COLLEGE OF MEDICINE
Changes to Note

The follow curricular changes for the College of Medicine were approved by the USF-Tampa Graduate Council on the date noted.

**New Program**
Health Informatics (M.S.)
New Program (effective 201201) 9/19/11

**Dual Degree Program Changes**
Biotechnology / Entrepreneurship (MS/MSB) Change curriculum in Biotechnology 5/21/12

**Program Changes**
Bioinformatics and Comp. Biology (MSBCB) Reduce hours to 36; change courses, add electives 5/21/12
Biotechnology (MSB) Revise curriculum, add electives 5/21/12
Medical Sciences (MSMS) - Change *Interdisciplinary Medical Sciences* 9/12/11
- Change *Course BCH 6935 Scientific Writing & Ethics* – change title to Grant Writing & Scientific Communication. (2) 1/9/12
- New Courses – *Metabolic & Nutritional Medicine Conc.* 1/9/12
- Change *Women’s Health Concentration* 5/21/12
- Change *Course: ATR 6516 Ethical and Legal Issues in Healthcare* Changes hours from 3 to 1 credits 11/5/12
- Change to Direct Receipt Program 2/4/13
- Add electives to *Metabolic & Nutritional Medicine Conc.* 1/25/13
- Change *IMS Concentration* courses; reduce hours to 32 3/4/13
- Add course options 5/9/13

Medical Sciences (Ph.D.) - Add elective option, change title for BCH 6935 Scientific Writing 1/9/12
- Change to direct receipt program 10/12/12

**New Graduate Certificates**
Integrative Weight Management 5/21/12
Brain Fitness sand Memory Management 2/4/13
Integrative Health Coaching 2/4/13
Integrative Oncology 5/6/13
Metabolic Cardiology 2/4/13

**Graduate Certificate Changes**
Bioinformatics Change course requirements 3/4/13
Biotechnology Change course requirements 3/4/13
Health Informatics Change course requirements 12/3/12

**Note for the Record:**
Medical Sciences (MSMS) Re-opened: *Medical Microbiology and Immunology* effective fall 2011; changed back to inactive spring 2013 9/12/11
12/12/12
University of South Florida
College of Medicine
12901 Bruce B. Downs Blvd. MDC40
Tampa, FL 33612-4799

Web address: www.health.usf.edu/medicine/graduatestudies
Email: biomed@health.usf.edu
Phone: 813-974-4181
Fax: 813-974-4317

College Dean: Steven Klasko, M.D., M.B.A.
Associate Dean: Michael Barber, D. Phil

Accreditation:
The Commission on Colleges of the Southern Association of College and Schools

Mission Statement:
The College of Medicine Graduate Faculty consist of scientists who conduct research in many fields of science basic to understanding disease processes and to the development of improved methods of diagnosis, treatment and prevention of disease. Students receive their research training in up-to-date methods of scientific investigation and gain experience in modern well-equipped laboratories. The faculty is dedicated to providing high quality education in an environment conducive to scholarly activity and scientific achievement.

Candidates for the Ph.D. in Medical Science enter into an interdisciplinary program enabling them to major in any one of the six concentrations that are offered. Collaboration among laboratory scientists of all disciplines is encouraged. The programs of study allow students to tailor their programs to individual needs and interests. Thanks to faculty research awards, students have a multitude of opportunities to participate in cutting-edge research projects. Medical Science Ph.D. graduates go on to become deeply involved in research sponsored by academic, industrial and government institutions.

The master’s degree in Medical Sciences (M.S.) can be completed in as little as one year and has been designed to assist students who are seeking admissions into doctoral programs (Ph.D. or M.D.). Successful graduates of the Medical Science master’s program can improve their chances for admissions into professional programs by further developing their foundational knowledge of biomedical science. Currently, the Medical Sciences master’s degree program boasts a ninety percent success rate for adequately preparing students for entry into doctoral or professional programs.

Financial Aid - A limited number of assistantships, fellowships, and tuition waivers are available for doctoral students.

Major Research Areas:
Allergy, Immunology and Infectious Diseases Cancer Biology, Cardiovascular Research, Neuroscience Research

Degrees, Programs, Concentrations:

Master of Arts in Bioethics and Medical Humanities (M.A.B.M.H.)
Bioethics and Medical Humanities (BMH)

Master of Science in Bioinformatics and Computational Biology (M.S.B.C.B.)
Bioinformatics and Computational Biology (BCB)
Master of Science in Biotechnology (M.S.B.)
Biotechnology (MSB)

Master of Science in Health Informatics (M.S.H.I.)
Health Informatics (HIF)

Master of Science in Medical Sciences (M.S.M.S.)
Medical Sciences (MSG)
- Aging and Neuroscience (ANS)
- Athletic Training (ATL)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB)
  Closed for admissions
- Clinical and Translational Research (CTR)
- Health Informatics (HIN)
- Health Science (HSC)
- Interdisciplinary Medical Sciences (IMS)
- Medical Microbiology and Immunology (MDI)
- Metabolic and Nutritional Medicine (MNM)
- Molecular Medicine (MLM)
- Women’s Health (WSH)

Doctor of Philosophy (Ph.D.)
Medical Sciences (MSG)
- Allergy, Immunology and Infectious Disease (All)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB)
  Closed for admissions
- Clinical and Translational Research (CTR)
- Microbiology and Immunology (MMI)
  Closed for admissions
- Molecular Medicine (MLM)
- Molecular Pharmacology and Physiology (MPY)
- Neuroscience (NEU)
- Pathology and Cell Biology (PCB)
- Pathology and Laboratory Medicine (PLM)
- Pharmacology and Therapeutics (PAT)
- Physiology and Biophysics (PAB)

Doctor of Medicine (M.D.)*
Medicine

Doctor of Physical Therapy (D.P.T.)*
Physical Therapy

*professional programs, offered through the College of Medicine – USF Medical School

Dual Programs:
- Biomedical Engineering (Ph.D.) and Medicine (M.D.) Dual Degree*
- Biotechnology (MS) and Entrepreneurship in Applied Technologies (M.A.)
- Medical Sciences (Ph.D.)/Medical (M.D.) Combined Program
- Physical Therapy (D.P.T.) and Public Health (M.P.H.)

*refer to the USF Medical School or the College of Engineering for information.
Graduate Certificates Offered:
  - Aging and Neuroscience
  - Biochemistry & Molecular Biology
  - Bioinformatics
  - Biotechnology
  - Brain Fitness and Memory Management
  - Cardiovascular Engineering
  - Clinical Investigation
  - Health Informatics
  - Health Sciences
  - Integrative Health Coaching
  - Integrative Oncology
  - Integrative Weight Management
  - Medical Biochemistry, Microbiology and Immunology
  - Medicine and Gender
  - Metabolic Cardiology
  - Metabolic and Nutritional Medicine
  - Molecular Medicine
  - Pharmacy Sciences

See: http://www.outreach.usf.edu/gradcerts/

COLLEGE REQUIREMENTS
  Refer to College for information.
About the Catalog

The University of South Florida Graduate Catalog is organized with the degree programs offered listed in the section of the College that offers them. For example, the Master of Science degree with a “program” (also known as major) in Biology is listed in the College of Arts and Sciences section. Some colleges offer areas of specialization, or “concentrations” within a degree program.

PROGRAMS

MEDICAL SCIENCES PROGRAM

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

CONCENTRATIONS

Concentration Requirements are listed separately under each Program.

The Program and Concentration are listed on the official transcript. Other areas, such as application tracks, are not listed on the transcript.

Example:
Doctor of Philosophy in Medical Sciences
with a Concentration in Anatomy
BIOETHICS AND MEDICAL HUMANITIES PROGRAM

Master of Bioethics and Medical Humanities (M.A.B.M.H.) Degree

DEGREE INFORMATION

Program Admission Deadlines:

<table>
<thead>
<tr>
<th></th>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
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<td>Domestic</td>
<td>June 1</td>
<td>October 1</td>
<td>March 1</td>
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<tr>
<td>International in country</td>
<td>March 1</td>
<td>August 1</td>
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<tr>
<td>International out of country</td>
<td>January 2</td>
<td>June 1</td>
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In select cases, late admission is possible.

Minimum Total Hours: 36

Program Level: Masters

CIP Code: 51.3201

Dept Code: MED

Program (Major/College): BMH MD

CONTACT INFORMATION

College: Medicine
Department: Biomedical and Medical Humanities

Contact Information: www.grad.usf.edu
Other Resources: www.usf4you
http://hsc.usf.edu/medicine/internalmedicine/bioethics/index.htm

PROGRAM INFORMATION

This innovative program, the first in Florida to combine bioethics and medical humanities, is designed to prepare leaders for increasingly complex healthcare concerns, especially those raised by advancements in technology, the distribution of scarce resources, and emerging global tensions. It is designed to focus on questions associated with genetic research and therapy, new reproductive technologies, health care delivery systems, end-of-life decisions, bio-terrorism, and numerous challenges associated with cultural sensitivities and competencies. The program is founded on the premise that questions posed by contemporary health care dilemmas, whether local, national or international, do not reside within the province of any single discipline, but require collaborative integration of insights from science, humanities, history, law, medicine, public health, nursing, philosophy, education and social-behavioral sciences.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements

- BA or equivalent degree from a regionally accredited university, with a “B” (3.0 on a 4.0 scale) average or better in all work attempted while registered as an upper division student working toward a baccalaureate degree; AND Graduate Record Examination (GRE) scores (500V, 500Q) OR
- GMAT scores of 500 or better; OR
- An equivalent measure approved by the Board of Trustees, taken within five years preceding application

http://health.usf.edu/medicine/
Applicants to the program will be expected to have some competency in basic research design and methods (either qualitative or quantitative) that will be determined from student transcripts. Students who do not meet this prerequisite will be encouraged to enroll in USF courses that provide this foundation.

