

**CLASS SCHEDULE**  
**MASTER OF SCIENCE (ENGINEERING MATHEMATICS)-MIXED MODE**  
**SEMESTER 2 ACADEMIC SESSION 2021/2022**

**\*For students: Please join Mixed Mode PG Telegram Group: <https://t.me/joinchat/TLQvXL42HDIWjzDZ>**

Day/Time	Course Code	Course Nama (BM/English)	Type	Unit	Lecturer(s)	Whatsapp/ Telegram Group
Monday 8.00 pm - 11.00 pm	SSQ10303	Komputasi Berangka/ Numerical Computation	C	3	Prof. Madya Ts. Dr. Muhammad Zaini Ahmad - (CC)	<a href="https://chat.whatsapp.com/LhcMdyAVeOI7b7F15AMsWs">https://chat.whatsapp.com/LhcMdyAVeOI7b7F15AMsWs</a>
Tuesday 8.00 pm - 11.00 pm	SSQ10603	Statistik Matematik/ Mathematical Statistics	C	3	Dr. Hamzah Abdul Hamid -(CC)	<a href="https://chat.whatsapp.com/DZ2LPg5AkxM9aarHRjnF7N">https://chat.whatsapp.com/DZ2LPg5AkxM9aarHRjnF7N</a>

Wednesday 8.00 pm - 11.00 pm	SSQ13603	Teori Set Kabur Dan Penggunaannya / Fuzzy Set Theory And Its Applications	E	3	Dr. Wan Suhana Wan Daud-(CC)	<a href="https://chat.whatsapp.com/Kx5J9W3Jlw38CtRsb9X8JU">https://chat.whatsapp.com/Kx5J9W3Jlw38CtRsb9X8JU</a>
Weekly meeting with supervisor	SSQ19806 (Old Code: EQT598)	Disertasi I/ Dissertation I	C	6	Ts. Dr. Wan Nor Munirah Binti Ariffin – (CC) -Appointed Supervisors	<a href="https://t.me/joinchat/TLQvXL42HDIWjzDZ">https://t.me/joinchat/TLQvXL42HDIWjzDZ</a>
Weekly meeting with supervisor	SSQ19914 (Old Code: EQT599)	Disertasi II/ Dissertation II	C	14	Ts. Dr. Wan Nor Munirah Binti Ariffin – (CC) -Appointed Supervisors	<a href="https://t.me/joinchat/TLQvXL42HDIWjzDZ">https://t.me/joinchat/TLQvXL42HDIWjzDZ</a>

**MSc (Engineering Mathematics)  
List of Courses**

**Students must complete all these courses:**

**1- All 4 Core Courses : 11 credits**

**2- Any 3 Elective Courses: 9 credits**

**3- Dissertation I : 6 credits**

**4- Dissertation II : 14 credits**

Type	Course Name	Course Code/Unit	New Course Code
<b>Core</b>	Methods of Engineering Mathematics	EQT501/3	SSQ10103
	Numerical Computation	EQT503/3	SSQ10303
	Mathematical Statistics	EQT506/3	SSQ10603
	Research Methodology	EQT507/2	SSQ10702

Type	Course Name	Course Code/Unit	New Course Code
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<b>Elective: Mathematics Discipline</b>	Partial Differential Equations	<b>EQT533/3</b>	<b>SSQ13303</b>
	Computational Fluid Dynamics	<b>EQT534/3</b>	<b>SSQ13403</b>
	Computer Aided Geometric Design (CAGD)	<b>EQT535/3</b>	<b>SSQ13503</b>
	Fuzzy Set Theory and its Applications	<b>EQT536/3</b>	<b>SSQ13603</b>
	Finite Element Analysis	<b>EQT537/3</b>	<b>SSQ13703</b>
	Discrete Event System Simulation	<b>EQT538/3</b>	<b>SSQ13803</b>
<b>Elective: Statistics Discipline</b>	Engineering Non-Parametric Statistics	<b>EQT571/3</b>	<b>SSQ17103</b>
	Design of Experiments	<b>EQT572/3</b>	<b>SSQ17203</b>
	Statistical Methods in Process Control	<b>EQT575/3</b>	<b>SSQ17503</b>

