MS PROGRAM IN PHARMACOLOGY

The Master of Science Program in Pharmacology prepares graduates for posistions in research and development, research management, clinical trials, or toxicology review and assessment. Specialization tracks include: **1) Clinical Research Scientist, 2) Clinical Pharmacology, 3) Clinical Toxicology, or 4) Human Investigation** (track reserved for physicians or other professionals). Graduates have been accepted into PhD and professional degree programs.

CORE COURSES

Course No	Course Name	Credit Hours
PR 522	General Pharmacology	3 credits
PR 525	Clinical Pharmacology	3 credits
BI 550	Topics in Biomedical Chemistry	3 credits
GC 660	Statistical Methods of Data Analysis	3 credits
PR 720	Seminar – Section 2	1 credits
GC 525	Information Systems in Organizations*	3 credits
GC 605	Performance Improvement*	3 credits
PR 810, 820, 830	Clerkship	6 credits
PR 870, 880, 890	Master's Thesis Research	6 credits
	Required Core Course Credit Hours . . . .31 credits	

Recommended Elective Courses (may vary between tracks)

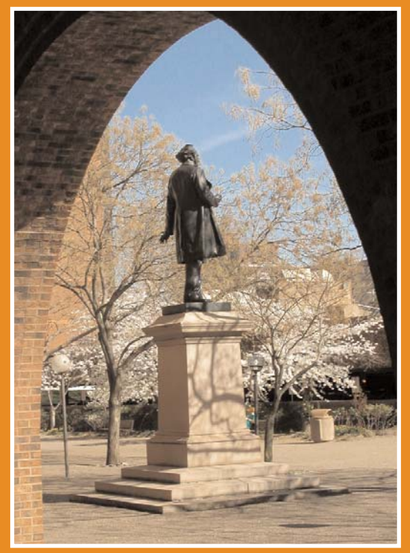
GC 510	Database Design and Management	3 credits
GC 529	Laboratory Animal Science	2 credits
GC 535	Introduction to Genomics & Bioinformatics	2 credits
GC 617	Project Management of Drug Development	2 credits
GC 625	Drug Development Issues	2 credits
GC 635	Fund of Clinical Trial Management	2 credits
GC 640	Res. Ethics and Responsible Conduct	1 credits
GC 680	Lab Techniques in Molecular Biology	2 credits
GC 690	Regulatory Issues	2 credits
PR 530	Fundamentals of Biosafety	2 credits
PR 625	In vivo Pharmacology	3 credits
PR 630	General Toxicology	3 credits
	Required Elective Credit Hours . . . . . .9 credits	
	Total MS Program Credit Hours . . . . . .40 credits	

**Representative of additional selections in management; total of 6 credits required.*

For information call Eleanor Gorman at

215-503-5799

MASTER OF SCIENCE PROGRAMS IN THE BASIC SCIENCES



at the

Thomas Jefferson University
Graduate Center for
Education and Training
Jefferson College of Graduate Studies

Thomas Jefferson University | Jefferson College of Graduate Studies

The primary goal of the Master of Science programs is to give students a sound theoretical and practical foundation in the basic sciences. Programs in the Jefferson College of Graduate Studies are **Master of Science in Biomedical Chemistry**, **Master of Science in Developmental Biology and Teratology, Master of Science in Microbiology**, and **Master of Science in Pharmacology**. These part-time programs are designed to meet the needs of professionals. Classes meet once a week and are scheduled late in the day. Courses are offered at convenient intervals so students can complete the program at their own pace. These 40-credit graduate programs can be completed on a part-time basis in 2 to 4 years. Tuition support may be available from employers.

The health related industries are projected to continue their growth and will require highly qualified professionals. These programs prepare graduates who will assume or continue professional and leadership roles in biotechnology research, clinical or research laboratory management, quality assurance, regulatory affairs, or teaching.

The programs have been designed to include a core curriculum that provides fundamental knowledge in basic science disciplines, field or laboratory-based research, an experiential component, and specialized instruction. The skills and knowledge gained here will allow students to pursue careers in international programs, the pharmaceutical industry, biotechnology corporations, and academia

Qualified candidates for the Master of Science Programs include:

- Graduates of baccalaureate programs in basic sciences, nursing, or health professions
- Graduates of professional, doctoral level programs (i.e. medicine, dentistry, or pharmacy)
- Post-doctoral trainees

Application Process for the Master of Science Degree in Basic Sciences

Applicants must submit the application form with a $50.00 non-refundable application fee and the following documents:

- A personal statement
- Two copies of official college transcripts demonstrating completion of a baccalaureate, graduate and/or professional degree
- Three letters of recommendation from an employer, supervisor, or academic faculty member
- Graduate Record Examination (GRE) or Medical College Admission Test (MCAT) scores
- Test of English as a Foreign Language (TOEFL) scores are required for students whose first language is not English

Applications follow University guidelines.

For more information visit our website at **www.jefferson.edu/jcgs** or contact us at **msbasicsciences@Jefferson.edu**

Contact Us

Graduate Center for Education and Training
Jefferson College of Graduate Studies
Thomas Jefferson University
1020 Locust Street, Suite M46
Jefferson Alumni Hall
Philadelphia, PA 19107-6799

MS PROGRAM IN BIOMEDICAL CHEMISTRY

The Master of Science Program in Biomedical Chemistry prepares graduates for positions as biotechnologists, managers of clinical laboratories, research associates in academia, research scientists in the pharmaceutical/biotechnology industry or forensic toxicology technologists. Graduates have been accepted into PhD and professional degree programs.