DEGREE PROGRAM REQUIREMENTS

CORE REQUIREMENTS
Four required core courses 12 credit hours

Choose 4 of the available 6 options:

- GMS6870 Medical Ethics & Humanities: Tools and Foundations 3
- ANG6469 Foundations of Medical Anthropology 3
- REL6938 Spirituality and Medicine 2-4
- NGR6137 Bioethics in Contemporary Society 3
- GM57930 Biotechnology and Bioethics 1-3
- GM57930 Health and Social Justice 1-3

Electives (18 hours)
Six approved elective courses 18 hours

Internship and Independent/Directed study 6 credit hours

Total: 36 hours

COURSES
See [http://www.ugs.usf.edu/sab/sabs.cfm](http://www.ugs.usf.edu/sab/sabs.cfm)
BIOINFORMATICS AND COMPUTATIONAL BIOLOGY PROGRAM

Master of Bioinformatics and Computational Biology (M.S.B.C.B.) Degree

DEGREE INFORMATION

Program Admission Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

Minimum Total Hours: 36
Program Level: Masters
CIP Code: 26.1103
Dept Code: MED
Program (Major/College): BCB MD

CONTACT INFORMATION

College: Medicine
Department: Molecular Medicine
Contact Information: www.grad.usf.edu
Other Resources:
- http://health.usf.edu/medicine/graduatestudies/ms_scus/ms_bioinformatics.htm
- http://ww.usf4you

PROGRAM INFORMATION

The Master’s Program in Bioinformatics and Computational Biology at the University of South Florida represents a multi-college partnership and a truly interdisciplinary collaboration. Participating departments include the Departments of Biochemistry & Molecular Biology in the College of Medicine, Mathematics in the College of Arts and Sciences, Computer Sciences and Engineering and the Division of Biomedical Engineering in the College of Engineering, Epidemiology and Biostatistics in the College of Public Health and Information Systems and Decision Sciences in the College of Business Administration. The program is designed to meet the increasing demand for trained people in this emerging area, which crosses the traditional fields of biological, mathematical and computer sciences. The program, therefore, builds on and complements the current strengths of the university.

The goal of the Master’s Program in Bioinformatics and Computational Biology is to provide students enrolled in the program with high quality training and education that will prepare them for careers in science, industry, health care and education. The curriculum has been designed accordingly and provides the theoretical background, the practical training and, with the internships, the “real life” experience, which will equip students with the essential tools for a successful career in the field of Bioinformatics and Computational Biology.

The Master’s Program in Bioinformatics & Computational Biology is designed for 40 credit hours to be obtained during two years of study. Nine core courses will provide the foundation and basics before advanced work, including four electives, and a Master’s thesis or internship will be pursued. The curriculum is flexible and will be tailored to the individual student’s background, interests and career goals. However, electives must be selected from at least two of the participating departments to assure breadth of training.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements
- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade-point average of 3.00 in the sciences
- Graduate Record Examination
- Completed pre-requisites in:
DEGREE PROGRAM REQUIREMENTS

Total Minimum Program Hours: 36

Prerequisites:
Calculus I-III, linear algebra, biostatistics, at least "C" and "Maple" or "Mathematica" or "MATH-CAD", one year of general biology and one year of organic chemistry.

CORE REQUIREMENTS

Required courses: 24
- GMS 7930 Principles of Biochemistry and Genetics 3cr
- GMS 7930 Python Programming 3cr
- GMS 7939 Bioinformatics 4cr
- GMS 6012 Basic Biomedical Genetics 3cr
- BSC 6932 Computational Biology 3cr
- GMS 6901 Research Ethics 1cr
- PHC 6050 Biostatistics I 3cr
- BSC 6942 Bioinformatics Internship 4cr
- MAT 6932 Selected Topics in Bioinformatics and Comp. Biology 3cr

ELECTIVES 12
Students select from the lists below, or other course as approved by Graduate Program Director.

SEQUENCE

Required Courses:

SUMMER
- GMS 7930 Principles of Biochemistry & Genetics 3cr
- GMS 7930 Python Programming 3cr

Students who can demonstrate significant prior training in the two course disciplines of summer I, can anytime during their studies, with written program approval, replace the two first summer courses with program electives and start the program in fall.

FALL
- GMS 6012 Basic Biomedical Genetics 3cr
- GMS 7930 Bioinformatics 4cr
- BSC 6932 Computational Biology 3cr
- GMS 6091 Research Ethics 1cr

SPRING
- MAT 5932 Sel.Topics in Combinatorics and Graph Theory 3cr
- BCH 6942 Bioinformatics Internship (all semesters) 4cr - 6cr
- PHC 6050 Biostatistics I 3cr
### Electives

<table>
<thead>
<tr>
<th>Science/COM:</th>
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<tbody>
<tr>
<td>BCH 6135 Methods In Molecular Biology</td>
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<tr>
<td>GMS 6114 Vaccines and Applied Immunology</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6194 Biotechnology Forum–R&amp;D in Florida’s Biotech Companies</td>
<td>1</td>
</tr>
<tr>
<td>GMS 6933 Case Studies: Intellectual Property in Biotechnology</td>
<td>2</td>
</tr>
<tr>
<td>GMS 6141 Basic Medical Microbiology/Immunology</td>
<td>3</td>
</tr>
<tr>
<td>CIS 6930 Advanced Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>MAT 6932 Sel. Topics in Bioinformatics &amp; Comp. Biology</td>
<td>3</td>
</tr>
<tr>
<td>GMS 7930 Graduate Seminars</td>
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</tr>
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<td>GMS 6847 Translational Biotechnology</td>
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<td>GMS 7910 Directed Research</td>
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<tr>
<td>GMS 6101 Molecular and Cellular Immunology</td>
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<tr>
<td>BHC 6746 Structural Biology</td>
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<tr>
<th>Management Information Systems/COBA:</th>
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<tr>
<td>ISM 6124 Advanced Systems Analysis and Design</td>
<td>3</td>
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<tr>
<td>ISM 6218 Advanced Database Management</td>
<td>3</td>
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<tr>
<td>ISM 6225 Distributed Information Systems</td>
<td>3</td>
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<tr>
<td>ISM 6930 Data Warehousing and Data Mining</td>
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<tr>
<td>ISM 6930 Information Technology in Medical Care</td>
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<th>Computer Science and Engineering/Biomedical Engineering/CE:</th>
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<tr>
<td>COT 6405 Introduction to the Theory of Algorithms</td>
<td>3</td>
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<tr>
<td>CEN 6016 Software Engineering</td>
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<tr>
<td>CAP 5625 Introduction to Artificial Intelligence</td>
<td>3</td>
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<tr>
<td>CAP 6638 Pattern Recognition</td>
<td>3</td>
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<tr>
<td>CAP 5400 Digital Image Processing</td>
<td>3</td>
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<tr>
<td>ESB/CIS 6930 Bioinformatics in Biomedical Engineering</td>
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<table>
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<tr>
<td>STA 5326 Mathematical Statistics</td>
<td>3</td>
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<tr>
<td>MAD 5305 Graph Theory</td>
<td>3</td>
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<tr>
<td>MAD 4504 Theory of Computation</td>
<td>3</td>
</tr>
<tr>
<td>STA 5166 Computational Statistics</td>
<td>3</td>
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<tr>
<td>MAT 6939 Graduate Seminar</td>
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</tr>
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</table>

<table>
<thead>
<tr>
<th>Epidemiology &amp; Biostatistics/CPH:</th>
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</thead>
<tbody>
<tr>
<td>PHC 6051 Biostatistics II</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6053 Categorical Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHC 6054 Design of Experimental Studies for Health Researchers</td>
<td>3</td>
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<tr>
<td>PHC 6057 Biostatistical Inference I</td>
<td>3</td>
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</tbody>
</table>

### Thesis

Complete M.S. Thesis Project or Internship 4-6

### COURSES

See [http://www.ugs.usf.edu/sab/sabs.cfm](http://www.ugs.usf.edu/sab/sabs.cfm)

http://health.usf.edu/medicine/
BIOTECHNOLOGY PROGRAM

Master of Science in Biotechnology (M.S.B.) Degree

DEGREE INFORMATION

Program Admission Deadlines:

Fall:
- Domestic: June 1
- International in country: March 1
- International out of country: January 2

Spring:
- Domestic: October 1
- International in-country: August 1
- International out of country: June 1

Summer:
- Domestic: March 1
- International in-country: January 1
- International out of country: Sept 15

In select cases, late admission is possible.

