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INSTITUT PENGAJIAN TERMAJU
Institute for Advanced Studies

UMPEDAC
UM POWER ENERGY DEDICATED ADVANCED CENTRE

Welcome to the
Briefing of
Master of Renewable Energy
Semester I, Session 2026/2027

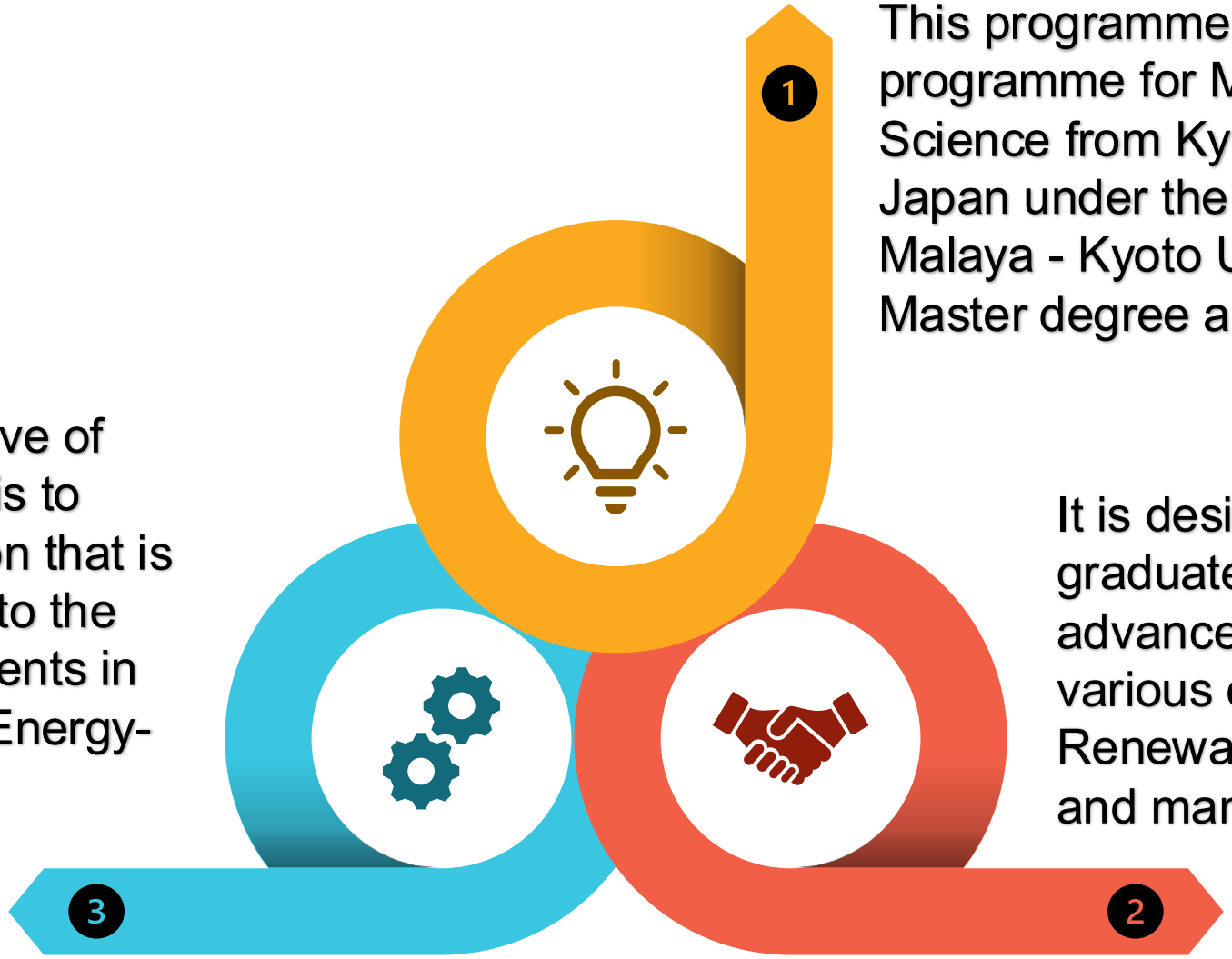
Dr. Siti Rohani Sheikh Raihan

Programme Coordinator

INTRODUCTION

This programme is a matching programme for Master of Energy Science from Kyoto University, Japan under the University of Malaya - Kyoto University double Master degree agreement.

