

Please read the manual and submit the signed cover page to the MSFS Graduate Secretary (Ms. Pupi Tomassini)

MSFS Student Policies and Procedures Manual

Thesis option

**Department of Chemistry
Florida International University**

August 2014 Edition
Effective 2009

The purpose of this manual is to bring together pertinent information essential for graduate students in the Forensic Science Masters Program at Florida International University. It is intended to supplement and help clarify the guidelines and requirements for graduate study at the university and the specific policies and procedures within the MSFS program. In no way is this manual intended to override or substitute any of required policies and procedures established by the University Graduate School. It is the student's responsibility to understand and follow the University and MSFS policies and procedures. The student is responsible for making certain all requirements have been met within the established deadlines. Each student must submit the signed statement to the graduate program secretary for inclusion in the student's file.

I have received and read the MSFS Policies and Procedures Manual.

Name

Signature

Date

Graduate Student Policies and Procedures Manual

**Department of Chemistry and Biochemistry
Florida International University**

**August 2014 Edition
Effective Sept 2009**

1. Graduate Admission Requirements and Procedures

1.1 Graduate Admission Requirements

A minimum undergraduate grade point average of 3.0/4.0 in chemistry, biology or the equivalent and cognate science is required except by special permission of the graduate committee. In addition, the GRE score must be submitted as part of the application. The admissions/evaluation committee for the MSFS expects the equivalent of a minimum 1000 (verbal + quantitative) from the former GRE scale or greater than ~ 40% rank for both verbal and quantitative scores for test-takers in the year of application (equivalent to 149 verbal and 149 quantitative in 2013, for example). Students whose native language is not English must score 550 or higher on the Test of English as a Foreign Language (TOEFL). Two letters of reference and official undergraduate transcripts are also required.

Students not meeting minimal FEPAC requirements for appropriate background for a forensic BS degree may be required to take additional classes to make up deficiencies in their education at the discretion of the Forensic Graduate Committee.

Note: Students aspiring to work in the field of forensic science are normally required to undergo a thorough background check. A past criminal record (arrests and/or convictions) will usually disqualify a person to work in this field. In addition, most forensic science employers will not hire anyone with a history of illicit drug abuse.

Minimal FEPAC requirements include

1. Biology: At least one course including a laboratory (4 semester hours) in biology for science majors. (Biochemistry is an appropriate substitution for this class)
2. Physics: At least 2 classes each including an associated laboratory (8 semester hours) in physics for science majors. Calculus based physics is preferred but not required.
3. Chemistry:
 - a. General chemistry: At least 2 classes each including an associated laboratory (8 semester hours) in chemistry for science majors.
 - b. Organic Chemistry: At least 2 classes each including an associated laboratory (8 semester hours) in organic chemistry for science majors.
4. Mathematics
 - a. Calculus At least 1 class in differential and integral calculus (3 semester hours)
 - b. Statistics At least 1 class (3 semester hrs)

In addition, the following requirements also apply

1. Students interested in forensic chemistry should have coursework in quantitative analysis, instrumental analysis and physical chemistry
2. Students interested in forensic biochemistry should have coursework in genetics, molecular biology and biochemistry.

1.2 Application Procedures

Prospective candidates must submit an application for admission to the graduate program on line (\$30) @ <http://www.fiu.edu/gradadm>. Additional departmental information is available on line @ <http://www.fiu.edu/orgs/chemistry>. Applicants must also arrange to have official transcripts from all colleges and/or universities attended and official test scores (GRE, plus TOEFL as a foreign student and TSE if a foreign student applying for financial support) sent to the Admissions Office. Transcripts in a language other than English must be accompanied by an official English translation. Three letters of recommendation and a statement of purpose must be submitted with the application materials. Students should indicate their interest in the MSFS program.

Florida International University has a rolling admissions policy. When the Admissions Office receives an application, application fee, transcripts and GRE, TOEFL, and TSE scores, they are forwarded to the Forensic Science Graduate Committee for evaluation. Formal admission to the MSFS program is granted by the Forensic Science Program Director in consultation with the Forensic Science Graduate Committee. The MSFS program normally accepts students at the beginning of each Fall semester but may consider Spring admissions under special circumstances. For full consideration, all application materials must be received before Feb. 15 for Fall admission. Applications received after these dates and up to May 15 will be reviewed and may be accepted depending on availability.

1.3 Program Requirements (Thesis Option)

General Coursework Requirements: The Master in Forensic Science program requires the satisfactory completion of a variety of lecture courses including a minimum number of core courses. Full-time M.S. students must register for 9 credits in the first semester (except for summer admits who register for 6 credits) and subsequently 9 credits each fall and spring semester and 6 credits during the summers. Part-time MSFS students must register for a minimum of 1 credit each semester or be dismissed from the program.

