

Subject Description Form

Subject Code	ABCT4770
Subject Title	RESEARCH PROJECT
Credit Value	6
Level	4
Pre-requisite	All Level 1 to Level 3 core compulsory subjects
Objectives	<p>The research project is related to the programme of study covered by the Course. The aims of the research project are to promote independent and creative thinking, and to train students to develop the academic and practical skills to define, investigate, analyses and solve a scientific/technical problem. The project may involve a theoretical and/or experimental investigation of a fundamental or practical problem in chemical technology.</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none">conduct thorough literature search and critically assess the information;demonstrate the ability to carry out research work independently;identify, formulate and solve a research problem;generate hypothesis, design and conduct studies as well as to critically analyze and interpret data, and draw significant conclusions;manage and organize time efficiently;write research report and present results orally in an effective, skilful and professional manner.
Subject Synopsis/ Indicative Syllabus	<p>A theoretical and/or experimental investigation of a fundamental or practical problem in chemical technology. The investigation should include a significant research element.</p>
Teaching/Learning Methodology	<p>The project may involve a theoretical and/or experimental investigation of a fundamental or practical problem in chemical technology. The project could be fundamental studies on chemical compounds, development of experimental methods/products/equipment, design and evaluation of chemical processes, and feasibility study/survey on the marketing of chemical products. Each student registered in the project will have a project supervisor, who is normally a member of the academic staff. With guidance from the project supervisor, each student is going to choose and propose his/her own project theme. The supervisor's major role is to provide advice and guidance to the student throughout the development of the project. However, the supervisor shall make sure that the guidance leaves the student ample scope to demonstrate initiative for thinking and working independently and creatively. Each student is required to submit a proposal, a final written report and to deliver an oral presentation.</p>

Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
			a	b	c	d	e	f
	1. Project preparation and efficient planning, organization, approach and execution of the project	10	√	√	√		√	
	2. Project outcomes: originality and significance of work; knowledge and understanding of work; execution of methods; results and data analysis; interpretation of results and conclusions	60	√	√	√	√		√
	3. Written report (organization, style, clarity, fluency, effectiveness, grammar and spelling)	10	√	√	√	√		√
	4. Oral presentation and response to questions	20	√	√	√	√		√
	Total	100 %						
	Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: The performance of the student will be assessed during the course of the research project. The project is assessed by the approach of work, achievement of proposed objectives, planning and execution of work, quality of research results, interpretation and analysis of results and presentation of results. The student’s ability to write research report and present results orally in an effective manner will be assessed based on the final written report and oral presentation.							
Student Study Effort Expected	Class contact:							
	▪ Guided Study						20 Hrs.	
	▪ Guided Theoretical and/or Laboratory Investigation						50 Hrs.	

	Other student study effort:	
	▪ Literature review	18 Hrs.
	▪ Independent Theoretical and/or Laboratory Investigation	92 Hrs
	▪ Writing proposal and final report	60 Hrs.
	▪ Preparing presentation	20 Hrs.
	Total student study effort	260 Hrs.
Reading List and References	Related books and journal articles	