The main objective of this programme is to offer an education that is directly relevant to the latest advancements in the Renewable-Energy-related industry.



It is designed to provide graduate students with advanced understanding in various core areas in Renewable Energy technology and management.

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BENEFITS

01 The students will be exposed to the latest techniques and methods to achieve their goals in the course of this programme.

02 They will also benefit from the industry-relevant technical field trips to various advanced institutions and establishments around the world.

03 The students will have the opportunity to observe and emulate the latest technologies and best practices during these field trips.

04 This programme is very suitable for fresh graduates as well as professionals who are looking to develop their knowledge, expertise and skills, as well as practicing engineers who are looking for career advancements in the field of Renewable Energy.

Academic Programme Information

Name of the programme:

Master of Renewable Energy

Methods of study and duration:

The method of the programme is teaching courses and research project.	The minimum duration of the program is one (1) year and maximum eight (8) semesters.

Curriculum Structure

Programme consists of 42 credits

Core courses: 15 credits

Research project: 12 credits

Elective courses: 15 credits

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Programme Learning Outcome

Students who will successfully obtain Master of Renewable Energy, are able to:

PLO1	Demonstrate expertise in the renewable energy field;
PLO2	Produce solutions to problems using scientific skills and critical thinking in the field of renewable energy;
PLO3	Translate the knowledge learnt into practical skills in renewable energy field;
PLO4	Managing information in digital age for lifelong learning in the field of renewable energy;
PLO5	Demonstrate ability to communicate and work as a team;
PLO6	Demonstrate leadership quality through effective communication among renewable energy partners and agencies;
PLO7	Demonstrate entrepreneurial mindset in dealing with energy related projects;
PLO8	Conduct research with minimum supervision and adhere to legal, ethical and professional practice codes in areas related to renewable energy;

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Core Courses

Course Code	Course Title	Credit Hours
HQA7001	Research Methodology	3
HQA7022	Research Project	12
HQA7003	Energy and Sustainable Development	3
HQA7004	Energy Policy	3
HQA7005	Energy Efficiency and Management	3
HQA7006	Foundation of Renewable Energy	3