3 credits of undergraduate biochemistry are required for this program.

CORE COURSES

Course No	Course Name	Credit Hours
BI 550	Topics in Biomedical Chemistry	3 credits
BI 555	Bioanalytical Techniques	3 credits
GC 660	Statistical Methods of Data Analysis	3 credits
MI 521	Introduction to Immunology	2 credits
BI 712	Seminar	2 credits
GC 600	Management Skills*	3 credits
GC 620	Fundamentals of Financial Management*	3 credits
BI 810, 820, 830	Clerkship	6 credits
BI 870, 880, 890	Master's Thesis Research	6 credits
	Required Core Course Credit Hours . . . .31 credits	

Recommended Elective Courses

CB 570	Pathologic Aspects of Disease	3 credits
GC 525	Information Systems	3 credits
GC 526	Presentation Skills	2 credits
GC 529	Laboratory Animal Science	2 credits
GC 535	Introduction to Genomics & Bioinformatics	2 credits
GC 605	Performance Improvement	2 credits
GC 625	Drug Development Issues	2 credits
GC 635	Fundamentals of Clinical Trial Management	2 credits
GC 680	Laboratory Techniques in Molecular Biology	2 credits
GC 720	Scientific Writing	2 credits
PH 505	Environmental and Occupat. Toxicology	2 credits
PR 530	Fundamentals of Biosafety	2 credits
PR 625	In vivo Pharmacology	3 credits
PR 630	General Toxicology	3 credits
	Required Elective Credit Hours . . . . . .9 credits	
	Total MS Program Credit Hours . . . . . .40 credits	

Representative of additional selections in management; total of 6 credits required.

msbasicsciences@jefferson.edu

MS PROGRAM IN DEVELOPMENTAL BIOLOGY AND TERATOLOGY

The Master of Science Program in Developmental Biology and Teratology prepares graduates for positions in research and development in academia, industry, and government. Graduates may be employed as basic research scientists, faculty in academic institutions, managers, or research associates in industrial positions. Graduates of the program may be accepted into PhD and professional degree programs.

CORE COURSES

Course No	Course Name	Credit Hours
CB 615	Dev. Biology/Teratology – Embryology	3 credits
CB 635	Dev. Biology/Tera – Mechs of Teratogen	3 credits
BI 550	Topics in Biomedical Chemistry	3 credits
GC 660	Statistical Methods of Data Analysis	3 credits
CB 710, 720, 730	Seminar	1 credits
GC 605	Performance Improvement*	3 credits
GC 620	Financial Management*	3 credits
CB 810, 820, 830	Clerkship	6 credits
CB 870, 880, 890	Master's Thesis Research	6 credits
	Required Core Course Credit Hours . . . .31 credits	

Recommended Elective Courses

CB 570	Pathologic Aspects of Disease	3 credits
GC 529	Laboratory Animal Science	2 credits
GC 535	Introduction to Genomics & Bioinformatics	2 credits
GC 680	Laboratory Techniques in Molecular Biology	2 credits
GC 700	Introduction to Neuroscience	3 credits
PH 505	Environmental and Occupational Toxicology	2 credits
PR 625	In vivo Pharmacology	3 credits
PR 630	General Toxicology	3 credits
	Required Elective Credit Hours . . . . . .9 credits	
	Total MS Program Credit Hours . . . . . .40 credits	

Representative of additional selections in management; total of 6 credits required.

MS PROGRAM IN MICROBIOLOGY

The Master of Science Program in Microbiology prepares graduates for positions in biotechnology and pharmaceutical industry settings, clinical microbiology laboratories, and infection control in hospitals or government agencies. Specialization tracks include: **1) Clinical Microbiology, 2) Microbiology Research/Biotechnology, and 3) Infection Control.** Graduates of the program maybe accepted into PhD and professional degree programs.

3 Credits in Diagnostic Microbiology MI 582 will be required for students lacking prior courses in this area.

CORE COURSES

Course No	Course Name	Credit Hours
MI 505	Biochemistry of Microorganisms	3 credits
GC 660	Statistical Methods of Data Analysis	3 credits
MI 521	Introduction to Immunology	2 credits
CB 570	Pathologic Aspects of Disease	3 credits
MI 580	Epidemiology	3 credits
GC 525	Information Systems in Organizations*	3 credits
GC 600	Management Skills*	3 credits
MI 810, 820, 830	Clerkship	6 credits
MI 870, 880, 890	Master's Thesis Research	6 credits
	Required Core Course Credit Hours . . . .32 credits	

Recommended Elective Courses

GC 535	Introduction to Genomics & Bioinformatics	2 credits
MI 520	Diagnostic Parasitology	2 credits
MI 530	Pathogenesis	2 credits
MI 532	Medical Mycology	2 credits
MI 540	Microbiology of Antimicrobial Agents	3 credits
MI 582	Diagnostic Microbiology	3 credits
MI 590	Introduction to Clinical Virology	2 credits
MI 682	Advanced Diagnostic Microbiology	2 credits
	Required Elective Credit Hours . . . . . .8 credits	
	Total MS Program Credit Hours . . . . . .40 credits	

Representative of additional selections in management; total of 6 credits required.

Visit our website at

www.jefferson.edu/jcgs

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