A maximum of six credits of post-baccalaureate coursework may be transferred from other institutions, subject to the approval of the Graduate Program Director and the Graduate Committee.

Thesis Option Required courses

- ∞ **BSC 5406 Forensic Biology (3) (Fall)**
- ∞ **CHM 5542 Forensic Chemistry (3) (Spring)**
- ∞ **CHM 5535 Forensic Analysis (3) (Fall)**
- ∞ **CHM 6935 Thesis Proposal Seminar (1) (First Spring semester in residence)**
- ∞ **CHM 6970 or BSC 6971 Thesis (minimum of 6 credits required)**
- ∞ **CHM 6971 or BSC 5975 Thesis Defense Seminar (1, during graduation semester)**

Electives (12 minimum)

The following elective courses are suggested for each sub-discipline.

Workshops, laboratories, independent study, and internships (up to 6 credits) may also be used for elective credits. (see course list)

Forensic Chemistry

CHS 5539 Forensic Toxicology (required for the Forensic Chemistry Track)

CHM 5165 Sampling and Chemometrics

Drug Chemistry (alternative to Forensic Toxicology for the Forensic Chemistry Track)

Arson and Explosives

Chromatography

Advanced Mass Spectrometry

Advanced Analytical Chemistry

Organic Spectroscopy

Biochemistry

CHS 6945 internship (up to 6 credits)

Forensic Biology Track

Human Genetics PCB 5665 (3)

DNA Population Statistics (3)

Forensic DNA typing

Graduate Biochemistry

Molecular Biology

Chromatography

Nucleic Acid Chemistry

Bioinformatics

CHS 6945 (up to 6 credits)

Credits taken at the 4000-level beyond six, or at a lower levels, will not count towards graduation. Chemistry, Biology, Physics, Statistics, Geology, Criminal Justice, Legal Psychology, and Medical Laboratory Sciences courses may serve as electives with approval from the student's committee.

Students should be familiarized with specific course requirements for their subdisciplines. (DAB, SWGDRG, and SWGDAM which specify training guidelines for analysts.) For example DNA analysts should have graduate and undergraduate coursework in molecular biology, genetics, biochemistry and statistics as it relates to population genetics. Forensic Chemistry students must take either Forensic Toxicology or Forensic Analysis of Drugs.

Research Proposal Seminar (Thesis Option)

During the second semester of full attendance, (6-9 credits passed) a student must sign up for and present a research proposal as part of the following class CHM6936. Students off campus who cannot attend this class must visit the school during this time and present a research proposal.

The first semester coursework will be determined in consultation with the graduate program director. Once a thesis/dissertation advisor has been chosen, this person will assist the student as to which courses should be taken in accordance with the policies established by the department and the university.

1.4 Meeting the faculty and choosing a research advisor

The purposes of this requirement are for the students and faculty members to meet and for the students to learn about the research projects of individual faculty members. New students during their first semester must meet each active faculty member in the MSFS program and submit to the graduate program director the mentor selection form (form 6.4 in the attached Appendix) signed by the faculty members the student has interviewed (minimum of 5 research faculty must be interviewed). Once the student has received a signature from at least five faculty members, he/she must submit the mentor selection form (attached in the appendix), signed by both the student and selected advisor. Final approval and acceptance must be obtained before beginning formal work with the agreed upon research advisor. Thesis option students shall complete the University Graduate School (UGS) form (M-1) that communicates the mentor and committee selection to the UGS and submit this form in the beginning of their second semester of residence.

1.4.1 Graduate faculty must meet the following requirements to serve as major professor for a given MSFS student:

- ∞ Be approved by FIU to mentor graduate students.
- ∞ Have specialized academic competence in the student's major field.
- ∞ Have published an article in a peer-reviewed journal in the last three years or had research funding during the last three years.

1.4.2 Choosing the faculty advisory committee

The advisory committee shall consist of the student's advisor and two other graduate faculty with expertise in the research topic selected by the student. The advisory committee is selected by the student, in consultation with their advisor. The purpose of the faculty advisory committee is to guide the MSFS student through their research project.

