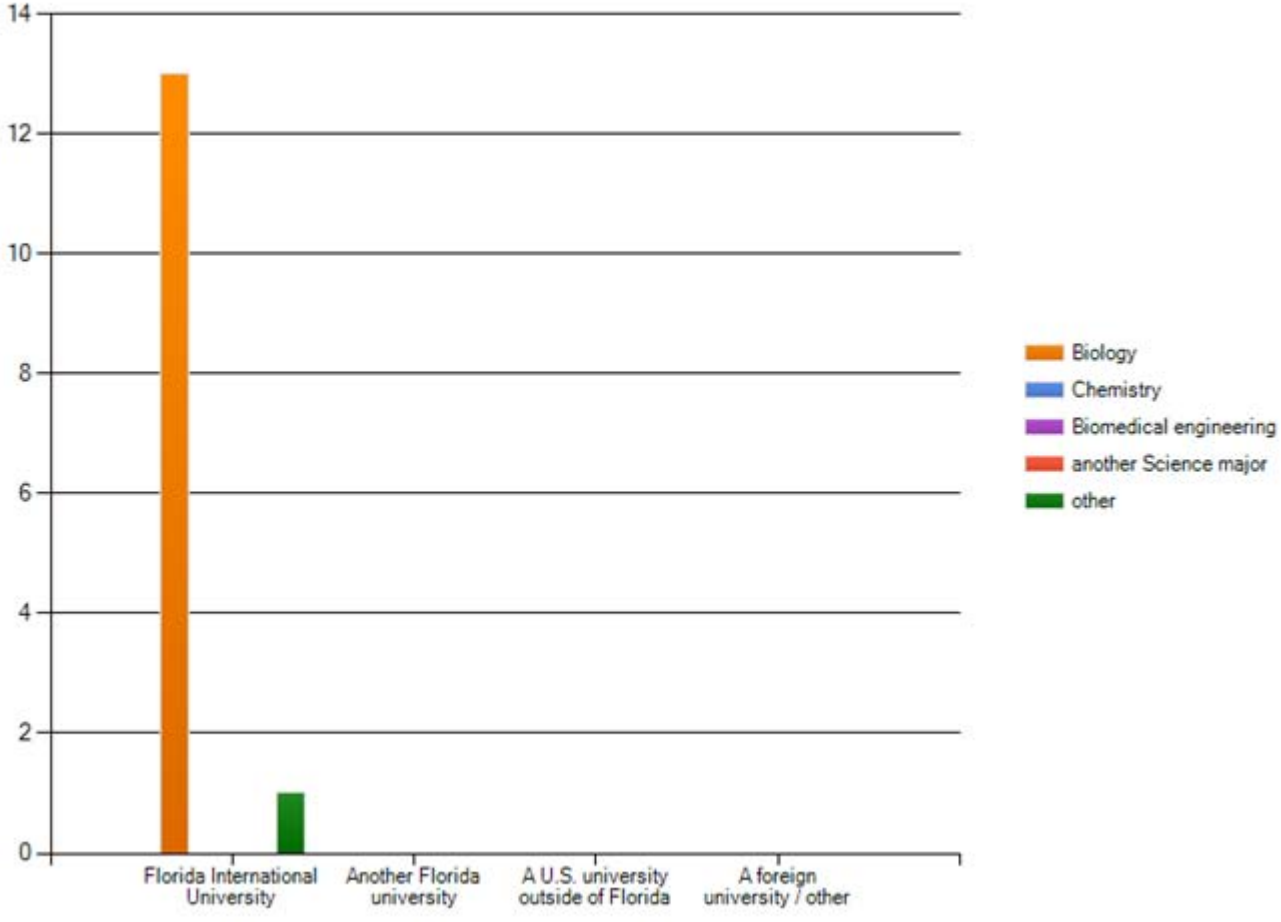
	Very Important	Important	Somewhat Important	Not Important	Rating Average	Response Count
Miami location	**42.9% (6)**	**42.9% (6)**	0.0% (0)	14.3% (2)	1.86	14
Curriculum	**57.1% (8)**	42.9% (6)	0.0% (0)	0.0% (0)	1.43	14
Research Programs	**78.6% (11)**	14.3% (2)	7.1% (1)	0.0% (0)	1.29	14
Opportunities to do clinical/translational research with FIU HWCOM faculty	**78.6% (11)**	14.3% (2)	0.0% (0)	7.1% (1)	1.36	14
Future employment as a physician scientist	**71.4% (10)**	14.3% (2)	7.1% (1)	7.1% (1)	1.50	14
				answered question		**14**
				skipped question		**0**

Would you be interested in obtaining a Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?

