

<b>Department of Chemical Engineering</b>			
<b>Graduate Project I (64591)</b>			
<b>Total Credits</b>	<b>2</b>		
<b>major compulsory</b>			
<b>Prerequisites</b>	<b>-</b>		
<b>Course Contents</b>			
<p>In this course, a student undertakes an independent project for the design and development of an industrial process; either experimental, theoretical or both. This can be in any area of chemical engineering under the supervision of a faculty advisor. The objective of the project is to show the student how to apply his/her knowledge of chemical engineering principles to a problem and in doing so to demonstrate his/her skills and creativity. The problem may be tackled by a group of students but contributions should be individually assessed. At the end of the term, the student must give an oral presentation of his/her project and submit a hard copy report.</p>			
<b>Intended Learning Outcomes (ILO's)</b>		<b>Student Outcomes (SO's)</b>	<b>Contribution</b>
1	an ability to apply knowledge of mathematics, science, and engineering	A	8 %
2	an ability to design and conduct experiments, as well as to analyze and interpret data.	B	6 %
3	an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability .	C	15 %
4	an ability to function on same- and multi-disciplinary teams.	D	10 %
5	an ability to identify, formulate, and solve chemical engineering problems	E	3 %
6	an understanding of professional and ethical responsibility.	F	13 %
7	an ability to communicate effectively orally and in writing.	G	12 %
8	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	H	21 %
9	a recognition of the need for, and an ability to engage in life-long learning	I	6 %
10	a knowledge of contemporary issues.	J	3 %
11	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	K	3 %
<b>Textbook and/ or References</b>			
0			
<b>Assessment Criteria</b>		<b>Percent (%)</b>	
Reports		50 %	
Presentation		30 %	
Progress		20 %	
<b>Course Plan</b>			
<b>Week</b>		<b>Topic</b>	