1.5 Research Proposal Seminar

During the second semester in residence, the MSFS students shall register for a "Chemistry Colloquium" (CHM6936) section. Each student will be required to present a 20-25 minute public seminar describing the proposed research to be conducted in partial fulfillment of the degree requirements. The student's faculty advisor committee must be selected by the time the presentation is given and all committee members must attend the proposal seminar (Form M-1 must accompany the committee selection). In addition, a 5-page written proposal describing the research must be submitted. This proposal will be forwarded to the Office of the Dean of Arts and Sciences and to the Dean of the University Graduate School for approval (Form M-2 must accompany the research proposal). The forms can be downloaded from the University Graduate School Web Site: <http://gradschool.fiu.edu/StudentForms.html> The committee will evaluate the research proposal with the form found in the appendix.

It is the student's responsibility to bring all the necessary forms ready for signature and to submit the forms along with the final and corrected proposal to the instructor of the CHM6936 class before the end of the semester. It is also the student's responsibility to submit the corrected 5-page research proposal to the Dean's office and the UGS for approval. The student will receive a letter grade for this 1-credit course based on feedback from both the instructor and his/her committee.

1.6 Annual Graduate Student Evaluation

Every MSFS thesis student enrolled in the program shall undergo a yearly evaluation to be conducted by his/her graduate committee by April 30 of every year. The purpose of this evaluation is to provide feedback to the student on his/her progress towards graduation as well as to document student performance for the research advisor, research committee, graduate program director and the Graduate Dean of the College of A&S to review. This evaluation may be conducted at the same time as the research proposal presentation gathering (see 1.5 above). The form is attached to this manual as an appendix.

1.7 Thesis

Upon completion of all the coursework, the research proposal and all the research requirements, the student must prepare and submit a thesis to the faculty advisor and research committee. Thesis preparation guidelines can be found in a separate document but the thesis must be prepared using the guidelines for submission as a paper to the Journal of Forensic Sciences (or other scientific journal) and should be judged acceptable by a committee composed of the student's advisor and committee and the Graduate Program Director of the MS in Forensic Sciences. Faculty may not serve on the committee of a student when a conflict of interest exists; this includes personal and/or business relationships.

1.8 Active Status and Time Limitations

Active status in good standing entitles students to utilize the University's resources. To maintain active status in the M.S. program, students must register for a minimum of one (1) credit per semester, summer semester included. Lapses in enrollment for two or more consecutive semesters will result in a student being dismissed from the program. All requirements for the M.S. degree, including the successful defense of a thesis, must be completed within six years of first enrollment in the program, inclusive of any leaves of absence or other interruptions of active student status. Students who do not complete their thesis within this time period may apply for an exception to this rule by filing a Request for Exception form to the Dean of the Graduate School.

2. General Information

2.1 Financial assistance

2.1.1 Various forms of financial assistance are available to graduate students at FIU. Recommendations for aid as well as admission into the program are based on the initial ranking of new students by their GRE and GPA scores. In addition, graduate students are encouraged to apply for external support for their graduate work (e.g., Sigma Xi, NSF, etc.). Proposals to funding agencies must have the approval of the Department of Chemistry and, in some cases, the Division of Sponsored Research. Graduate stipends for TA's and RA's and some tuition fee waivers (partial and full) are available to eligible students.

2.1.2 Graduate teaching assistantships are not offered to MSFS students but MSFS students may be offered research assistantships or graduate assistantships. Satisfactory progress toward the degree is a condition of renewal of any financial aid, including assistantships. Students will be notified each academic year regarding renewal of an assistantship, amount of stipend/tuition waiver and responsibilities for the following term.

2.2 Guidelines for graduate assistantships including Gas, TAs and RAs

2.2.1 Research assistantships (RAs) are intended to:

- ∞ provide financial support for graduate students working toward their M.S. or Ph.D. degrees.
- ∞ give graduate students the opportunity to obtain university research experience under the guidance of departmental faculty. Specific research duties are assigned by the major professor.

2.2.2 Teaching assistantships are intended to:

- ∞ provide financial support for graduate students working toward their M.S. or Ph.D. degrees.
- ∞ give graduate students the opportunity to obtain university teaching experience under the guidance of departmental faculty. Specific requirements for a TA will be determined by the faculty member to whom they are assigned.
- ∞ enable the department to meet the teaching demand of multiple-section high-enrollment laboratory courses.

2.3 Duties of teaching assistants (TAs)

2.3.1 Teaching Assistants are typically assigned for 20 hours per week, usually 2-3 sections of a laboratory class during the academic year. Students will be paid in bi-weekly paychecks. Assigned duties may include:

- ∞ supervision of 2-3 laboratory sections per week. Since some laboratory courses meet for differing lengths of time, alternate duties may be added or subtracted to

ensure that TA effort workloads are equally distributed.