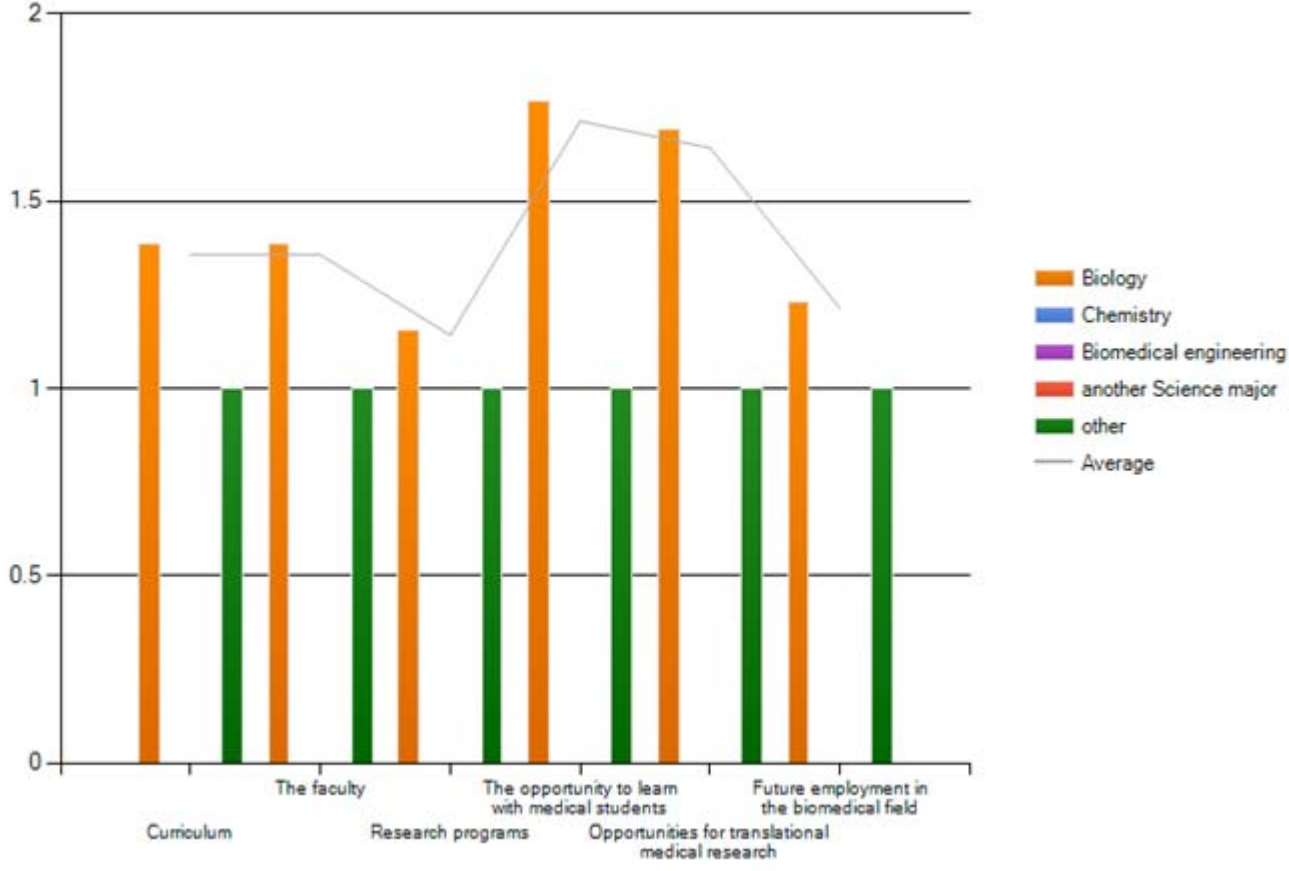



What is your major/undergraduate degree?
14
12
10
8
6
4
2
0
Biology
Chemistry
Biomedical engineering
another Science major
other
Biology
Chemistry
Biomedical engineering
another Science major
other

