

ENGINEERING DOCTORATE (TECHNOLOGY AND CONSTRUCTION MANAGEMENT)

PROGRAMME SPECIFICATIONS

1. Programme Name		Engineering Doctorate (Technology and Construction Management)	
2. Final Award		Engineering Doctorate (Technology and Construction Management)	
3. Awarding Institution		UTM	
4. Teaching Institution		UTM	
5. Programme Code		EKAA	
6. Professional or Statutory Body of Accreditation		MQA	
7. Language(s) of Instruction		English	
8. Mode of Study (Conventional, distance learning, etc)		Conventional	
9. Mode of operation (Franchise, self-govern, etc)		Self-governing	
10. Study Duration (Full Time/Part Time)		Full Time	
11. Study Duration (semester)		Full time	Part time
Minimum		6	-
Maximum		16	-
12. Entry Requirement	<p>Master Degree with cumulative grade average of 3.00, or equivalent from a recognized university with more than 1 year experience (Candidate must register 18 credits of courses based on Master of Science (Construction Management) curriculum)</p> <p>An international student should satisfy the English language minimum requirement of TOEFL score of 550 or IELTS band 6.0, or equivalent. A local student must produce a satisfactory score from MUET.</p> <p>Accepted by the post-graduate selection committee of the faculty involved.</p> <p>At least one member from the faculty who has at least a Master degree in the field of study is qualified and willing to supervise the candidate.</p> <p>Pass the health, financial and other requirements as specified by the university.</p>		
13. Programme Educational Objectives (PEO)			
1.	Mastery of competencies and integration of knowledge required in the engineering profession.		
2.	An appreciation of the value of lifelong learning and possessing enthusiasm and strong commitment to continued acquisition of new knowledge and skills.		
3.			

4.	Advanced leadership and team working skills that allow environmental engineers and professionals to become visionary and inspirational leaders.
5.	Highly developed oral and written communications skills that fit at all level, appropriate to the field of engineering. An appreciation of the ethics and integrity in management, leadership and good governance.

14. Programme Learning Outcomes (PLO)

Code	Intended Learning Outcomes	Teaching and Learning Methods	Assessment
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(a) Technical Knowledge and Competencies

PLO1	Advanced Knowledge Graduates are able to incorporate in-depth relevant knowledge in professional practices for the benefits of both national and international communities. Graduates are able to apply their knowledge and skills in the planning, analysis, design and supervision of works related to the civil engineering discipline.	Lectures, seminars, projects, directed reading, tutorials independent study, active learning	Examinations, group and individual project reports, presentations, assignments, problem-based exercises
PLO2	Research Skills Graduates are able to formulate hypothesis, design and perform experiments/research scientifically to solve and explain observed phenomena.	Lectures, seminars, projects, directed reading, tutorials independent study, active learning	Examinations, presentations, assignments, problem-based exercises, project reports, design tasks, simulation exercises
PLO3	Critical Thinking & Problem Solving Graduates are able to manage conducive working environment qualities problem solving and higher order thinking skills. Graduate are technically competent in solving problems logically, analytically and	Computer hands-on sessions, laboratory/field works, lectures, independent study, seminars, active learning, projects	Examinations, presentations, assignments, problem-based exercises, project reports, design tasks, simulation exercises

	creatively based on sound facts and ideas.		
(b) Generic Skills			
PLO4	Ethics, Values and Professionalism Graduates are able to balance professional and ethical responsibilities including contemporary issues and environmental awareness.	Pre-Projects and Masters Project, lectures, tutorials, group projects, independent study	Masters Project thesis, project reports, design tasks, examinations, presentations, assignments
PLO5	Communication Graduates are able to apply a wide range of relevant knowledge through effective oral and written communication. Graduate are able to communicate effectively across a range of contexts and audiences.	Lectures, tutorials, directed reading, simulation exercises, group project, independent study, problem-based learning, projects	Masters Project thesis, project reports, design tasks, examinations, presentations, assignments
PLO6	Lifelong Learning Graduates are able to adopt the latest relevant knowledge and cutting-edge technologies through life-long learning process.	Group projects, independent study, field trips	Oral presentations, project reports

15. Classification of Subjects

No.	Classification	Credit Hours	Percentage
1.	University	3	3.3%
2.	Programme Core	6	6.7%
3.	Programme Electives	9	10%
4.	Dissertation	72	80%
TOTAL		90	100%

For engineering programme please fill up the following classification. (Others please refer to the Statutory Body guidelines)

A.	Engineering Subjects		96.7%
	Lecture	15	
	Dissertation	72	
	Total credit hours for Part A	87	
B.	Related Subjects		3.3%