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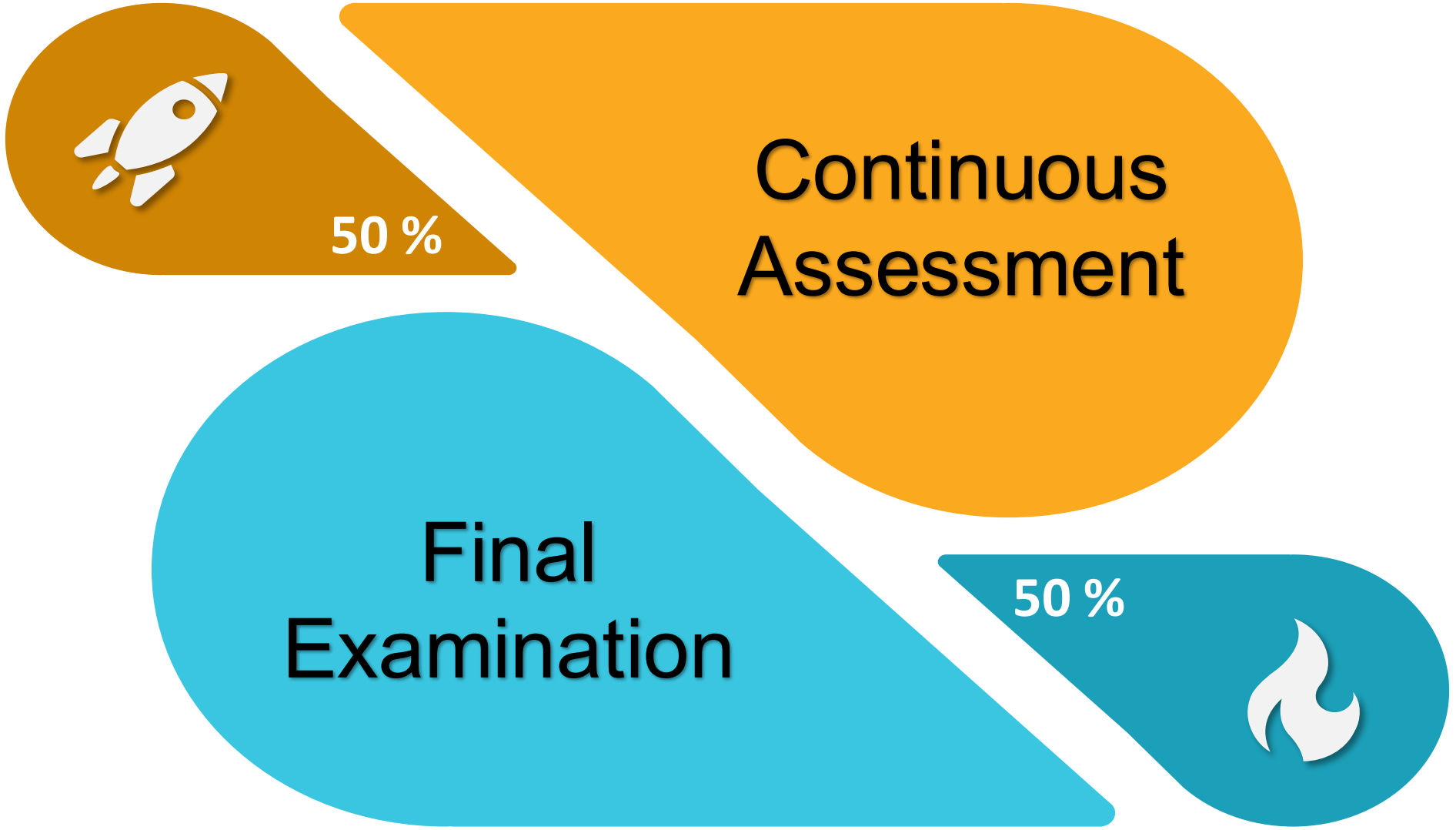
Elective Courses

Course Code	Course Title	Credit Hours
HQA7011	Smart Grid*	3
HQA7012	Bioenergy*	3
HQA7014	Energy Storage Technology	3
HQA7015	Low Carbon Buildings	3
HQA7016	Energy Economics	3
HQA7018	Solar Energy*	3
HQA7019	Hydro Energy*	3
HQA7021	Hydrogen Technology	3

Note:

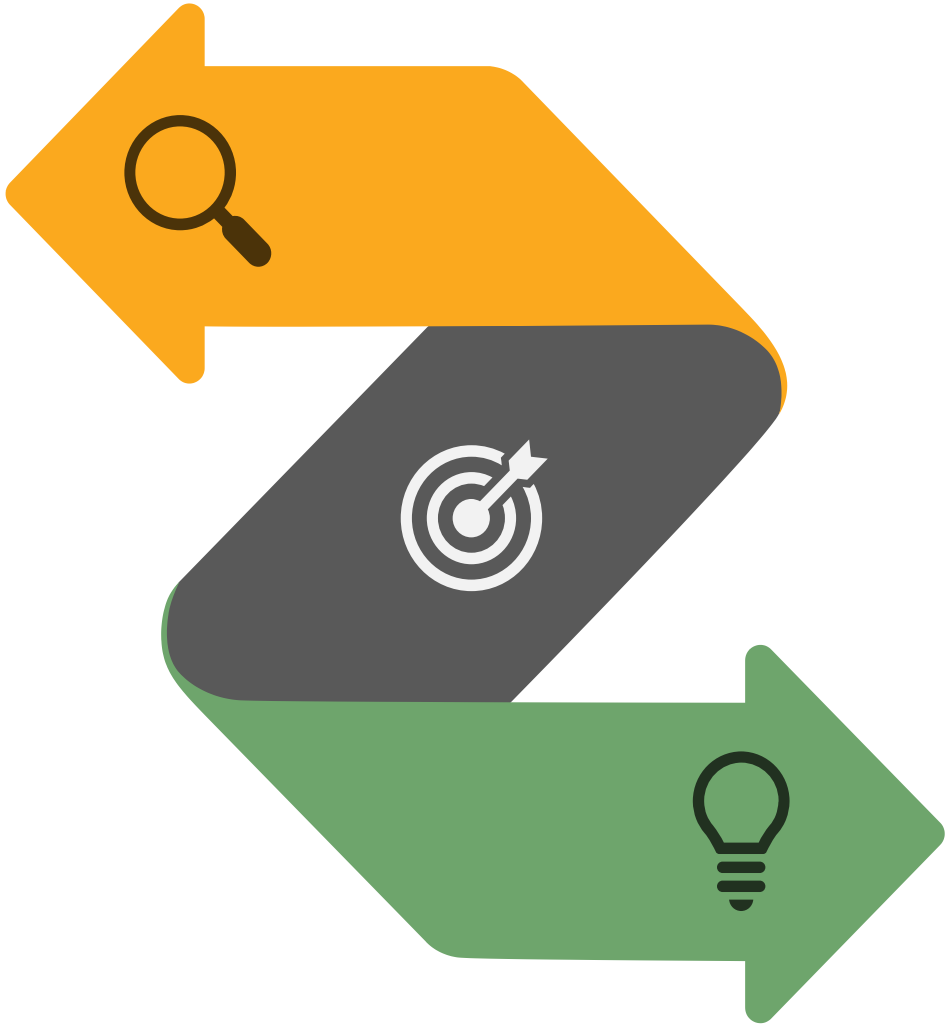
1) For elective courses, minimum number of students must be more than 10 registered students at any time.
2) Course offered, subjected to the availability of lecturer of the specific course.
3) * Course content may contain technical aspect.

Assessment Methods



Scoring

Candidates must pass all core courses and 5 elective courses and a minimum grade point 3.0 (Grade B) with a grade point average (GPA) of at least 3.0.



Evaluation and scoring used for this program is based on the structural evaluation and scoring system adopted for semester at the University of Malaya

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Scoring

GRADE	SCORES	GRADE POINT	PURPOSE
A	80-100	4.0	Brilliant
A-	75-79	3.7	Brilliant
B +	70-74	3.3	Pass
B	65-69	3.0	Pass
B-	60-64	2.7	Failed
C +	55-59	2.3	Failed
C	50-54	2.0	Failed
C-	45-49	1.7	Failed
D +	40-44	1.5	Failed
D	35-39	1.0	Failed
F	0-34	0.0	Failed
U			Not satisfactory
R			Registered for audit
UW			Unofficial withdrawal
W			Official withdrawal
P			Progress
S			Satisfy
K			Notional
I			Unfinished

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Opportunity to Study in Japan