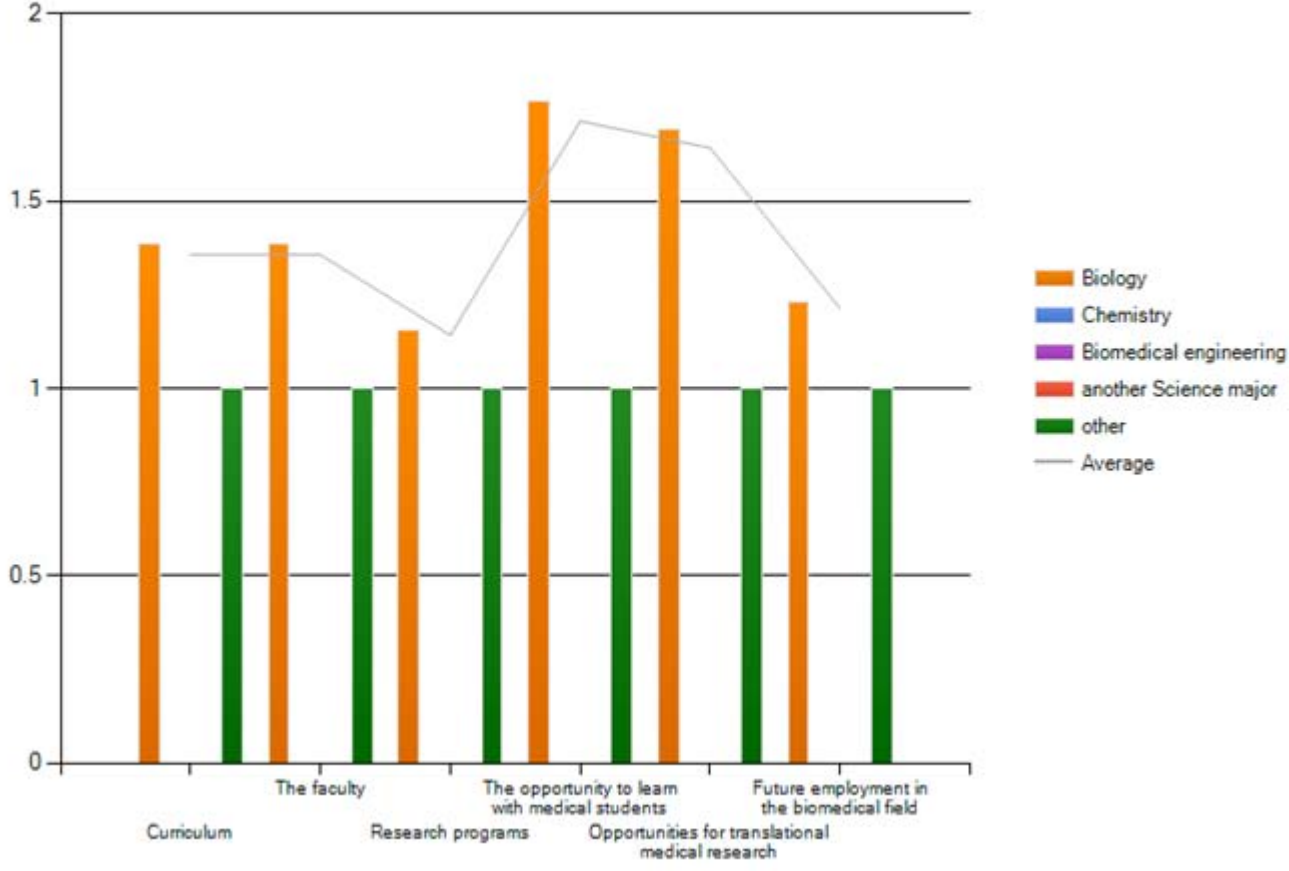
Where are you receiving your undergraduate education?