Minimum Total Hours: 36
Program Level: Masters
CIP Code: 26.1201
Dept Code: MED
Program (Major/College): MSB MD

CONTACT INFORMATION

College: Medicine
Department: Molecular Medicine
Contact Information: www.grad.usf.edu
biotech@health.usf.edu
Other Resources:
Website: http://health.usf.edu/medicine/molecularmedicine/PSM
-Biotechnology
www.usf4you

PROGRAM INFORMATION

The USF Master’s Program in Biotechnology represents a multi-college partnership and a truly interdisciplinary collaboration. Participating colleges include the College of Medicine, the College Of Engineering, the College Of Public Health, the College of Arts And Sciences and the College of Business Administration. The program is designed to meet the increasing demand for trained people in this exploding area, which crosses the traditional fields of biological, chemical, engineering, health and computer sciences. The curriculum has been designed accordingly and provides the theoretical background, the practical training and, with the internships, the “real life” experience, which will equip students with the essential tools for a successful career in the field of biotechnology. In 2008, the USF Biotechnology Master’s Program was recognized by the Council of Graduate Schools as Professional Science Master’s Program. Program graduates take jobs in the Biotechnology Industry or move on to a PhD Program, Medical School, Dental School, Veterinary School or Pharmacy School.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements
The USF Biotechnology Master’s Program will be available for full-time and part-time enrollment. In order to be considered for admission to the Master’s Program in Biotechnology, applicants must fulfill the following requirements:
Administrative Pre-Requirements:
- A bachelor’s degree
- A minimum undergraduate GPA of 3.00 on a 4.00 scale
- A GRE test score
- Three letters of recommendation
- Statement of purpose, indicating how the program would suit the student’s interests and serve his/her professional goals
- Complete transcripts of undergraduate work and any previous graduate work
- International students need an official transcript evaluation, see Graduate School Admissions
- A completed USF Application to Graduate Studies

Program Pre Requirements:
A good foundation in biochemistry, molecular biology and genetics, i.e. a bachelor’s degree in either the biological or chemical sciences or at least one year of studies in those disciplines would be the optimal preparation for admission to the USF Master’s Program in Biotechnology. However, the faculty of the USF Biotechnology Program is aware that not all applicants who are interested in pursuing this degree will have this formal background. Instead, some might have accumulated substantial knowledge in one of these disciplines during their work as laboratory technicians, engineering assistants or environmental or public health service providers. Those students would be ideally suited to start their graduate education with a Graduate Certificate in Biotechnology that is also offered by the Department of Molecular Medicine in the College of Medicine.
http://www.outreach.usf.edu/gradcerts/certinfo.asp?code=XBT

The Biotechnology Graduate Certificate Degree has less stringent entrance requirements a GRE is not required) but its successful completion will serve several purposes:
- it will provide the students with a certificate of advanced studies independent of prospective additional studies in the Biotechnology Master’s Program,
- it will serve as a complete package of fulfilled pre requirements for admission into the Biotechnology Master’s Program,
- 12 credit hours of the Biotechnology Certificate Program can be transferred into the Master’s Program.

DEGREE PROGRAM REQUIREMENTS

The Master’s Program in Biotechnology is designed for 36 credit hours, which can be obtained in 3 semesters of study. The program will be available for full-time and part-time enrollment. Seven core courses will provide the foundation and basics before advanced work, including four electives and an internship, will be pursued. The curriculum is flexible and can be tailored to the individual student’s background, interests and career goals.

The core courses include introductory courses in biochemistry, molecular and cellular biology, introduction to biotechnology, bioinformatics, biotechnology and bioethics, Translational Biotechnology and a seminar on current topics in biotechnology. Most of these courses are part of the current graduate curricula in the involved colleges. Student will have the option to choose four electives out of a total of 22 electives that are contributed by five participating colleges. The electives are organized in four different categories i.e. science, engineering, public health and business/law and the students will be free to select according to their interests and career plans.

Students must maintain an overall average of 3.00 (“B”)

Core Requirements

Required Courses

<table>
<thead>
<tr>
<th>SUMMER</th>
<th>36 hrs</th>
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<tr>
<td>GMS 7930 Principles of Biochemistry &amp; Genetics</td>
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<tr>
<td>GMS 7930 Python Programming</td>
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Students who can demonstrate significant prior training in the two course disciplines of summer I, can anytime during their studies, with written program approval, replace the two first summer courses with program in fall.
### Fall Semester

<table>
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<tr>
<th>Course</th>
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<tr>
<td>GMS 6012</td>
<td>Basic Biomedical Genetics</td>
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<tr>
<td>BSC6436</td>
<td>Introduction to Biotechnology</td>
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<tr>
<td>GMS 7930:</td>
<td>Bioinformatics</td>
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<td>EIN 6106</td>
<td>Technology and Law</td>
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### Spring Semester

<table>
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<tr>
<td>GMS 6847:</td>
<td>Translational Biotechnology</td>
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<tr>
<td>BSC 6437:</td>
<td>Biotechnology and Bioethics</td>
</tr>
<tr>
<td>GMS 6943</td>
<td>Biotechnology Internship (all semesters)</td>
</tr>
</tbody>
</table>

### Electives

#### Science:
- BCH6135: Methods in Molecular Biology
- GMS7930: Stem Cells in Brain Repair
- GMS6513: Principles of Pharmacology and Therapeutics
- GMS7930: Aging and Neuroscience
- GMS 6114: Vaccines and applied Immunology
- GMS 6194: Biotechnology Forum
- GMS 6141: Basic Medical Microbiology/Immunology
- GMS 6115: Medical Parasitology and Mycology
- GMS 6110: Microbial Pathogenesis and Host parasite interactions

#### Engineering:
- BME6107: Biomaterials I: Material Properties
- BME6108: Biomaterials II: Biocompatibility
- BME6034: Biotransport Phenomena
- ECH6417: Bioseparations
- ECH5740: Theory and Design of Bioprocesses
- BME5040: Pharmaceutical Engineering
- ENV6667: Environmental Biotechnology

#### Public Health:
- PHC6310: Environmental Occupational Toxicology
- PHC6050: Biostatistics I
- PCH6051: Biostatistics II
- PHC6000: Epidemiology
- PHC6017: Design and Conduct of Clinical Trials

#### Business/Law:
- EIN 6186: Strategic Market Assessment for New Technologies
- ENT 6016: New Venture Formation
- ENT6116: Business Plan Development
- ENT 6415: Fundamentals of Venture Capital and Private Equity in Entrepreneurship
- GMS6095: Principles of Intellectual Property
- GMS 6933: Case Studies: Intellectual Property in Biotechnology

### Project or Thesis/Dissertation:

As an alternative to a Master’s Comprehensive Exam, biotechnology Master’s students will have to complete a practical internship and theoretical assignment which will both require the successful application of the knowledge they have acquired during their formal training. Required are:

- an internship with a written and an oral internship report and
- a review paper providing an overview of recent advancements in an area of biotechnology of the student’s choice.
COURSES

See http://www.ugs.usf.edu/sab/sabs.cfm. For more information on individual courses, please see http://www.ugs.usf.edu/sab/sabs.cfm or contact the program directly: biotech@health.usf.edu

For more information on individual courses, please see http://www.ugs.usf.edu/sab/sabs.cfm or contact the program directly: biotech@health.usf.edu
BIOTECHNOLOGY AND ENTREPRENEURSHIP IN APPLIED TECHNOLOGIES
DUAL DEGREE PROGRAM

Master of Science in Biotechnology (M.S.B.) Degree and Master of Science in Entrepreneurship in Applied Technologies (M.S.)

DEGREE INFORMATION

Program Admission Deadlines:
Fall:
- Domestic: June 1
- International in country: January 2

Spring:
- Domestic: October 1
- International in-country: February 1
- International out of country: June 1

Minimum Total Hours: 57
Program Level: Masters
CIP Code: 26.1201
Dept Code: MED
Program (Major/College): MSB MD

CONTACT INFORMATION

Colleges: Business and Medicine
Department: Center for Entrepreneurship and Molecular Medicine
Contact Information: www.grad.usf.edu
Other Resources: www.usf4you

PROGRAM INFORMATION

The Dual Degree Program in Biotechnology and Entrepreneurship is the combination of two existing programs that allows students to obtain two Master’s degrees in a concurrent rather than sequential effort. The time commitment will be about three years with a total of 57 credit hours. The combination of a Master's in Biotechnology with a Master's in Entrepreneurship educates students to understand the scientific process and its challenges and at the same time provides the training that will enable them to facilitate the translation of scientific data from mind to market. This combination makes graduate students outstandingly versatile and thereby lays an essential step-stone for their future success.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools. The Biotechnology Program has also been recognized as a “Professional Science Master’s Program” by the U.S. Council of Graduate Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements
Students will have to apply individually to each program. Admission to one program does not automatically grant admission to the other program. Once the student has been admitted to both programs, he/she seeks permission from the program directors of both programs for dual crediting of 9 credit hours; the USF Graduate School provides a form sheet for this process. For admission students must have:

- A bachelor's degree with a minimum undergraduate GPA of 3.0 on a 4.0 scale
- A minimum GRE test score of at least 500 verbal and at least 600 quantitative, can be waived in some cases
DEGREE PROGRAM REQUIREMENTS

A total of 57 credits is required for graduation with a Dual Master’s in Biotechnology and Entrepreneurship. Beyond the dual crediting of 9 credit hours, all graduation requirements of the individual programs apply.