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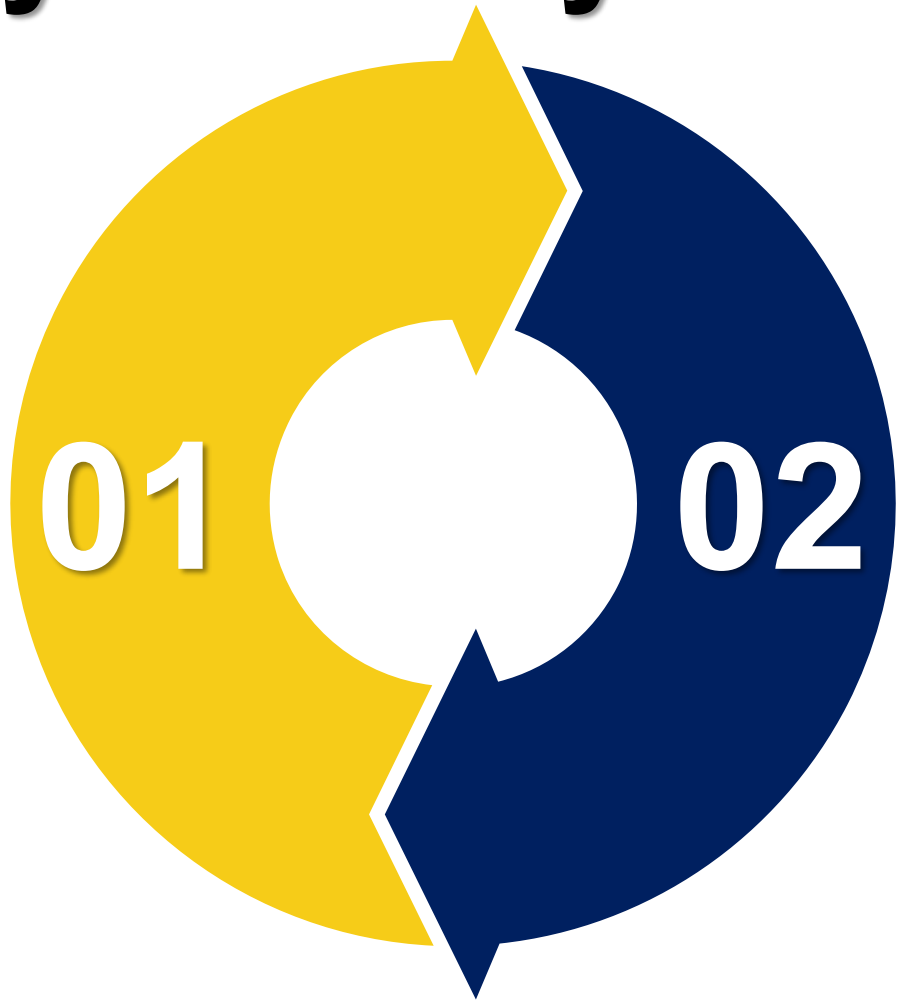
Master of Renewable Energy is a matching programme for Master of Energy Science with Kyoto University, Japan under the University of Malaya – Kyoto University, Double Degree Memorandum of Agreement signed on 16th August 2008.



Students can be awarded two Master Degrees from University of Malaya and Kyoto University, Japan by means of overseas study programme with credit transfer.

