



SACRED HEART UNIVERSITY

Master of Science in Chemistry

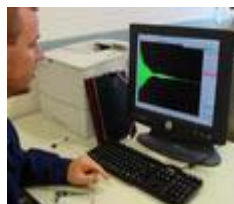
Chemistry plays a central role in the contemporary research frontiers of science. Sacred Heart University's Master of Science in Chemistry program allows students to achieve their academic goals under the guidance of a dynamic and intellectually stimulating department.

The program meets the needs of students and the chemical industry by offering a unique opportunity for career and personal advancement to employees of the chemical industry, while also serving the industry to employ and recruit better qualified chemists.

Many graduate students attending Sacred Heart University are pursuing their advanced degree while working, thus graduate courses are offered in the evenings and on Saturdays. In addition, Sacred Heart's Graduate Chemistry program allows students who have a B.S. in a scientific field other than Chemistry to obtain the M.S. in Chemistry after completing some prerequisite course work as determined by the Chemistry Department.

LABORATORIES

There are eight brand new, state-of-the-art chemistry laboratories serving the needs of inorganic chemistry, organic chemistry, physical chemistry, analytical chemistry, instrumental analysis, biochemistry, and computational chemistry. These laboratories contain major Spectroscopy, Chromatography and Electrochemistry equipment including: Jeol Eclipse High Resolution 400 MHz NMR Spectrometer; Bruker Alfa FT-IR/ATR Spectrometer, Performance Plus HP 6890 GC/MS System; Buck Scientific Accusys211 Flame and Graphite Furnace Atomic Absorption Spectrometer w/ Autosampler; Perkin Elmer HPLC Binary UV/Vis System w/ Autosampler; Rudolph Autopol IV Automatic Polarimeter; Pine dual Potentiostat/Voltammetry system; Bio-Rad Experion Automated Electrophoresis System.



ABOUT SACRED HEART UNIVERSITY

Sacred Heart University was founded in 1963 as a coeducational, independent, comprehensive institution in the Catholic intellectual tradition. With an expanding enrollment of undergraduate and graduate students Sacred Heart University is the second largest Catholic university in New England.

In recent years the University has achieved phenomenal growth in enrollment, faculty and facilities. Our Master of Science in Chemistry program is now one of the largest in the country.

WHO CAN I CALL IF I HAVE MORE QUESTIONS?

Admissions Questions:

Kathy Dilks
Associate Dean of Graduate Admissions
203-396-8259
dilksk@sacredheart.edu

Program/Curriculum Questions:

Dr. Eid Alkhatib
Graduate Program Director
(203) 365-7546
alkhatibe@sacredheart.edu

We also encourage you to visit our website at:

www.sacredheart.edu/graduate.cfm

PROGRAMS OF STUDY

Molecular Biochemistry Track

In addition to exposure to an advanced background of all the sub-disciplines of Chemistry, students in the Molecular Biochemistry program study the chemistry of biomolecules with a focus on the bio analytical aspects. Computational methods integrated with more traditional ones provide students with a versatile background suited for a variety of industries. This track is non-thesis with a lab component that will expose students to the specific **state-of-the-art technologies**.

The master of molecular biochemistry requires a total of 33 credits.

Required Chemistry Courses (15 credits):

Course Number & Title	Credits
CH 521 or CH 522: Advanced Organic or Org. Synthesis	3
CH 533: Biophysical Chemistry	3
CH 553: Advanced Inorganic Chemistry	3
CH 563: Biochemical Analysis	3
CH 597: Computational Bioanalytical Chemistry Class	2
CH 597L: Computational Bioanalytical Chemistry Lab	1

Elective Courses (18 credits):

Course Number & Title	Credits
CH 525: Supramolecular Chemistry	3
CH 526: Medicinal Chemistry and Pharmacology	3
CH 529: Special Topic: Nuclear Magnetic Resonance Spectroscopy	3
CH 531: Adv. Physical Chemistry I: Molecular Structure	3
CH 532: Adv. Physical Chemistry II: Molecular Dynamics	3
CH 537: Microscale & Nanophase Materials: Chem. Process & Analysis	3
CH 545: Bio-Informatics	3
CH 547: Computational Chemistry & Molecular Modeling	3
CH 556: Chemical Application of Group Theory	3
CH 557: Bioinorganic Chemistry	3
CH 561: Advanced Analytical Chemistry I: Spectroscopy	3
CH 562: Advanced Analytical Chemistry II: Chromatography	3
CH 567: CH-Experimental Design	3
CH 569: Special Topic: Mass Spectrometry	3
CH 571: Adv. Environmental Chemistry	3
CH 575: Polymer Chemistry	3
CH 590: Chem-Informatic	3

Chemistry: Thesis and non-Thesis tracks

The Master of Chemistry at SHU requires a total of 30 credits for the thesis track and 33 credits for the non-thesis track

Required Chemistry Courses (18 credits for Thesis & 15 for non-Thesis):

Course Number & Title	Credits
CH 521: Adv. Org. Chemistry or CH 522 Org. Synthesis	3
CH 531: Adv. Physical Chemistry I Mol. Structure or CH 532 Adv. Physical Chemistry II Mol. Dyn.	3
CH 561: Adv. Analy. Inst. Spectroscopic or CH 562 Adv. Analyt. Inst. Chrom	3
CH 553: Adv. Inorganic Chemistry or CH 555 Theoretical Inorg. Chemistry	3
THESIS TRACK *CH 599: Thesis	6
NON THESE TRACK CH 595: Adv. Integrated Experimentation (Can be substituted by an elective course with evidence of substantial lab and instrumental experience)	3

Elective Courses (12 credits for Thesis & 18 for Non-Thesis):

Course Number & Title	Credits
CH 553: Advanced Inorganic Chemistry	3
CH 525: Supramolecular Chemistry	3
CH 526: Medicinal Chemistry and Pharmacology	3
CH 529: Special topic: Nuclear Magnetic Resonance Spectroscopy	3
CH 537: Micro/Nanophase Materials: Chem. Process & Analysis	3
CH 545: Bio-informatics	3
CH 547: Computational Chemistry & molecular Modeling	3
CH 556: Chemical Application of Group Theory	3
CH 567: CH-Experimental Design	3
CH 569: Special Topic: Mass Spectrometry	3
CH 571: Adv Environmental Chemistry	3
CH 575: Polymer Chemistry	3
CH 590: Chem-informatic	3

ADMISSIONS REQUIREMENTS

Individuals who hold a bachelor's degree in any academic discipline from a regionally accredited college or university will be considered for admission to the Master of Science in Chemistry program. All students will take the ACS test to prove basic knowledge in chemistry.

The following documents must be submitted and will be considered when applying:

- A complete Application for Graduate Study Submitted online at www.sacredheart.edu/gradapp.cfm
- Official transcripts from all undergraduate institutions.
- \$50 USD non-refundable application fee
- Two letters of recommendation
- Professional resume
- TOEFL score (just for International students)

ADMISSIONS DEADLINE

Although applications are reviewed by the Admissions Committee on a rolling basis, the University has a priority deadline of March 1 for Fall admittance and November 1 for Spring admittance. All application materials must be sent to the Office of Graduate Admissions at the address below.