Course Requirements:
- GMS 6200 Biochemistry and Molecular and Cellular Biology 5
- BSC 6436 Intro to Biotechnology 3
- BCH 6888 Bioinformatics 3
- GMS 6095 Principles of Intellectual Property 3
- GMS 6847 Translational Biotechnology 3
- BCH 6070 Biotechnology and Bioethics 3
- Elective from Biotechnology Program 3
- GMS 7939 Graduate Seminar 1
- EIN 6106 Technology and Law 3
- GEB 6115 New Venture Formation 3
- GEB 6930 Fund of Venture Cap Priv Equity 3
- EIN 6930 New Product Development 3
- GMS 6943 Biotechnology Internship (140 contact hrs minimum) 3
- GEB 6930 Strategies in Entrepreneurship 3
- EIN 6430 Overview of Regulated Industries 3
- GEB 6930 Strategies in Market Assessment 3
- GEB 645 Social, Ethical, Legal Systems 3
- GEB 6116 Business Plan Development 3
- GEB 6930 Adv Topics in Entrepreneurship/Internship 3
- GEM 7930 Biomedical Ethics 3
- GMS 6141 Basic Medical Microbiology/Immunology 3
- GMS 6115 Medical Parasitology and Mycology 3
- GMS 6110 Microbial Pathogenesis and Host Parasite Interaction 3

COURSES

See [http://www.ugs.usf.edu/sab/sabs.cfm](http://www.ugs.usf.edu/sab/sabs.cfm)

For more information on individual courses, please see [http://www.ugs.usf.edu/sab/sabs.cfm](http://www.ugs.usf.edu/sab/sabs.cfm) or contact the program directly: biotech@health.usf.edu
HEALTH INFORMATICS

Master of Science in Health Informatics (M.S.H.I.) Degree

DEGREE INFORMATION

Program Admission Deadlines:
- Fall: February 15
- Spring: October 15
- Summer: February 15

Minimum Total Hours: 32
Program Level: Masters
CIP Code: 51.2706
Dept Code: MED
Program (Major/College): HIF/MD

CONTACT INFORMATION

College: Medicine
Contact Information: [www.grad.usf.edu](http://www.grad.usf.edu)
Other Resources: [www.usf4you](http://www.usf4you)

PROGRAM INFORMATION

The Master of Science in Health Informatics degree offers a curriculum which integrates the domains of information science, information resources management and health care organization and management.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements

- $65 non-refundable application fee
  The breakdown of this fee is as follows:
  - $30.00 USF’s Application Fee
  - $35.00 Transcript Procurement Fee

- A bachelor’s degree from a regionally accredited university in the biological, chemical, computer or management information sciences or other appropriate field, or the equivalent bachelors and/or graduate degrees from a foreign institution.
- Minimum overall grade-point average of 3.00 out of a possible 4.00 with a minimum grade point average of 3.00 in the sciences
- Transcripts from all colleges and universities attended
- Resume
- Two Letters of Recommendation
- While these are not required, GRE, MCAT or VAT standardized test scores or evidence of substantial health informatics experience can be submitted to enhance an application.
- An example is if a student has a GPA below 3.0 and wishes to prove he will be a positive addition to the school.

Note: F-1 student visa regulations allow students to enroll in only one 3-credit hour online/distance learning course per the official full-time equivalent for the degree level of study. Therefore, the F-1 visa is not appropriate for any
degree program that is offered completing via distance learning or online courses. International students may pursue an online program from outside the US, in which case an I-20 is not required.

Applicants who do not require a visa who are from countries where English is not the official language must demonstrate proficiency in English* in one of the following ways:

- By providing scores of 79 or higher on the Test of English as a Foreign Language (TOEFL iBT)
- By providing a score of 6.5 or higher on the International English Language Testing System (IELTS)
- By earning a score of 500 (or equivalent) on the GRE Verbal Exam
- By earning a baccalaureate or higher degree at a regionally accredited institution in the U.S.
- By earning a degree at a foreign institution where English is the language of instruction (must be documented on the transcript)

Proof of Residency
a. Applicants who are not U.S. citizens, but are residing in the U.S., must provide a copy of a U.S. Visa or permanent resident card.
   i. The following VISA types are not eligible to take classes in these programs:
      - F-1
      - F-2
      - B-1/B-2
      - C (transit visa only)
      - D
      - J-1 student
      - M-1
      - M-2
      - The other categories could be admitted - subject to review of ability to engage in study while in the US.
   
   ii. USF cannot issue an I-20 for a student visa to pursue this degree program. International applicants who do not require a visa and whose current visa status allows study can apply as well as students who intend to take the entire degree from outside the US. Please note the visa waiver program and the B1/B2 visa do not allow study in this type of program.

b. Applicants who were born outside of the U.S. but are now U.S. citizens are required to submit proof of citizenship (naturalization paperwork or a copy of a passport).

All foreign transcripts that are not in English must be accompanied by a certified English translation and a course-by-course credential evaluation from any National Association of Credential Evaluators, Inc (NACES) or the Association of International Credential Evaluators, Inc. (AIICE) approved agency certifying equivalency to the U.S. degree. Documents signed by a notary or other public official with no educational affiliation will not be accepted.

**DEGREE PROGRAM REQUIREMENTS**

<table>
<thead>
<tr>
<th>Total Minimum Program Hours</th>
<th>32 credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CORE REQUIREMENTS</strong></td>
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</tr>
<tr>
<td>HIM 6667</td>
<td>Foundation in Management Information Systems 3</td>
</tr>
<tr>
<td>HIM 6118</td>
<td>Introduction to Health Informatics 3</td>
</tr>
<tr>
<td>HIM 6350</td>
<td>E-Medicine Business Models 3</td>
</tr>
<tr>
<td>HIM 6114</td>
<td>Integrated Electronic Medical Records 3</td>
</tr>
<tr>
<td>HIM 6320</td>
<td>Managerial Communications 3</td>
</tr>
<tr>
<td>HIM 6017</td>
<td>Legal Aspects of Health Information Systems 3</td>
</tr>
<tr>
<td>HIM 6840</td>
<td>Case Studies in Health Information Management 3</td>
</tr>
<tr>
<td>ISM 6930</td>
<td>Selected Topics: Health Data Management 3</td>
</tr>
<tr>
<td>HIM 6018</td>
<td>e-Healthcare Ethics 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
<th>6 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or more required:</td>
<td></td>
</tr>
<tr>
<td>HIM 6137</td>
<td>Pharmacy Informatics 3</td>
</tr>
<tr>
<td>HIM 6943</td>
<td>Health Informatics Internship 3</td>
</tr>
</tbody>
</table>
HIM 6908  Health Informatics Independent Study  3
MHS 6645  Mental Health Informatics  3
PHC 6934  Selected Topics in Public Health: Medical Terminology  3
ISM 6930  Selected Topics in MIS: Health Systems Analysis & Design  3
ISM 6930  Selected Topics in MIS: Health Data Mining  3
PHC 6050  Biostatistics I  3
BCH 6888  Bioinformatics  3

**Internship Project**

For students who select the Internship option, each student will be assigned a faculty director who will oversee the internship project. Students will formally present their projects which will be shared with all program participants.

A minimum of thirty-two (32) semester hours are required and entail a minimum of 480 contact hours

**COURSES**

See [http://www.ups.usf.edu/sab/sabs.cfm](http://www.ups.usf.edu/sab/sabs.cfm)
MEDICAL SCIENCES PROGRAM

Master of Science in Medical Sciences (M.S.M.S.) Degree

**DEGREE INFORMATION**

<table>
<thead>
<tr>
<th>Program Admission Deadlines:</th>
<th>CONTACT INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall: June 1</td>
<td>College: Medicine</td>
</tr>
<tr>
<td>Minimum Total Hours: 30</td>
<td>Department: Medical Sciences</td>
</tr>
<tr>
<td>Program Level: Masters</td>
<td>Contact Information: <a href="http://www.grad.usf.edu">www.grad.usf.edu</a></td>
</tr>
<tr>
<td>CIP Code: 26.9999</td>
<td>Other Resources: <a href="http://www.usf4you">www.usf4you</a></td>
</tr>
<tr>
<td>Dept Code: MED</td>
<td>Website: <a href="http://health.usf.edu/medicine/graduatestudies/index.htm">http://health.usf.edu/medicine/graduatestudies/index.htm</a></td>
</tr>
<tr>
<td>Program (Major/College): MSG MD</td>
<td></td>
</tr>
</tbody>
</table>

Concentrations:
- Aging and Neuroscience (ANS)
- Anatomy (ANA)
- Athletic Training (ATL)
- Biochemistry and Molecular Biology (BMB)*
- Clinical and Translational Research (CTR)
- Health Science (HSC)
- Health Informatics (HIN)
- Interdisciplinary Medical Sciences (IMS)
- Medical Microbiology and Immunology
- Metabolic and Nutritional Medicine
- Molecular Medicine (MLM)
- Women’s Health (WSH)

*Concentrations noted with (*) are closed for admissions; not accepting applications

**PROGRAM INFORMATION**

The program is designed to provide students with advanced training in either Anatomy, Biochemistry, Medical Microbiology, or Pharmacology. Students successfully completing the program will have a foundation that will prepare them for a professional degree in biomedical science such as a M.D. or Ph.D. or qualify them to work as teachers or research assistants in academia or in the private sector. The program will provide a solid core of training in the latest findings, concepts, and experimental techniques. Students will be allowed to individualize their training through elective courses and will have the opportunity to conduct laboratory research. The program is intended for students who wish training beyond a baccalaureate degree but do not wish to commit to a Ph.D. program or do not meet the qualifications required for admissions into a M.D. or Ph.D. program.