	Management/Law/Humanities/Ethics	3					
	Total credit hours for Part B	3					
Total Credit Hours for Parts A and B		90	100%				
Total credit hours to graduate		46 credit hours					
16. Programme structures and features, curriculum and award requirements							
<p>The course is offered on full-time mode and is based on a 2-Semester Academic Session with several subjects being delivered and assessed in each Semester. Assessment is based on final examination and viva (oral presentation) conducted throughout the semester.</p> <p>Award requirements: To graduate, students should: Attain a total of no less than 18 credit hours with minimum CPA of 3.0. Complete and pass the Eng. Doc's dissertation and viva (oral presentation).</p>							
17. Mapping of Programme Learning Outcomes to Subjects							
CORE ENGINEERING SUBJECTS OFFERED (COMPULSORY)				LEARNING OUTCOME			
Code	Course	PO1	PO2	PO3	PO4	PO5	PO6
Core Course							
EKAB 2163	Quantitative Analysis	√	√				
EKAB 2153	Research Methodology	√	√				
ELECTIVE ENGINEERING SUBJECTS OFFERED				LEARNING OUTCOME			
Code	Course	PO1	PO2	PO3	PO4	PO5	PO6
Elective Course							
EKAB 2013	Construction Project Management	√		√			√
EKAB 2023	Construction Site Management and Safety Control	√		√		√	
EKAB 2043	Construction Law and Contract	√		√			√
EKAB 2053	Project Planning and Scheduling	√				√	
EKAB 2103	Financial Management	√		√	√		
EKAB 2133	Sustainability & Environmental Management in Construction	√		√			√
EKAB 2033	Construction Technology	√		√		√	
EKAB 2073	Project Estimating	√		√		√	
EKAB 2083	Construction Management Information System	√		√			√
EKAB 2123	Construction Plants Management	√		√			√
EKAB 1153	Advanced Concrete Technology	√		√			√
DISSERTATION				LEARNING OUTCOME			

Code	Course	P O 1	PO2	PO3	PO 4	P O 5	P O 6
EKAW XX80	Dissertation	√	√	√	√	√	√
MASTER'S PROJECT		LEARNING OUTCOME					
Code	Course	P O 1	PO2	PO3	PO 4	P O 5	P O 6
UABA 0013	Principle Engineering Management	√	√	√	√		
18. Our Uniqueness							
<p>No. of graduates</p> <p>Employability rate</p> <p>Leaders in industry</p> <p>Diversity of lecturers</p> <p>Biggest Civil Engineering School in the world</p> <p>One of the biggest Civil Engineering lab/facilities in the region</p> <p>ISO 9001:2000 and ISO 17025 accreditations (the only one in the world for Civil Engineering)</p>							
19. Career Prospects and Career Path							
<p>Graduates of the programme can work as a Project Engineer, Construction Engineer or Civil Engineer</p>							
20. Facilities available							
<p>List of laboratories:</p> <p>Structural Engineering Laboratory</p> <p>Material Engineering Laboratory</p> <p>Hydraulics and Hydrology Laboratory</p> <p>Environmental Laboratory</p> <p>Geotechnical Laboratory</p> <p>Highway & Transportation Laboratory</p> <p>Computer Laboratory</p> <p>CETU</p> <p>ITUCE</p> <p>Resource Centre</p> <p>Surveying Unit</p>							

CURRICULUM STRUCTURE

University's General Elective Courses(Total : 3 credits)		
UABA 0013	Principle of Engineering Management	3 credits
Core Courses (Total : 6 credits)		
EKAB 2163	Quantitative Analysis	3 credits
EKAB 2153	Research Methodology	3 credits
Elective Courses – Choose any three from the following list (Total : 9 credits)		
EKAB 2033	Construction Technology	3 credits
EKAB 2073	Project Estimating	3 credits
EKAB 2083	Construction Management Information Sys.	3 credits
EKAB 2123	Construction Plants Management	3 credits
EKAB 2153	Advance Concrete Technology	3 credits
EKAB 2013	Construction Project Management	3 credits
EKAB 2023	Construction Site Management and Safety Control	3 credits
EKAB 2043	Construction Law and Contract	3 credits
EKAB 2053	Project Planning and Scheduling	3 credits
EKAB 2103	Financial Management	3 credits
EKAB 2133	Sustainability & Environmental Management in Construction	3 credits
Dissertation (Total : 72 credits)		
EKAW XX80	Dissertation	72 credits
TOTAL CREDITS		90 credits
Duration of Study		
Full Time	:	6 – 16 semester