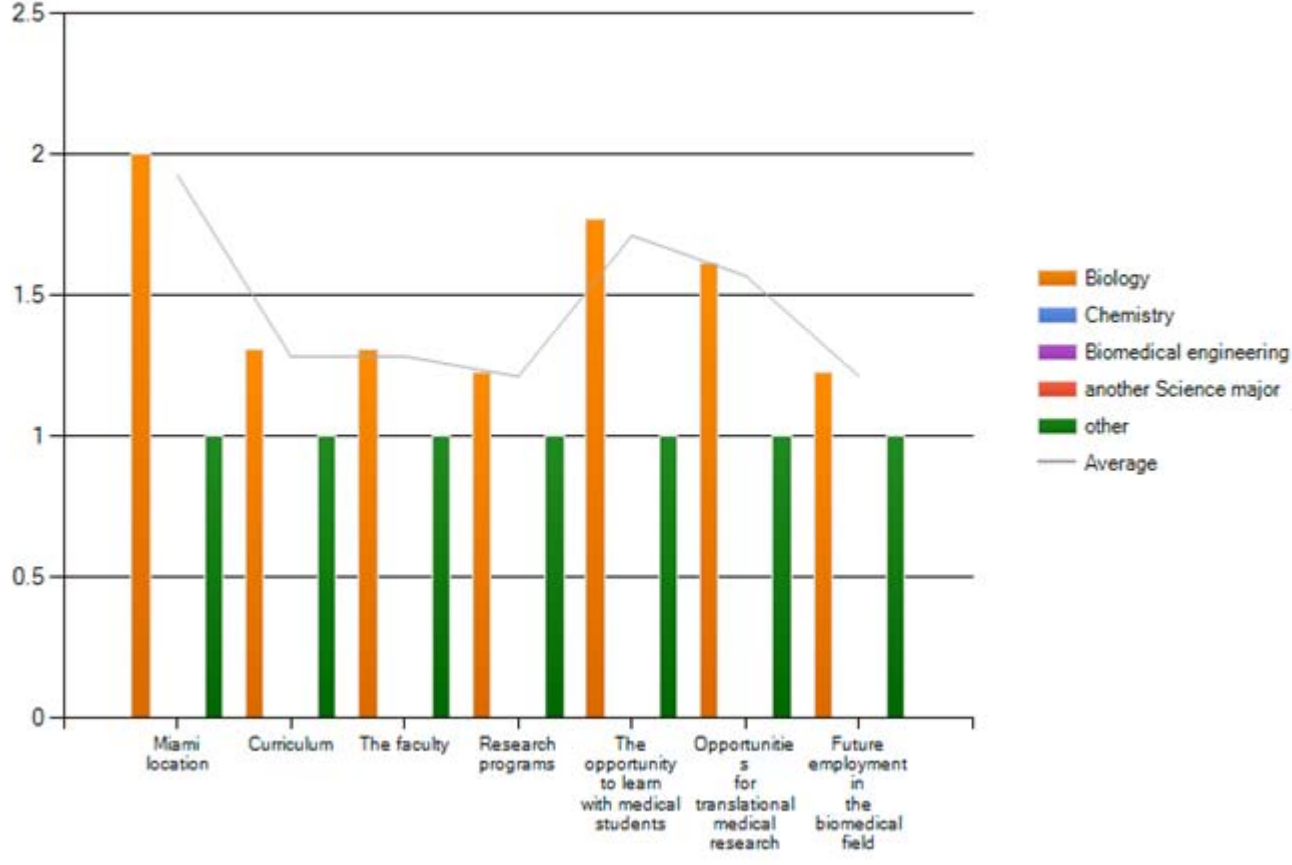
How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

