Department of Chemistry and Biochemistry

Chemistry is a field that studies syntheses, reactions, and functions of substances at the molecular level. Although chemistry has produced many useful substances such as medicines, synthetic fabrics, plastics, and other functional materials, some of these substances have been found to cause diseases and environmental pollution. The major challenge for chemistry in the twenty-first century is to provide the theoretical and experimental foundations for the development of substances and technologies that are not only useful but also environmentally safe. The Department of Chemistry and Biochemistry educates individuals to become scientists who are capable of bringing deep insights to deal constructively with this challenge.

Required Group C Courses

Number of Minimum Credits		
Specialized Required Courses	Specialized Elective Required Courses	Specialized Elective Courses
0	10	45

There are no specific Group C courses that students must complete to graduate from the Department of Chemistry and Biochemistry. However, students must have earned 10 or more credits from elective required courses in Group C out of nine Group C courses offered by the Department of Chemistry and Biochemistry: Green Materials Science, Inorganic Chemistry A, Inorganic Chemistry B, Organic Chemistry A, Organic Chemistry B, Physical Chemistry A, Physical Chemistry B, Biochemistry, and Chemical Biology and if you have earned more than 10 credits in IPSE specialized elective required courses offered by the Department of Chemistry and Biochemistry, the excess credits can be appropriated to IPSE Group C specialized elective courses. They are strongly recommended to complete three laboratory Group C courses offered by the Department of Chemistry and Biochemistry: Physical Chemistry Laboratory, Inorganic and Analytical Chemistry Laboratory, and Organic Chemistry Laboratory. A student must earn a total of 45 credits of Group C courses offered by any department participating in the International Program in Science and Engineering.

Although Graduation Thesis A and Graduation Thesis B are not required for graduation, students wishing to register Graduation Thesis A and Graduation Thesis B must complete the requirements according to the guidelines noted below.

To register for Graduation Thesis A, B

- You must have earned 5 or more credits from courses in Group A.
- You must have earned 42 or more credits from courses in Group B.
- You must have earned 10 or more credits from elective required courses in Group C.
- You must have earned 8 credits to complete three laboratory Group B3 required courses: Science and Engineering Laboratory 1A, 1B, and 2A.
- You must have earned 9 credits to complete three laboratory Group C courses offered by the Department of Chemistry and Biochemistry: Physical Chemistry Laboratory, Inorganic and Analytical Chemistry Laboratory, and Organic Chemistry Laboratory.
- You must have earned at least 116 credits in total.