Faculty/School	**Faculty of Chemical and Energy Engineering**
Program Name	**Master in Chemical Engineering**
Program Code	**METK**
Mode of Program	**Taught Course**
Academic Session/ Semester	**2026/2027-1**

COURSE MENU

University General Courses (Choose 1 ONLY)		
Course Code	**Course Name**	**Credit**
UHMS6013	Seminar on Global Development, Economic and Social Issues	3
UHIS6013	Philosophy of Science and Civilization	3
UHPS6013	Dynamics of Leadership	3
UHMZ6023	Malaysia Society and Culture	3
UECS6023	Introduction to Technopreneurship	3
UHLM6013	Malay Language for Academic Writing	3
UBSS6023	Business Ethics, Responsibility and Sustainability	3
UBSS6013	Organizational Behavior and Development	3
UECS6013	IT Project Management	3
UMJJ6013	Basic Japanese Language & Culture	3
URTS6013	Environmental Ethics	3

Pre-Requisite Courses (Compulsory for non-chemical Engineering Background)		
Course Code	**Course Name**	**Credit**
METK0113	Mass Balance	3
METK0123	Chemical Reaction Engineering	3
METK0133	Separation Processes	3

Core Faculty Courses (Compulsory)		
Course Code	**Course Name**	**Credit**
METU1013	Research Methodology	3

Core Courses (Compulsory)		
Course Code	**Course Name**	**Credit**
METK1113	Advanced Chemical Reaction Engineering	3
METK1123	Computational Method in Chemical Engineering	3
METK1133	Separation Technology for Industrial Applications	3
METK1143	Project Management for Engineering and Technology	3

Elective Courses (Choose 4 only)		
Course Code	**Course Name**	**Credit**
METK1213	Advanced Thermodynamics	3
METK1223	Multiphase Reactor Analysis	3
METK1233	Data Science for Chemical Engineers	3
METB1103	Biotechnology for Engineers	3
METB1123	Facilities and Infrastructure in Bioprocess Engineering	3
METE1113	Sustainable Energy System & Management	3
METE1143	Thermal Energy Management and Audit	3
METE1233	Energy Integration and Resource Conservation	3
METE1253	Energy Planning for Conservation and Sustainable Development	3

METM1153	Hydrocarbon Gas Exploration, Production and Processing	3
METM1243	Liquefied Natural Gas Technology	3
METM1253	Membrane Technology for Gas Separation	3
METR1113	Polymer Characterization	3
METR1223	Smart Materials	3
METR1233	Surface and Foam Technology	3
METW1143	Occupational Safety	3

Master Project		
Course Code	**Course Name**	**Credit**
METK1314	Master Project 1	4
METK1326	Master Project 2	6
TOTAL CREDIT		**40**

Programme Coordinator : Dr. Nor Alafiza Yunus
(alafiza@utm.my/012-3302842)

PROGRAM STRUCTURE (METKA1AJA – MAINSTREAM JOHOR BAHRU)

COURSES OFFERED FOR NEW INTAKE STUDENTS SESSION 2026/2027 SEMESTER 1

SYLLABUS	COURSE CODE	SEMESTER	SECTION	DAY & TIME	LECTURER'S NAME & CONTACT NO : (Email & HP no.)
University General Courses	*Student MUST refer to SPS Website https://sps.utm.my/academic-related-resources/ for the University General Courses schedule*				
Core Faculty Course	METU1013	1	01	Wednesday 2.00 pm – 5.00 pm	Prof. Dr. Zainul Akmar Zakaria zainulakmar@utm.my 012-6270423
Core Courses	METK1133	1	01	Monday 8.00 am – 11.00 am	Prof. Madya Ir. Dr. Muhammad Abbas Ahmad Zaini r-abbas@utm.my 016-2581878
	METK1113	1	01	Tuesday 8.00 am – 11.00 am	Dr. Amnani Shamjuddin amnani.shamjuddin@utm.my 010-3075589
Elective Courses	-	-	-	-	-
Project	METK1314	1	01		Dr. Nor Alafiza Yunus alafiza@utm.my 013-302842
	METK1326	1	01		