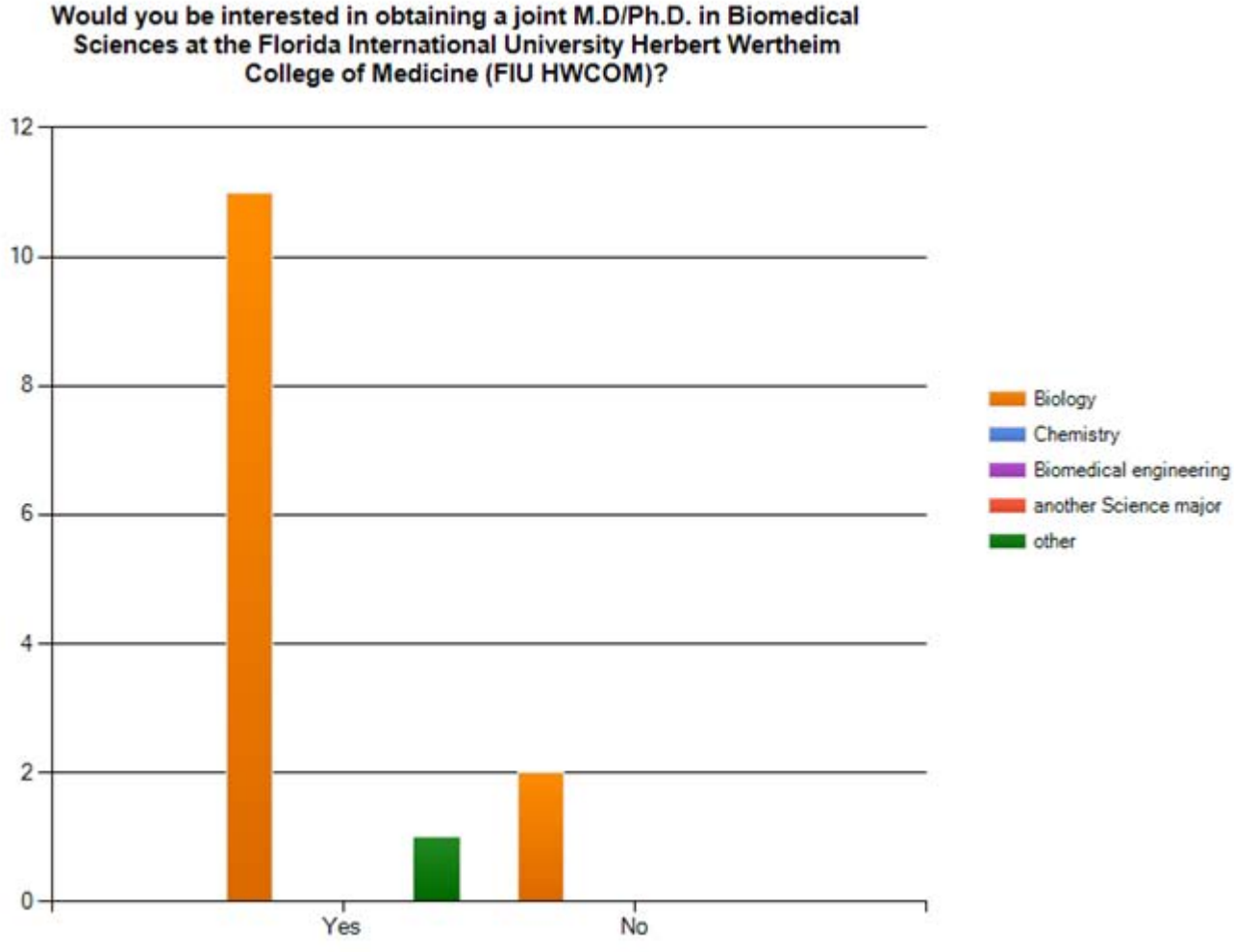


How important are the following factors in influencing your choice of a Biomedical Sciences Program in the HWCOM versus a graduate program in another FIU college?