**Accreditation:**
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

**Program Admission Requirements**
- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.0 out of a possible 4.0 with a minimum grade-point average of 3.0 in the sciences*
- GRE or MCAT

http://health.usf.edu/medicine/
• Completed pre-requisites in:
  o General biology (1 year)
  o General chemistry (1 year)
  o General physics (1 year)
  o Organic chemistry (1 year)
  o Quantitative analysis (1 course)
  o Mathematics including integral and differential calculus

APPLICATION PROCEDURES
Please refer to http://health.usf.edu/medicine/graduatestudies/mscus/apply_domestic.htm?wbc_purpose=Basic

DEGREE PROGRAM REQUIREMENTS

Degree requirements are individualized according to the educational and research interests and goals.

Total Minimum hours 30

Core Requirements
Core Course: (2 hours minimum)
GMS 6871 Health Sciences Ethics 2

Pre-Professional Track: (30 hours minimum in addition to core requirement)
Students are required to complete the following, chosen in consultation with Program Advisor.
GMS 6605 Basic Medical Anatomy 3
GMS 6630 Basic Medical Histology 3
GMS 6201 Basic Medical Biochemistry 3
GMS 6706 Basic Medical Neuroscience 3
GMS 6012 Basic Medical Genetics 3
GMS 6141 Basic Medical Immunology & Microbiology 3
GMS 6433 Clinical Correlations in Molecular Medicine 3
GMS 6440 Basic Medical Physiology 3
GMS 6111 Basic Medical Pathology 3
GMS 6505 Basic Medical Pharmacology 3

Electives Course
GMS 6000 Medical Sciences Success Skills 1-3

Concentration Options:
Students who prefer to take a Concentration instead of the Pre-Professional Track may choose from the following concentrations. Requirements for each are listed on the following pages:

Aging and Neuroscience (ANS)
Anatomy (ANA)
Athletic Training (ATL)
Clinical and Translational Research (CTR)
Health Informatics (HIN)
Health Science (HSC)
Interdisciplinary Medical Sciences (IMS)
Metabolic and Nutritional Medicine
Molecular Medicine (MLM)
Women’s Health (WSH)
CONCENTRATIONS

AGING AND NEUROSCIENCE (ANS)

Neuroscience is one the fastest growing fields of biomedical sciences. There is an increasing demand for health care professionals and research scientists to meet the needs of the increasing number of the aging population affected with neurodegenerative diseases such as Alzheimer’s disease. The Aging and Neuroscience concentration within the master’s program in Medical Sciences has been developed in collaboration with the School of Aging Studies to integrate neuroscience as well as biomedical aging in one-year curriculum. The program is targeted for students interested in pursuing a medical, professional degree or further graduate education in biomedical sciences and in aging studies. The core curriculum focuses on basic and applied neuroscience, with emphasis on neurodegenerative diseases. Classes on research methods, stem cell biology, neuropharmacology and other basic biomedical sciences, as well as several classes offered by the school of Aging Studies are offered as electives. The students can elect to engage in a research component where they will be supervised by mentors from the USF research faculty or affiliated institutes. Program graduates can pursue further professional training in medicine and allied health sciences, continue their graduate education in neuroscience or aging studies, or work in the diverse health care fields, especially those catered to the aging population.

Concentration Core Requirement:
GMS6020 Neuroscience (Interdisciplinary) 4-6

Required Courses:
GMS7930 Aging and Neuroscience (Neurosurgery) 3
GMS7930 Neuroscience Seminar Series (Neurosurgery) 1
GEY 6613 Physical Change and Aging (Aging Studies) 3
GMS7910 Aging and Neuroscience Directed Research (neurosurgery) 3-12

All students are required to have a minimum of 20 hours of didactic lectures, and a minimum of 6 hours of directed research. Only students who opt for a research paper must and can accumulate a minimum of 15 hours of directed research and laboratory rotations in their mentor/mentors’ laboratories.

Electives
A minimum of 10 credit hours must be fulfilled by COM elective courses.

College of Medicine Courses
GMS6091 Ethics and Skills in Research (Interdisciplinary) 2
GMS6404 Systems Neurophysiology (Physiology) 4
GMS6602 Neural Correlates of Behavior (Pathology and Cell Biology) 3
GMS6610 Advanced Neuroanatomy (Pathology and Cell Biology) 4
GMS6200 Biochemistry, Molecular & Cellular Biology (Molecular Medicine) 5
GMS7930 Aging/Neuroscience Lab Rotations (Neurosurgery) 3
GMS6735 Neuropharmacology (Pharmacology) 3
GMS7930 Stem Cells in Brain Repair (Neurosurgery) 3
GMS7930 Spec Topics in Alzheimer’s Disease (Neurosurgery) 1
NUR6931 Psychoneuroimmunology (Nursing) 3
PCH6050 Biostatistics (Public Health) 3

School of Aging Elective Courses
GEY6600 Human Development 3
GEYS620 Sociological Aspects of Aging 3
GEY6450 Gerontological Research and Planning 3
GEY6614 Psychopathology and Aging I 3
GEY6934 Alzheimer’s Diseases Management 3
GEY6616 Mental Health assessment in Older Adults 3

Graduate students must maintain an overall average of 3.0 (B) in all courses.
ANATOMY

Total Minimum Hours 31

Concentration Core Requirements:
- GMS6610 Advanced Neuroanatomy 4
- GMS6604 Human Embryology 3
- GMS6608 Advanced Microscopic Anatomy 4
- GMS6609 Advanced Gross Anatomy 6

Required Courses:
- GMS6001 Foundations in Biomedical Science 6

Electives (8 credit hours):
- GMS6091 Responsible Conduct in Research 1
- GMS6210 Basic Medical Biochemistry (on-line course) 3
- GMS6334 Pathobiology of Human Cancer 3
- GMS6601 Methods in Microscopy 3
- GMS6870 Medical Ethics and Humanities 3
- GMS 6671 A Brief History of Anatomy and Pathology 1-2
- GMS7920 Directed Research 1-5
- GMS7910 Directed Research 2
- GMS7930 History of Pathology and Cell Biology 2
- GMS7930 Theory of Cell Culture 3
- PHC6050 Biostatistics (on-line course) 3

ATHLETIC TRAINING (ATL) – 28 hours minimum

Concentration Core Requirements:
- ATR 6236 Pediatric Sports Medicine 3

Concentration Requirements 30 hours:
- ATR 5605 Youth Injury Epidemiology 3
- ATR 5515 Administration of Injury Prevention Programs 3
- ATR 5x508Contemporary Issues in Athletic Training 3
- ATR 5319Rehabilitation Considerations for Children 3
- ATR 6615 Evidence Based Research & Writing 3
- ATR 6920 Athletic Training Professional Colloquium 3
  (Includes 5 days on campus in Tampa)
- ATR 6446 Medical Conditions of Adolescents 3
- ATR 6516 Ethical and Legal Issues in Healthcare 1
- ATR 6617 Capstone Project I 3
- ATR 6618 Capstone Project II 3

BIOCHEMISTRY AND MOLECULAR BIOLOGY

Contact program for information - Closed for admissions; not accepting applications
CLINICAL AND TRANSLATIONAL RESEARCH (CTR)

Admission Criteria
This is a one-and-a-half to two-year program of both didactic coursework and mentored research. Admission criteria will be to the Scholars in Patient-Oriented Research (SPOR) Program and include the following:

- Must have a doctoral or first professional degree (M.D., D.O., Ph.D., D.D.S., Pharm.D., Dr.P.T., Doctorate of Nursing Practice, Ph.D. in Nursing, or equivalent degrees).
- GRE score will be waived and replaced by a requirement for documentation of a professional doctorate degree.
- NIH eligibility for the SPOR Program requires U.S. citizenship or status as a non-citizen national or lawfully admitted permanent resident of the U.S.
- Applicants will be required to complete a 2-step application process.
  - For Step 1 to enter the SPOR Program there is an online application.
  - Upon acceptance into the SPOR Program, Step 2 of the application process will consist of completing the standard application procedures to become a graduate degree-seeking student in the Master of Science in Medical Sciences degree program.

Concentration Degree Requirements
Minimum of 32 hours of credit, (23 hours core coursework, 6 hours directed research, and remaining 3 required hours in any combination of directed research and/or elective courses, as needed for each SPOR scholar’s particular research focus. In addition, each SPOR scholar will be required to submit a first author manuscript based on his/her research project (not a review article) to a peer-reviewed journal, and that manuscript must be judged by an appointed sub-panel of the SPOR Program Executive Committee and Key Faculty to be potentially acceptable for publication. This latter requirement is in lieu of a thesis requirement.