- ∞ grading of lecture- or laboratory-related quizzes, exams, reports, etc.
- ∞ attendance at weekly laboratory meetings and/or course-related lectures
- ∞ preparation and organization of laboratories
- ∞ consultation and office hours with students
- ∞ proctoring and grading of lecture exams
- ∞ attendance of workshops and meetings held by the department as required for training and coordination.

2.3.2 Teaching assistants are required to enroll in 1-2 credits of supervised teaching CHM 6940. The course may include teaching orientation and regular meetings to address teaching issues throughout the semester and all TAs are required to attend.

2.4 Evaluation of TAs

TA's will receive an evaluation from students in every laboratory that they teach. Copies of the student evaluations and any student comments are also added to the student's file and sent to the faculty member that supervised the TA within 60 days of the end of the semester. Graduate students who have also enrolled in CHM 6940 to fulfill the teaching requirement for the Ph.D. degree will also receive a P/F grade based on their performance in teaching. Faculty members must submit to the Chemistry Graduate Program Director written evaluations for each TAs. These evaluations are added to the student's file.

2.5 Obtaining Florida Residency

2.5.1 To be considered for Florida residency, the student must be a U.S. citizen or legal alien, and independent (i.e. your parents do NOT claim you on their taxes and you file your own taxes). To apply, the following information and any other documentation proving your ties to the state of Florida must be taken to the Registrar's Office to be reviewed. All of the following documents must be dated one year prior to the time that you apply for residency. Therefore, it is extremely important to get the following items BEFORE YOUR FIRST SEMESTER BEGINS.

2.5.2 Proof of Residency:

- ∞ Florida Driver's License
- ∞ Voter's Registration Card;
- ∞ Florida Vehicle's Registration
- ∞ Declaration of Domicile (from a Dade County Court and signed by a Notary Public of Florida)
- ∞ Proof of Independence (ex. Tax forms)
- ∞ Permanent Employment (ex. show contract)
- ∞ Residence during periods of non-enrollment
- ∞ Lease/Own Home/Own Property
- ∞ Checking Account with a Florida Bank

2.5.3 Obtaining Florida residency is mandatory for any student eligible US citizen or

legal/permanent resident who is seeking financial support from the department. The department will only pay an eligible U.S student's out-of-state tuition for one academic year; otherwise, the increased fees are the burden of the student.

2.6 Withdrawal/leaves of absence/re-admittance

2.6.1 Graduate students who have not been registered for two consecutive semesters, including the summer session, will be dropped from the graduate program and must apply for re-admission through the Admissions Office.

2.6.2 If a student finds it necessary to be excused from registration in a the program for two or more consecutive semesters he/she must formally request a leave of absence from the graduate program. Leave will be granted only under exceptional circumstances. When the student returns from a leave of absence, decisions concerning previous or current programs of study will be mutually agreed upon by the graduate committee, the student's thesis committee and the student.

2.6.3 A leave of absence does not extend the amount of time allotted for degree completion. The six years for the MS and nine years for the Ph.D. are calculated from the entry date in the program and do not take absence from the program into account. Student who have been dismissed from the program may not be considered for re-admission into the program within a year.

2.7 Research and Patents

The results of a graduate student's research could lead to a patent and the payment of royalties. The University claims no rights to patent royalties if the research is performed in a laboratory outside of the University under close cooperation with an outside advisor. The University insists, however, that the student receive a fair share of any financial benefits from such a patent. If the patented work is done in a University laboratory with the frequent consultation of regular faculty, the University may claim a portion of the royalty. Negotiations on such claims will be conducted by the Provost's Office.

2.8 Forgiveness policy

2.8.1 A forgiveness policy is a way in which a student may repeat a limited number of courses to improve his or her GPA by having only the grade received on the last repeat used in its calculation. Graduate students must follow the procedures described in the FIU Graduate Catalog to utilize the University's forgiveness policy.

2.8.1 Graduate students may repeat no more than two courses with no course being repeated more than once. The course shall be repeated on a letter grade basis. Only the grade and credit received on the second attempt shall be used in computing the graduate GPA. The original grade will remain posted on the student's permanent record.

2.9 Transfer of graduate credits

Official request for consideration of transfer credits must be submitted to the graduate committee within two semesters of the student's entry into the graduate program.

2.10 Rights and responsibilities

The University has developed policies and procedures on the rights and responsibilities of students and a code of conduct assuring that these rights may be freely exercised without interference or infringement by others. The code of conduct, academic misconduct policies, student grievance procedures and policies on student records are reported in detail in the University publication Rights and Responsibilities of Students. All administrative procedures and time deadlines must be met, whether or not they are specifically mentioned in this document. Students must operate within the rules and guidelines of the Graduate Policy and Procedures Manual, Graduate Catalog and the Regulations for Thesis and Dissertation Preparation Manual. Accordingly, graduate students should obtain copies of these publications from the Graduate Studies Office or visit the Graduate Division website (www.fiu.edu/~gradstud/) and be familiar with their contents.