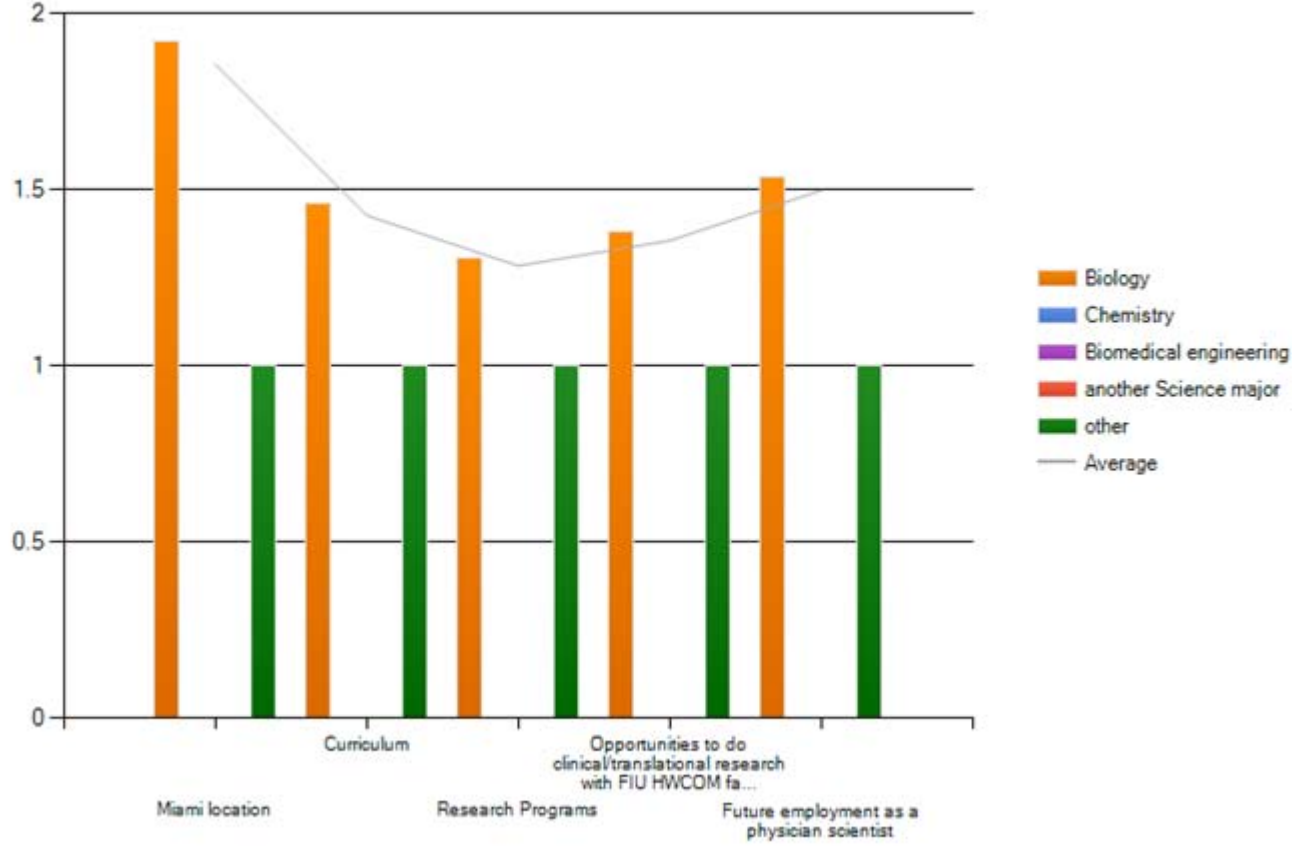


How important are the following factors in influencing your choice of the FIU HWCOM Biomedical Sciences degree program versus a program at another university?




Would you be interested in obtaining a joint M.D/Ph.D. in Biomedical Sciences at the Florida International University Herbert Wertheim College of Medicine (FIU HWCOM)?
12
10
8
6
4
2
0
Yes
No
Biology
Chemistry
Biomedical engineering
another Science major
other

How important are the following factors in influencing your choice of the FIU HWCOM joint M.D./Ph.D. degree versus a program at another university?



May 18, 2010

Dear Dr. Barry Rosen:

It is my goal to pursue a career in clinical and basic research that is biomedically translational. This August I will be doing a post-baccalaureate program at the NIH Academy and thereafter plan to do a graduate research training program in genetics, immunology or molecular biology and thing that a PhD Program in the Biomedical Sciences at the FIU College of Medicine would be a good match, if available. If this program were available, I would definitely apply. The FIU COM, the state of Florida, and many students would benefit much by having such a program available.

Thank you for your time and for considering the implementation of such a wonderful program!

Sincerely,

Rosa Rodriguez
MBRS RISE Fellow
Rrodr057@fiu.edu
(305)978-38237