	Reliability Engineering	EQT577/3	SSQ17703
	Applied Multivariate Statistical Analysis	EQT578/3	SSQ17803

<b>Core: Dissertation</b>	Disertasi 1	EQT598	SSQ19806
	Disertasi 2	EQT599	SSQ19914

<b>Core * FTKEN only</b>	Advanced Engineering Mathematics and Statistics	EQT519	SSQ11903
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### Course Rational and Synopsis (S1 2021)

No	Course Code and Name	Rational	Synopsis
1	SSQ10303	This course is an introduction to the methods, tools and ideas of numerical computation. In mathematics, one often encounters standard problems for which there are no easily obtainable explicit solutions, given by a closed formula. Examples might be the task of determining the value of a particular integral, finding the roots of a certain non-linear equation or	This course will cover more on numerical analysis, finding the approximation values of functions, interpolation, extrapolation and regression, solving equations and systems of equations..

		approximating the solution of a given differential equation. Different methods are presented for solving such problems on a modern computer, together with their applicability and error analysis.	
<b>2</b>	SSQ10603	Mathematical Statistics is an important basic knowledge related with decision theory, estimation, confidence intervals, and hypothesis testing. It introduces large sample theory, asymptotic efficiency of estimates, exponential families, and sequential analysis.	Mathematical statistics is the backbone of methods applied and developed in statistical practice and research. Thus, this course provides a calculus-based coverage of statistics and introduction to the theory of mathematical statistics, specifically of statistical inference, methods of the theoretical statistics and their applications. This course will cover a variety topics including: the concept of probability and its distribution, properties of a random sample, point estimation (including maximum likelihood estimation), interval estimation, the Hypothesis tests for one sample and two samples.
<b>3</b>	SSQ13603	Fuzzy set theory has been shown to be a useful tool to describe situations in which the data are imprecise or vague. It handles such situations by attributing a degree to which a certain object belongs to a set. Since its introduction in 1965, people began to appreciate how uncertainty originating from human thinking can affect scientific problems. During the last two decades, fuzzy set has been successfully used in working with numerous practical applications, especially in engineering fields. The most well-known and popular work is the combination of fuzzy logic and expert systems.	This course introduces students to a mathematical field based on fuzzy set theory. Students will be exposed to the basic operations of fuzzy sets, fuzzy arithmetic, fuzzy relation and fuzzy IF-THEN rules. Later, students will be exposed with fundamental principles in fuzzy logic that are useful in the fuzzy inference engine and fuzzy systems.

<b>4</b>	SSQ19806	<p>Writing a good and effective research proposal is very important to produce quality academic work. This course provides exposure to students to strengthen the writing of introductory chapters up to the research method development section. This is a part of writing a complete dissertation.</p>	<p>In this course, student will be to expose the basic research skills to students who will be undergoing research activities in the following semester. The student required to conduct their own research proposal based on their research interest. At least one supervisor will be assigned to supervise and guide them during the preparation of research proposal. At the end of period, the student will be required to submit and present the research proposal.</p>
<b>5</b>	SSQ19914	<p>Dissertation writing is an academic writing that covers the knowledge of engineering mathematics and statistics that have been learned throughout the student's period of study. This Dissertation 2 course is a continuation of Dissertation 1. Students must complete the previous research proposal and must present the research findings at the end of the semester. This course provides exposure to students to write academically well and increases students' confidence in communicating.</p>	<p>Dissertation is a follow-up research work to Dissertation 1. In this dissertation project, student will be required to conduct their own research based the assigned topic. At least one supervisor will be assigned to supervise and guide the students along the dissertation period. At the end of the period students are required to make an oral presentation.</p>