

# CHEMISTRY (CHM)

<b>CHM 511 Modern Instrument Methods</b>	<b>4 Credit hours</b>	
This course investigates the theory and functional aspects of modern analytical instrumentation. Emphasis is placed on the components of instruments and the applicability of various techniques to specific analytical problems.		
<b>Pre-req:</b> CHM 307 with a minimum grade of C or CHM 357 with a minimum grade of C.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 540 Thermodynamics</b>	<b>3 Credit hours</b>	
An introduction to chemical thermodynamics and statistical mechanics. 3 lec.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 548 Adv Inorganic Chemistry I</b>	<b>4 Credit hours</b>	
Study of physical and chemical properties and periodic relationships of inorganic materials. 3 lec, 2 lab (PR: CHM 356, CHM 307, or CHM 357)		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 549 Adv Inorganic Chem II</b>	<b>3 Credit hours</b>	
A detailed consideration of bonding, structure, reaction rates and equilibrium involving inorganic materials. 3 lec.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 551 Biological Mass Spectrometry</b>	<b>4 Credit hours</b>	
This course investigates the theory and applications of mass spectrometry. It includes a laboratory component in which you will learn to run the mass spectrometers and interpret mass spectral results.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 565 Adv Organic Chemistry I</b>	<b>3 Credit hours</b>	
Studies of the dynamics of organic reactions with emphasis on mechanisms and stereo chemistry. 3 lec.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 566 Adv Organic Chemistry II</b>	<b>3 Credit hours</b>	
A continuation of Chemistry 565 with emphasis on synthetic methods. 3 lec.		
<b>Pre-req:</b> CHM 565.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 567 Intermediate Biochemistry</b>	<b>3 Credit hours</b>	
A survey course including introduction to basic biochemical concepts, bioenergetics, and information transfer.		
<b>Pre-req:</b> CHM 365 with a minimum grade of C or BSC 365 with a minimum grade of C.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 580 Special Topics</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 581 Special Topics</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 582 Special Topics</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 583 Special Topics</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 585 Independent Study</b>	<b>1-4 Credit hours</b>	
<b>Attributes:</b> No Textbook Required		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 586 Independent Study</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 587 Independent Study</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 588 Independent Study</b>	<b>1-4 Credit hours</b>	
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 604 Theories Analytical Chem</b>	<b>2 Credit hours</b>	
Offered on demand.		
<b>Pre-req:</b> CHM 556.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 607 Theoretical Organic Chem</b>	<b>2 Credit hours</b>	
The application of quantitative methods to problems in structure and dynamics. 2 lec.		
<b>Pre-req:</b> CHM 565.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 618 Kinetics</b>	<b>3 Credit hours</b>	
An advanced study of reaction rates and mechanisms.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 628 Special Topics-Inorganic</b>	<b>1-3 Credit hours</b>	
Offered on demand.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 629 Special Topics-Organic</b>	<b>1-3 Credit hours</b>	
Offered on demand.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 630 Special Topics-Physical</b>	<b>1-3 Credit hours</b>	
Offered on demand.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 631 Seminar</b>	<b>1 Credit hour</b>	
<b>Attributes:</b> No Textbook Required		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 632 Seminar</b>	<b>1 Credit hour</b>	
<b>Attributes:</b> No Textbook Required		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 678 Applied Micr in Research</b>	<b>4 Credit hours</b>	
A combined lecture/lab/self-motivated research course that results in a microscopy based project to be presented by each student at an open forum (can augment thesis project).		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 679 Problem Report</b>	<b>3 Credit hours</b>	
Preparation of a comprehensive written report on a topic in Chemistry of current importance. Registration only by permission of Department.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 682 Research</b>	<b>1-12 Credit hours</b>	
Credit in the course is earned by pursuing a directed original investigation in a field of chemistry. Twelve semester hours credit in research are applied toward the M.S. degree. Students may sign for one or more credit hours per semester depending upon the time to be spent on research. A grade of PR may be reported at the close of each term or semester.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 685 Independent Study</b>	<b>1-4 Credit hours</b>	
Individual study of topics not offered in regularly scheduled classes.		
<b>Grade Mode:</b> Normal Grading Mode		
<b>CHM 686 Independent Study</b>	<b>1-4 Credit hours</b>	
Individual study of topics not offered in regularly scheduled classes.		
<b>Grade Mode:</b> Normal Grading Mode		

**CHM 687 Independent Study 1-4 Credit hours**

Individual study of topics not offered in regularly scheduled classes.

**Grade Mode:** Normal Grading Mode

**CHM 688 Independent Study 1-4 Credit hours**

Individual study of topics not offered in regularly scheduled classes.

**Grade Mode:** Normal Grading Mode

**CHM 723 Chemistry and Physics 3 Credit hours**

Scientific principles and clinical application of properties of matter, gas laws, vaporization, fluid dynamics, explosion hazards, electrical safety, acid-base balance, blood gas analysis, biochemistry in anesthesia, mechanisms of narcosis. Analyze the molecular basis for molecular bonding, stereochemistry, protein confirmation, enzyme-substrate reactions.

**Grade Mode:** Normal Grading Mode