3. Appendix 1 Meeting and Interviewing Faculty Form

**Master of Science in Forensic Science Program
Choosing a Forensic Science Research Advisor**

Every MS in Forensic Science student must complete a research project ending in a thesis or report in order to fulfill the requirements for graduation. Below please find the names of some faculty you may select as your faculty mentor for research. Please take the time to research your top choices carefully and then go to interview as many faculty as necessary for you to make a selection. You MUST select your advisor AND form your research committee (2 other faculty members) before the Thanksgiving break.

Faculty Name	Location	Phone no.	Faculty Signature
<i>Chemistry</i>			
Jose Almirall	OE116 A	348-3917	
Yong Cai	CP 315	348-6210	
Kenneth G. Furton	Provost Office	348-2292	
Piero Gardinali	BBC Campus	348-6345	
Rudolf Jaffe	BBC Campus	348-2456	
Francisco Lima	CP 331	348-3121	
Anthony Decaprio	OE116 B	348-2419	
Bruce McCord	CP 313	348-7543	
<i>Biochemistry</i>			
Bruce McCord	CP 313	348-7543	
Fenfei Leng	CP 317	348-3081	
Watson Lees	CP 314	348-2871	
Yi Xiao	CP 306	348-4536	
John Berry	CP346	348-3525	
Joongho Moon	CP-338A		
<i>Biology</i>			
Dee Mills	OE 116C	348-7410	
Jeff Wells	OE 203	348-1320	
Kalai Mathee	AHC1 441A	348-1261	

For a complete list of IFRI-Affiliated faculty, go to: <http://ifri.fiu.edu/faculty/>

I choose _____ as my Major Professor and research advisor

Student signature

Date

Major Professor's signature

Date

Graduate Program Director's signature

Date

Appendix 2. Course Checklist

Student Name:

M. S. Schedule/Courses	Credits	Course No	Required?	Expected completion	Completed Date
Formation of Committee			Yes	BEFORE Thanksgiving break, 3 members	
Preliminary Proposal (5-page)			Yes	Beginning of the 2nd term/no later than end of 2nd term	
Research Proposal Seminar	1	CHM 6936	Yes	Beginning of the 2nd term/no later than end of 2nd term	
Thesis Research	3 (min.)	CHS6905	Yes	Start in the second semester	
Graduate seminar	1	CHM 6935	No	Take any semester	
Core Courses (Required)					
Forensic Chemistry	3	CHS 5542	Yes	Spring (Instrumental methods as pre-requisite)	
Forensic Biology	3	BSC 5406	Yes	Fall (Biochemistry as pre-requisite)	
Forensic Analysis	3	CHS 5535	Yes	Fall	
Electives	Minimum of 12		Yes		
Forensic Toxicology	3	CHS5539	Elective		
Forensic Chemistry Laboratory	1	CHS 5541L	Elective	Fall	
Workshop in Chemical Analysis	1 or 2		Elective	Spring	
Trace Evidence Workshops	2		Elective	Summer	
Chemistry and Analysis of Drugs	3	CHS 5538	Elective	Spring	
Forensic DNA Chemistry	3	CHS5536	Elective	Summer	
				Fall	
Explosives & Fire Evidence Analysis	3	CHS5545	Elective	Fall	
DNA Typing Workshop	2	BSC	Elective	Summer	
Chemistry Electives					
Advanced Analytical Methods	3	CHM 6166	Elective		
Sampling and Chemometrics	3	CHM 5165	Elective		
Mass Spectrometry	3	CHM 5138	Elective		
Advanced Chromatography	3	CHM 5156	Elective		
Biology Workshops				(up to 6 credits of 1 or 2 credit workshops may be substituted for electives)	
Cloning DNA	2	MCB 5315C	Elective		
DNA Sequencing	1	BCH 6133C	Elective		
Molecular Techniques Lab	2	PCB 5025	Elective		
Microbial Community workshop	1	BSC 5935	Elective		

Biology Electives					
Molecular & Cellular Biology I	3	PCB 6025	Elective		
Introduction to Biological Research	3	BSC 6457	Elective		
Population Genetics	3	PCB 5685	Elective		
Human Molecular Genetics	3	PCB 5665	Elective		
To graduate	32 (min.)				