Coursework:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMS6875</td>
<td>Ethical &amp; Regulatory Aspects of Clinical Research</td>
<td>2</td>
</tr>
<tr>
<td>GMS6840</td>
<td>Cultural Influences &amp; Diversity Issues in Clinical Research</td>
<td>2</td>
</tr>
<tr>
<td>GMS6844</td>
<td>Special Topics: Principles of Patient-Oriented Research</td>
<td>1</td>
</tr>
<tr>
<td>PHC6050</td>
<td>Biostatistics I</td>
<td>3</td>
</tr>
<tr>
<td>PHC6000</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6841</td>
<td>Fundamentals of Translational and Team Research</td>
<td>1</td>
</tr>
<tr>
<td>GMS6843</td>
<td>Scientific Communication</td>
<td>2</td>
</tr>
<tr>
<td>BCH6627</td>
<td>Metabolic and Genetic Basis of Disease or other Basic Science course for 3 credits with approval</td>
<td>3</td>
</tr>
<tr>
<td>GMS6905</td>
<td>Grantsmanship I</td>
<td>1</td>
</tr>
<tr>
<td>GMS6906</td>
<td>Grantsmanship II</td>
<td>1</td>
</tr>
<tr>
<td>PHC6020</td>
<td>Design and Conduct of Clinical Trials</td>
<td>3</td>
</tr>
<tr>
<td>GMS6921</td>
<td>Colloquium on Building a Successful Academic Patient-Oriented Research Career</td>
<td>1</td>
</tr>
</tbody>
</table>

Mentored Clinical and Translational Research/Directed Research: 6 credits
Electives/Mentored Clinical and Translational Research/Directed Research: 3 credits

HEALTH INFORMATICS (HIN)

Concentration Core Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GMS 7930</td>
<td>Health Sciences Ethics</td>
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Required Courses: (24 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>HIM 6XXX</td>
<td>Foundation in Management Information Systems</td>
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<td>HIM 6118</td>
<td>Introduction to Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>HIM 6350</td>
<td>E-Medicine Business Models</td>
<td>3</td>
</tr>
</tbody>
</table>
HEALTH SCIENCE (HSC)

100% ONLINE. Health sciences, the study and research of the human body and health-related issues, are critical to our understanding of how humans function. The knowledge gained from these studies is vital to today’s mission of improving health and preventing and curing diseases. In the new millennium, in which science truly complements the art of medicine, advances in the health sciences contribute to our understanding of the structure and function of molecules key to normal body function and the pathogenesis of disease and to design new approaches for diagnosis, treatment and prevention. Recent changes in research and scholarship in the biomedical sciences has directed attention to the development and training of students who are able cross the barriers of traditional disciplines and embrace the concepts of interdisciplinary approaches to biomedical problems. The Health Sciences concentration, within the Master’s Program in Medical Sciences, has been developed to provide a new interdisciplinary and concentrated program of study that is designed for students interested in either future doctoral professional programs in the biomedical sciences. The program integrates an array of disciplines, including anatomy, biochemistry, histology, physiology, genetics, microbiology, immunology, pathology, pharmacology and ethics to provide a solid medically-relevant foundation. The rigorous program allows students to demonstrate their full academic ability for future graduate programs or medical school. The interdisciplinary program promotes the broad intellectual focus required of future graduate or professional students in the biomedical sciences or health-care related fields. The courses integrate modern distance teaching methods and are designed to improve their academic skills that are critical to their future professional development.

Curriculum

Course Requirements: 32 hrs

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>GMS6605</td>
<td>Basic Medical Anatomy</td>
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<tr>
<td>GMS6630</td>
<td>Basic Medical Histology</td>
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</tr>
<tr>
<td>GMS6201</td>
<td>Basic Medical Biochemistry</td>
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</tr>
<tr>
<td>GMS6706</td>
<td>Basic Medical Neuroscience</td>
<td>3</td>
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<tr>
<td>GMS6012</td>
<td>Basic Medical Genetics</td>
<td>3</td>
</tr>
<tr>
<td>GMS6141</td>
<td>Basic Medical Immunology &amp; Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MCB6433</td>
<td>Clinical Correlations in Molecular Medicine</td>
<td>3</td>
</tr>
<tr>
<td>GMS6871</td>
<td>Health Sciences Ethics</td>
<td>2</td>
</tr>
<tr>
<td>GMS6440</td>
<td>Basic Medical Physiology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6111</td>
<td>Basic Human Medical Pathology</td>
<td>3</td>
</tr>
<tr>
<td>GMS6505</td>
<td>Basic Medical Pharmacology</td>
<td>3</td>
</tr>
</tbody>
</table>

http://health.usf.edu/medicine/
INTERDISCIPLINARY MEDICAL SCIENCES (IMS)

This concentration within the Master’s degree in Medical Sciences program is designed to provide qualified students with advanced training in the sciences basic to the practice of medicine. Students successfully completing the program will have a foundation that fosters opportunities in the private sector, teaching, or the pursuit of further advanced degrees. A goal of this concentration is to provide promising medical school applicants an opportunity to develop the knowledge, skills, and attitudes that would enable them to have a career in the medical sciences. Students who perform well during this program could be considered for admission to medical, graduate, or other health professions programs. This concentration provides an opportunity for students interested in graduate work that has a broad medical base. Students will take courses that will provide the same level of depth, breadth and intensity as those taken by a first year medical student. This will allow successful participants to demonstrate their readiness for the rigors of a medical school curriculum. Alternatively, appropriate selection of elective courses will allow any student who completes the program to tailor their educational experience to best suit their future plans and aspirations.

Admission Information:
Applicants must hold a Bachelor’s degree from an accredited institution at the time of entrance into the program. They must have completed at least 1 year each of General Chemistry, Organic Chemistry, General Biology and General Physics and have achieved a total score of at least 22 on the MCAT. Applicants who are deficient in one or more of these requirements, but otherwise meet the College-wide requirements for admission to the Master’s Program may be considered on a case by case basis.

Total Minimum Hours for the MSMS with a concentration in IMS: 32 hours

Program Core Courses
GMS 6871 Health Sciences Ethics 2

Required Concentration Courses:
GMS 6418 Core Principles and Musculoskeletal System 7 credits
GMS 7930 Medical Science Learning Skills 3 credits
GMS 6707 Medical Neuroscience 6 credits
GMS 6411 Cardiovascular and Pulmonary Systems 7 credits
GMS 6419 Excretory, Endocrine and Reproductive Systems 7 credits

Elective Courses
Students may select elective courses with the approval of the Program Director.

GMS 6141 Basic Medical Microbiology and Immunology 3 credits
GMS 7930 Selected Topics 1-3 credits
GMS 6908 Medical Sciences Independent Study 1-3 credits

Total minimum hours: 32

MEDICAL MICROBIOLOGY AND IMMUNOLOGY

Core Course
GMS 6200C Biochemistry, Cell & Molecular Biology 5

Required Courses
GMS 6100C Medical Microbiology 3
GMS 7930 Medical Parasitology and Mycology 2
GMS 6101 Molecular and Cell Immunology 3
GMS 6107 Adv in Virology 2
GMS 6110 Microbial Pathogenesis and Host-parasite Interactions 3
BCH 6411 Biomedical Genomics and Genetics 4
Electives
Select one course of the following (2 hrs minimum)
BCH6935  Grant Writing and Scientific Communication 2
BSC6436  Intro to Biotech 3
GMS6876  Current Topics in Molecular Medicine 1

Select one or more from the following (9 hrs minimum):
GMS7910  Directed Research 3-9
GMS6114  Vaccines and Applied Immunology 2
BCH6135C  Methods in Molecular Biology 4
BCH6420  Clinical Correlations in Molecular Medicine 3

Total minimum hours: 32

METABOLIC AND NUTRITIONAL MEDICINE

Total Minimum Hours 32

Program Core Courses (2 hours)
GMS 6871  Health Sciences Ethics 2

Required Courses:
GMS6455  Clinical Intensives in Metabolic and Nutritional Medicine 3
GMS6441  Clinical Approach to Endocrinology 3
GMS6543  Diabetes and Coronary Heart Disease 3
GMS6751  Integrated Clinical Neurobiology 3
GMS6451  Nutrition and Metabolism 3
GMS6454  Functional Medicine and Infectious Disease 3
GMS6752  Autoimmune Diseases and Cognitive Function 3
GMS6340  Laboratory Fundamentals and Adjunct Cancer Therapies 3

Electives:
GMS 6240  Metabolic Approaches to Pediatrics 3
GMS 6550  Introduction to IV Therapies 3
GMS 6310  Toxic Metal and Functional Toxicology 3
GMS 6770  A Metabolic Approach to Pain Management 3
GMS6753  The Basics of Brain Fitness and Memory Management 3
GMS 6331  Stem Cell Biology 3
GMS 6XX  Integrated Bariatrics 3
GMS 7930  Selected Topics 3
GMS 6908  Medical Sciences Independent Study 3
GMS7910  Directed Research 3
GMS 6053  Cancer Prevention 3
GMS 6055  Cancer Immunology 3
GMS 6408  Cardiovascular Disease 3
GMS 6410  Cardiovascular Health 3
GMS 6411  Metabolic Cardiology 3
GMS 6709  Neuropsychiatry 3
GMS 6715  Lifestyle Coaching 3
GMS 6716  Nutrition Counseling 3
GMS 6717  Co-Active Coaching 3
GMS 6718  Integrated Lifestyle Medicine 3
GMS 6720  Sports Medicine and Nutrition 3
GMS 6755  How the Brain Learns 3
GMS 6756  Brain Fitness Therapies 3

http://health.usf.edu/medicine/
MOLECULAR MEDICINE (MLM)

