**Chemistry**

**Master of Science (M.S.) Degree**

**DEGREE INFORMATION**

**Priority Admission Application Deadlines:**

**Fall:** December 5

**Spring**: August 15

International applicant deadlines:

<http://www.grad.usf.edu/majors>

**Minimum Total Hours:** 30

**Level:** Master’s

**CIP Code:** 40.0501

**Dept. Code:** CHM

 **Major/College Codes:** CHM AS

**Approved:** 1965

**CONTACT INFORMATION**

**College:** Arts and Sciences

**Department:** Chemistry

**Contact Information:** [www.grad.usf.edu](http://www.grad.usf.edu)

**Other Resources:** <http://chemistry.usf.edu/graduate/>

**MAJOR INFORMATION**

The Department of Chemistry offers Doctor of Philosophy, Master of Science, and Non-thesis Master of Arts degrees. The Chemistry graduate faculty is comprised of full-time senior faculty members, all holding the Ph.D. degree. The combination of a large and strong faculty with a wide variety of courses provides students with programs of study that can be tailored to fit individual needs, while maintaining a sound background in all general aspects of Chemistry. The excellent research facilities and low student-faculty ratio combine to afford unique opportunities for advanced study in Chemistry.

**Major Research Areas:**

Research opportunities are available in such interdisciplinary and specialized areas as Analytical Chemistry, Chemical Education, Computer Modeling and Computational Chemistry, Drug Discovery and Delivery, Bioorganic and Bioinorganic Chemistry, Biophysical Chemistry, Electrochemistry, Environmental Chemistry, Enzymology, Inorganic Chemistry, Marine Chemistry, Medicinal Chemistry, Metal-Organic Framework Chemistry, Nanomaterials, Natural Products, Nucleic Acid Chemistry, Nuclear Magnetic Resonance, Organic Chemistry, Organocatalysis, Photochemistry, Physical Chemistry, Polymers, Spectroscopy, and Synthetic Organic Chemistry.

**ADMISSION INFORMATION**

Must meet University requirements (see Graduate Admissions), as well as requirements for admission to the major, listed below.

* A baccalaureate degree in Chemistry or a closely related discipline.
* A preferred minimum score of 149 V (430/800, 47th percentile) and 147 Q (570/800, 28th percentile) on the GRE (the Chemistry subject exam is not required).
* A minimum of a 3.00 grade point average (based on a 4.00 scale) in all undergraduate coursework, as verified by a transcript from the applicant’s undergraduate institution.
* At least three letters of recommendation from professionals familiar with the student’s academic background.
* Applicants whose native language is not English must obtain at least a score of 79 on the Internet-based Test of English as a Foreign Language (TOEFL).

**CURRICULUM REQUIREMENTS**

**Total Minimum Hours – 30 Credit Hours (Post-Baccalaureate)**

**Core – 10 credit hours**

**Electives – 18 credit hours**

**Thesis – 2 credit hours**

Twenty hours must be in formally structured (graded) courses of which sixteen hours must be at the 6000 level, as approved by the student’s Supervisory Committee.

**Core Requirements – 10 Credit Hours**

CHM 6935 3 credits Graduate Seminars in Chemistry

CHM 6978 3 credits Advanced Research in Chemistry

CHM 6973 4 credits Directed Research

**Electives - 18 Credit Hours**

Students may select from graduate level courses in the Chemistry Department and/or related departments, such as Public Health, Education, Chemical Engineering, Physics, Biology, and Mathematics, with advisement of the student’s Supervisory Committee. Courses include, but are not limited to, the following:

[BCH](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5045) [5045](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5045) 3 credits [Biochemistry Core Course](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5045)

[BCH](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5105) [5105](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5105) 1-3 credits [Biochemistry Laboratory Rotations](http://ugs.usf.edu/course-inventory/?output=detail&subj=BCH&num=5105)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5225) [5225](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5225) 3 credits Intermediate  [Organic Chemistry I](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5225)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5226) [5226](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5226) 3 credits Intermediate [Organic Chemistry I](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5225)I

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5452) [5452](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5452) 3 credits [Polymer Chemistry](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5452)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5621) [5621](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5621) 3 credits [Principles of Inorganic Chemistry](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5621)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5931) [5931](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5931) 1-3 credit(s) [Selected Topics in Chemistry](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=5931)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6036) [6036](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6036) 3 credits [Chemical Biology](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6036)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6150) [6150](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6150) 3 credits [Advanced Analytical Chemistry](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6150)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6235) [6235](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6235) 3 credits [Spectroscopic Analysis of Organic Compounds](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6235)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6250) [6250](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6250) 3 credits [Advanced Organic Chemistry I: Synthesis](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6250)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6263) [6263](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6263) 3 credits [Advanced Organic Chemistry II: Physical-Organic](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6263)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6279) [6279](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6279) 3 credits [Introduction to Drug Discovery](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6279)

[CHM](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6480) [6480](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6480) 3 credits [Advanced Quantum Mechanics I](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6480)

[CHM](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6810) [6810](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6810) 3 credits [Methods of Instruction in Higher Ed Chemistry](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6810)

[CHM](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6811) [6811](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6811) 3 credits [Classroom Assessment Practices in Chemistry](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6811)

[CHM](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6907) [6907](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6907) 1-19 credit(s) [Independent Study](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6907)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6936) [6936](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6936) 1 credit [Chemistry Colloquium](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6936)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6938) [6938](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6938) 1-3 credit(s) [Selected Topics in Chemistry](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6938)

[CHM](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6945) [6945](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6945) 3 credits [Investigating Chemical Education Research in the United States](http://ugs.usf.edu/course-inventory/?output=detail&subj=CHM&num=6945)

[CHM](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6946) [6946](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6946) 1-4 credit(s) [Graduate Instruction Methods](https://www.systemacademics.usf.edu/course-inventory/?output=detail&subj=CHM&num=6946)

**Comprehensive Exam**

The student must submit and orally defend before the Supervisory Committee a written thesis based on original research in an area approved by the student’s Supervisory Committee. This will serve as the final comprehensive examination required by the *USF Office of Graduate Studies*.

**Thesis – 2 credit hour**

CHM 6971 2 credit Thesis

**COURSES**

See <http://www.ugs.usf.edu/course-inventory/>