

Data Science for Chemical Applications, Academic Certificate

This academic certificate requires a minimum of 12 semester credit hours.

The graduate Data Science for Chemical Applications Academic Certificate is a 12-hour program open to all majors and professionals. This certificate provides students with the necessary skills to apply computational and data science methods effectively in chemical and biochemical contexts, including molecular modeling, bioinformatics, and analytical data workflows. Students acquire competencies in computational simulation, data processing, statistical analysis, and reproducible workflows that prepare them for roles in pharmaceutical informatics, cheminformatics, computational chemistry, and data-intensive research laboratories.

To qualify for the certificate, students must complete two required core courses and two electives. The electives may be taken as either two lecture courses or as one lecture course and one research course. Substitution within the Computational/Data Science core may be allowed with advisor and School Director approval.

Code	Title	Semester Credit Hours
Required Coursework		
CHEM 5333	Bioinformatics	3
CHEM 5332	Molecular Modeling	3
Electives		6
CHEM 5303	Advanced Analytical Chem	
CHEM 5328	Physical Organic Chemistry	
CHEM 5365	Graduate Research	
CHEM 5305	Project Research	
CHEM 5306	Thesis Research	
Total Semester Credit Hours		12

Prerequisites for various courses must be met or waived on approval of the instructor. Students should consult the course instructor or the Graduate Coordinator for information and advising concerning prerequisites.