Considered the vanguard of the new millennium in which science truly complements the art of medicine, molecular medicine strives to understand the molecules key to normal body function and the pathogenesis of disease and to design molecular tools for diagnosis, treatment and prevention. Recent changes in research and scholarship in the biomedical sciences has directed attention to the development and training of students who are able to cross the barriers of traditional disciplines and embrace the concepts of interdisciplinary approaches to biomedical problems. The Molecular Medicine concentration, within the Master’s Program in Medical Sciences, has been developed to provide a novel interdisciplinary and concentrated program of study that is designed for students interested in either future doctoral or professional programs in the biomedical sciences. The program integrates several disciplines, including biochemistry, molecular biology, genetics, genomics, microbiology, immunology, virology and biomedical ethics to provide a solid medically-relevant foundation. The rigorous program allows students to demonstrate their full academic ability for future graduate programs or medical school. The interdisciplinary program promotes the broad intellectual focus required of future graduate students in the biomedical sciences or health-care profession. The courses integrate modern teaching methods with extensive student participation designed to improve their oral and presentation skills that are critical to their future professional development.

Core requirements: 6 hrs

- GMS6200C Biochemistry, Molecular and Cellular Biology 1
- BCH6935 Grant Writing and Scientific Communication 2
- GMS6100 Medical Microbiology 3

Course Requirements:

- BCH6411 Biomedical Genomics and Genetics 4
- GMS6101 Molecular and Cellular Immunology 3-4
- GMS6110 Microbial Pathogenesis and Host-Parasite Interactions 3
- GMS7930 Clinical Correlations in Molecular Medicine
- BCH6627 Metabolic and Genetic Basis of Human Diseases 3
- GMS6114 Vaccines and Applied Immunology

Electives 3

- BCH6135C Methods in Molecular Biology 3
- GMS6104 Cellular Immunology 3
- GMS6107 Advances in Virology 3
- BCH6746 Proteomics and Structural Biology 3
- BCH6888 Bioinformatics 3
- PHC6050 Biostatistics I 3
- BCH6876 Current Topics in Molecular Medicine 3

Total Minimum Hours: 32

WOMEN’S HEALTH (WSH)

This innovative, interdisciplinary program, the first in Florida to provide an integrated approach to the subject area of holistic women’s health, is designed to develop leaders in the field of women’s health. The program, which has been constructed to prepare students for future educational or research endeavors in graduate or medical schools or health practice institutions, is designed to fulfill the M.S. M.S. Women’s Health Concentration increasing demand for trained individuals in this emerging area, which focuses on gender-specific issues. The program is founded on the premise that future health-care providers, researchers and educators will require extensive interdisciplinary training in order to develop novel solutions to current biomedical problems in women’s health. The interdisciplinary curriculum has been designed to provide the background training that will equip students with the essential tools for a successful career in the field of women’s health.

The program requires a minimum of 32 credit hours, which can be completed in one year of accelerated and intense study. Core courses provide both foundation and advanced training while electives in such topics as
reproductive women’s cancers, endocrine mechanisms, clinical nutrition, the business side of medicine and biostatistics, provide students with additional educational opportunities.

Program Admission Requirements
- A bachelor’s degree or equivalent from a regionally accredited university in the biological or chemical sciences
- Minimum overall grade-point average of 3.0 out of a possible 4.0 with a minimum grade point average of 3.0 in the sciences
- Graduate Record Examination (MCAT scores can be submitted in lieu of the GRE)

Courses

Core Courses:
- GMS 6871 Health Science Ethics 2
- GMS 6xxx Medicine and Gender 3
- GMS7930 Women’s Health Lab (1-2 Interd.) 2-3
- Elective 2-3 hrs
- GMS6334 Pathobiology of Human Cancer 3
- GMS 6452 Clinical Nutrition 3
- PHC6532 Women’s Health Issues 3
- GMS7910 Directed Research (Women’s Health) 3-6 hrs Interdisciplinary 3
- Elective 3

Elective Courses:
- PCH 6050 Biostatistics 3
- GMS7910 Directed Research (Women’s Health) 3-6 hrs Interdisciplinary 3
- Elective 5-6 hrs

COURSES
See [http://www.ugs.usf.edu/sab/sabs.cfm](http://www.ugs.usf.edu/sab/sabs.cfm)
MEDICAL SCIENCES PROGRAM

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Program Admission Deadlines:
- Fall: February 15

Minimum Total Hours: 90
Program Level: Doctoral
CIP Code: 26.9999
Dept Code: MED
Program (Major/College): MSG MD

Concentrations:
- Allergy Immunology & Infectious Disease (All)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB) *
- Clinical and Translational Research (CTR)
- Microbiology and Immunology (MMI) *
- Molecular Medicine (MLM)
- Molecular Pharmacology and Physiology (MPY)
- Neuroscience (NEU)
- Pathology and Cell Biology ((PCB)
- Pathology and Laboratory Medicine (PLM)
- Pharmacology and Therapeutics (PAT)
- Physiology and Biophysics (PAB)
*Closed for admissions; not accepting applications

CONTACT INFORMATION

College: Medicine
Department: Medical Sciences
Contact Information: www.grad.usf.edu
Website: http://health.usf.edu/medicine/graduatemedicine/index.htm

PROGRAM INFORMATION

The program is designed to provide students with a broad knowledge in the basic medical sciences, while preparing them for careers as effective and knowledgeable teachers, as well as productive and versatile researchers. To meet these objectives, students take courses in the medical sciences and related areas, participate in seminars, and receive individual research training. Departmental advisory committees counsel the entering students in planning their first year curriculum. In addition to course work and participation in seminars, first year students are expected to become familiar with ongoing research in their chosen department; when possible, they are encouraged to work on a part-time basis as research assistants in their department. Once the student selects a major professor, a formal dissertation committee is appointed. The dissertation committee assists the student in planning the research and course of study, evaluates the student’s progress, supervises the comprehensive examination, and conducts the final dissertation defense.

By the end of the second year, a student has usually completed sufficient course work and met the other research requirements to take the comprehensive qualifying examination. Successful completion of this examination leads to formal admission to candidacy for the Ph.D. degree. The final phase of the program emphasizes research and independent study and leads to a written dissertation. The Ph.D. degree is awarded upon successful completion and oral defense of the dissertation. Departments within the College of Medicine may have additional requirements that pertain to their respective training program. Contact the department for information.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.
Major Research Areas:
Allergy, Immunology and Infectious Diseases Cancer Biology, Cardiovascular Research, Neuroscience & Neurodegenerative Diseases, Diabetes/Metabolic Disorders

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements

- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.0 out of a possible 4.0 with a minimum grade-point average of 3.0 in the sciences
- GRE- Graduate Record Examination (preferred minimum 600Q)
- Completed pre-requisites in:
  - General biology (1 year)
  - General chemistry (1 year)
  - General physics (1 year)
  - Organic chemistry (1 year)
  - Quantitative analysis (1 course)
  - Mathematics including integral and differential calculus
- Three (3) letters of recommendation
- Personal Interview
- One-two page personal statement

Application Procedures
Please refer to http://health.usf.edu/medicine/graduatestudies/phd/apply_phd.htm

DEGREE PROGRAM REQUIREMENTS

Total Minimum Hours: 90 hours
(including 24 minimum directed research hours)

All students are required to successfully complete the following didactic courses:

- GMS6001 Foundation in Biomedical Sciences 6
- GMS6091 Responsible Conduct in Research 1
- GMS6094 Experimental Design & Analysis 3
- GMS6002 Success Skills for the Biomedical Science Researcher 1
- BCH6935 Grant Writing & Scientific Communication 2

Students are also required to complete at least one semester of:

- GMS6942 Laboratory Rotations in Biomedical Sciences 1-3

Each student shall complete a minimum of 24 credit hours of didactic course work (excluding journal clubs, seminars, laboratory rotations, directed research, etc.). In addition to the required courses listed above (13 credit hours), the student shall fulfill the 24 credit hour minimum by completing coursework in their chosen concentration. The student will work with his/her advisory and dissertation committees to choose appropriate courses from the course list for their chosen concentration.
CONCENTRATIONS:

ALLERGY, IMMUNOLOGY & INFECTIOUS DISEASE
Research and education in the Ph.D. in Medical Sciences Program, concentration in Allergy, Immunology & Infectious Disease is focused on interdisciplinary approaches to the study of how the immune system functions properly to rid the body of foreign pathogens and how the immune system can go awry in autoimmunity. The process by which microbes interact with the host to cause disease is also a focus of this program.

