

Faculty/School	<b>Faculty of Chemical and Energy Engineering</b>
Program Name	<b>Master in Bioprocess Engineering</b>
Program Code	<b>METB</b>
Mode of Program	<b>Taught Course</b>
Academic Session/ Semester	<b>2023/2024-2</b>

## COURSE MENU

<b>University General Courses (Choose 1 ONLY)</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
UHMS6013	Seminar on Global Development, Economic and Social Issues	3
UHS6013	Philosophy of Science and Civilization	3
UHPS6013	Dynamics of Leadership	3
UHMZ6023	Malaysia Society and Culture	3
UECS6023	Introduction to Technopreneurship	3
UHLM6013	Bahasa Malaysia Penulisan Ilmiah	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

<b>Core Faculty Courses (Compulsory)</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
METU1013	Research Methodology	3

<b>Core Courses (Compulsory)</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
METB1103	Biotechnology for Engineers	3
METB1113	Industrial Bio-processing	3
METB1123	Facilities and Infrastructures in Bioprocess Engineering	3
METB1133	Advanced Bio-Product Development	3
METB1143	Digital Transformation in the Process Industry	3

<b>Elective Courses (Choose 3 only)</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
METK1123	Computational Methods in Chemical Engineering	3
METW1243	Process Safety and Loss Prevention	3
METW1273	Human Factors	3
METT1043	Product Formulation	3
METT1033	Herbal Processing	3
METT2023	Nutraceutical and Functional Food	3
METE1213	Renewable Energy	3

<b>Project (Compulsory)</b>		
<b>Course Code</b>	<b>Course Name</b>	<b>Credit</b>
METB1154	Master Project 1	4
METB1166	Master Project 2	6

Prerequisite (mandatory attendance)(Only one or both)*		
Course Code	Course Name	Credit
METB3133	Bioreactor Design & Analysis	4
METB3213	Biochemistry	6

*\*prerequisite course METB 3133 for non-engineering background students and METB 3213 non-biotechnology background students*

**Programme Coordinator : Dr. Nor Hasmaliana Abdul Manas  
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## PROGRAM STRUCTURE

### COURSES OFFERED FOR NEW INTAKE STUDENTS SESSION 2023/2024 SEMESTER 2

SYLLABUS	COURSE CODE	SEMESTER	SECTION	DAY & TIME	LECTURER'S NAME & CONTACT NO : (Email & HP no.)
University General Courses	<b><i>Student MUST refer to SPS Website <a href="https://sps.utm.my/academic-related-resources/">https://sps.utm.my/academic-related-resources/</a> for the University General Courses schedule</i></b>				
Core Faculty Course	METU1013	1	01	Wednesday 2.00 pm – 5.00 pm	Assoc. Prof. Dr. Zainul Akmar Zakaria <a href="mailto:zainulakmar@utm.my">zainulakmar@utm.my</a> 012-6270423
Core Courses	METB1143	1	01	Sunday 8.00 am – 11.00 am	Assoc. Prof. Dr. Agus Arsad <a href="mailto:agus@utm.my">agus@utm.my</a> 019-5590545
	METB1123	1	01	Sunday 2.00 pm – 5.00 pm	Prof. Dr. Hesham Ali Metwally El-Enshasy <a href="mailto:hesham@utm.my">hesham@utm.my</a> 011-17739884
Elective Course	<i>Please refer other programs that offer elective courses (as listed in the study plan)</i>				
Project	-				