ANATOMY

BIOCHEMISTRY AND MOLECULAR BIOLOGY - Closed for admissions; not accepting applications

CLINICAL AND TRANSLATIONAL RESEARCH
Cardiovascular disease is the leading cause of death, in the United States Atherosclerotic coronary artery disease, valvular heart disease, diseases of the heart muscle, electrical disturbances of the heart rhythm, high blood pressure, stroke, and peripheral vascular disease all contribute to this morbidity. According to current estimates, coronary heart disease, high blood pressure, congestive heart failure and stroke affect nearly 58 million Americans. The USF Signature Interdisciplinary Program in Cardiovascular Research is a comprehensive program that brings together resources in heart care, research and education to fight against cardiovascular disease. Clinicians and researchers at USF are working to improve our knowledge of cardiovascular disease in order to develop new methods of prevention and treatment that will make a difference in the lives of patients with cardiovascular disorders.

MEDICAL MICROBIOLOGY AND IMMUNOLOGY - Closed for admissions; not accepting applications

MOLECULAR MEDICINE
Research and education in the Ph.D. in Medical Sciences Program, concentration in Molecular Medicine is focused on interdisciplinary approaches to the study of bacteriology, biochemistry, immunology, molecular biology and virology as it relates to human health and disease such as allergy and immune dysfunction, cancer, cardiovascular disorders, infectious diseases and inheritable defects. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

MOLECULAR PHARMACOLOGY & PHYSIOLOGY
Research and education in the Ph.D. in Medical Sciences Program, concentration in Molecular Pharmacology and Physiology is focused on interdisciplinary approaches to the study of the nervous and cardiovascular systems and related disorders, including Alzheimer’s disease and other neurodegenerative disorders, cardiovascular disease and stroke, diabetes, and neuropsychiatric disorders such as depression and drug addiction. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

NEUROSCIENCE
Research and education in the Ph.D. in Medical Sciences Program, concentration in Neuroscience is focused on interdisciplinary approaches to the study of the nervous systems and related disorders, including Alzheimer's disease and other neurodegenerative disorders, stroke, and neuropsychiatric disorders such as depression and drug addiction. Areas of expertise include biochemistry and cellular and molecular neuroscience, neural systems and computational neuroscience, behavioral neuroscience, developmental neuroscience, neuroimmunology, and neuropsychopharmacology, among others. Students are encouraged to carry out research during their entire period of study. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience. The interdisciplinary structure permits considerable flexibility in training; each student’s training is tailored to meet individual requirements.

PATHOLOGY & CELL BIOLOGY
Research and education in the Ph.D. in Medical Sciences Program, concentration in Pathology & Cell Biology is focused on interdisciplinary approaches to the study of cancer, reproductive pathobiology, neurological disease & injury and related diseases, including cancer biology, angiogenesis and morphogenesis, gene discovery, neurobiology, cell biology and new educational technologies.

PATHOLOGY AND LABORATORY MEDICINE
PHARMACOLOGY AND THERAPEUTICS

PHYSIOLOGY AND BIOPHYSICS

Electives
Some of the electives include:

- BCH 6746 Structural Biology 3
- GMS 6115 Medical Parasitology & Mycology 3
- GMS 6708 Neuroimmunology 3

COURSES
See http://www.ugs.usf.edu/sab/sabs.cfm
MEDICINE / MEDICAL SCIENCES DUAL PROGRAM

Doctor of Medicine (M.D.) / Doctor of Philosophy (Ph.D.) Dual Degree

DEGREE INFORMATION

Program Admission Deadlines:
Contact the College of Medicine

Minimum Total Hours: 90
Program Level: Doctoral
CIP Code: 26.9999
Dept Code: MED
Program (Major/College): MED MD / MSG MD
Concentrations:
- Allergy Immunology & Infectious Disease (All)
- Anatomy (ANA)
- Biochemistry and Molecular Biology (BMB)*
- Clinical and Translational Research (CTR)
- Microbiology and Immunology (MMI)*
- Molecular Medicine (MLM)
- Molecular Pharmacology and Physiology (MPY)
- Neuroscience (NEU)
- Pathology and Cell Biology ((PCB)
- Pathology and Laboratory Medicine (PLM)
- Pharmacology and Therapeutics (PAT)
- Physiology and Biophysics (PAB)
* Closed for admissions; not accepting applications

CONTACT INFORMATION

College: Medicine
Department: Medicine/Medical Sciences
Contact Information: www.grad.usf.edu

PROGRAM INFORMATION

The combined MD/PhD program is designed to provide well-qualified students who are interested in careers in translational medicine with a broad knowledge in the basic biomedical and clinical sciences that is integrated with the advanced experimental training that is critical for their development as productive and versatile researchers. To meet these objectives, student’s complete courses in both the basic and clinical sciences, participate in patient-care activities and seminars, and receive individual research training in one of the many research concentrations available within the College. Program advisory committees counsel the entering students on planning their curriculum and selecting a research mentor. During the first two years, students complete the basic science course work and participation in research rotations that assist in the selection of a dissertation mentor. Following the successful completion of the second year of medical training and the selection of a major professor, a formal dissertation committee is appointed which assists the student in planning the research and course of study, evaluates the student’s progress and supervises the comprehensive examination.

The successful completion of this examination leads to formal admission to candidacy for the PhD degree. The remainder of this phase of the program emphasizes research and independent study and leads to a written dissertation and its oral defense. Following the completion and defense of their PhD dissertation, students embark on the final two years of their medical training. The program culminates in the award of both MD and PhD degrees. Departments within the College of Medicine may have additional requirements that pertain to their respective portions of the training program. Contact the department for information.

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

Major Research Areas:
See College of Medicine website.
ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below. As well as requirements of the College of Medicine MD and PhD programs, listed below. Student applications must be submitted through AMCAS.

Program Admission Requirements
- A bachelor’s degree or equivalent from a regionally accredited university
- Minimum overall grade-point average of 3.70 out of a possible 4.00 with a minimum grade-point average of 3.7 in the sciences
- Medical College Admissions Test score of 30 (The MCAT substitutes for the GRE).
- Completed pre-requisites in:
  - General biology (1 year)
  - General chemistry (1 year)
  - General physics (1 year)
  - Organic chemistry (1 year)
  - Quantitative analysis (1 course)
  - Mathematics including integral and differential calculus
- Three (3) letters of recommendation
- Interview
- One-two page personal essay

DEGREE PROGRAM REQUIREMENTS

Total Minimum Program Hours 90

Contact programs for complete information. Degree requirements are individualized according to research interests and goals. Ninety credit hours minimum including 24 minimum directed research hours.

COURSES

See http://www.ugs.usf.edu/sab/sabs.cfm
PHYSICAL THERAPY AND PUBLIC HEALTH PROGRAM

Dual Degree Program
Doctor of Physical Therapy (D.P.T.) and Master of Public Health (M.P.H.) Degree

DEGREE INFORMATION

Program Admission Deadlines:
Rolling Admissions. One class admitted each August.
Contact program for details.

Minimum Total Hours: Contact Programs
Program Level: Professional/Masters
Program Status: Active
CIP Codes: 51.2308/
Dept Code: PHT/
Program (Major/College): MPT MD

CONTACT INFORMATION

Colleges: Medicine and Public Health
Departments: School of Physical Therapy and Rehabilitation Sciences and Public Health
Contact Information: www.grad.usf.edu

PROGRAM INFORMATION

Physical therapists are health professionals with special expertise in the science of movement. They use this knowledge to provide preventive and therapeutic services and psychological support to people of all ages with movement dysfunction. Professional education includes study of basic sciences and the professional skills needed for client examination, evaluation, diagnosis, prognosis, intervention and outcomes. Students will participate in comprehensive clinical internships throughout the program. The School of Physical Therapy and Rehabilitation Sciences is a component of the College of Medicine and is a limited access first professional degree program with an annual enrollment of up to 36 students per year. Students complete the majority of their first year studies on a parallel path with the first year curriculum in medicine.

The Doctor of Physical Therapy is offered through the USF Medical School in the College of Medicine. For information regarding the DPT contact the School of Physical Therapy and Rehabilitation Sciences.

The Master of Public Health is offered through the USF College of Public Health. For information regarding the MPH contact the College of Public Health Graduate Studies office.

Accreditation:
Accredited by the Commission on Accreditation in Physical Therapy Education.

ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.
Contact programs for complete information.

Program Admission Requirements

- Have a bachelor’s degree or equivalent from a regionally accredited university, and completion of prerequisite courses.
- Have earned a "B" (3.0 on a 4.0 scale) average or better in all work attempted while registered as an upper division student working for a baccalaureate degree; overall GPA of 3.0 and on all prerequisite coursework.
- Interview upon request of the School of Physical Therapy and Rehabilitation Sciences.
● Have at least 20 total hours of documented, observational, volunteer or other work experience in both hospital outpatient and inpatient physical therapy settings

● English competency. Applicants who have completed a degree in which English is not the primary language of instruction must present evidence of competency to pursue studies in the English language prior to being extended an offer of admission. Acceptable English language proficiency tests for applicants to the Doctor of Physical Therapy program are: TOEFL (Test of English as a Foreign Language) a minimum score of 600 (paper version); 230 (computer version).

● Have a written autobiographical statement of personal values and purpose for attending USF’s DPT Degree Program.

DEGREE PROGRAM REQUIREMENTS

Contact programs for complete information.

Students must complete 107 credit hours of professional coursework and meet the general graduate requirements of the School of Physical Therapy and Rehabilitation Sciences and the College of Medicine for admission and graduation.

COURSES

See http://www.ugs.usf.edu/sab/sabs.cfm