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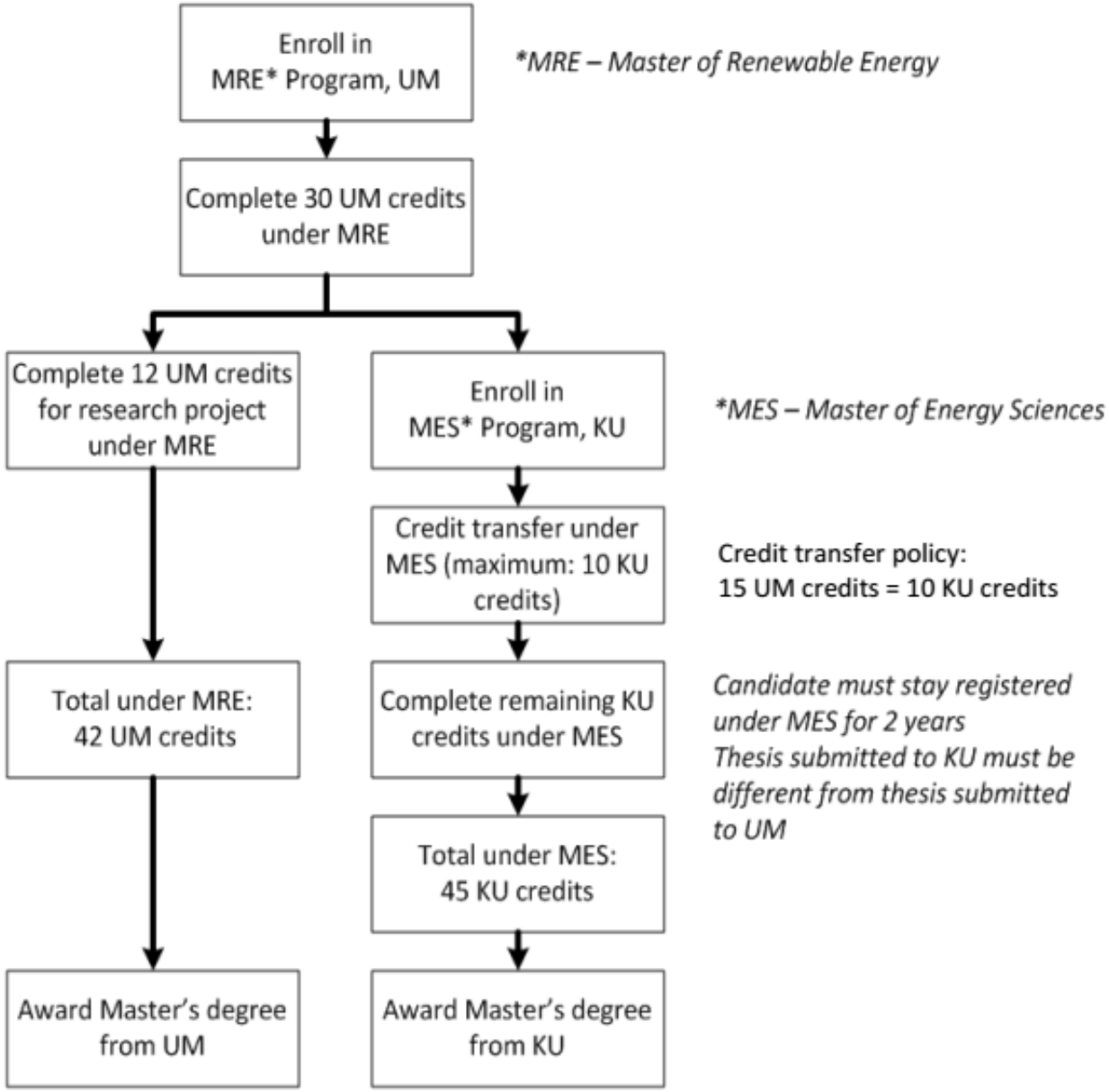
Opportunity to Study in Japan



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Master of Renewable Energy Related Course in KU

Code	Course in UM	Related Course in KU
Core Course		
HQA7001	Research Methodology	
HQA7022	Research Project	
HQA7003	Energy and Sustainable Development	Energy, materials and resources
HQA7004	Energy Policy	Energy Policy
HQA7005	Energy Efficiency and Management	Socio-Environmental Energy Science 1
HQA7006	Foundation of Renewable Energy	
Elective Course		
HQA7011	Smart Grid	
HQA7012	Bioenergy	Energy Ecosystems
HQA7014	Energy Storage Technology	
HQA7015	Low Carbon Buildings	
HQA7016	Energy Economics	Energy Economics
HQA7018	Solar Energy	
HQA7019	Hydro Energy	
HQA7021	Hydrogen Technology	Future Energy: Hydrogen Economy

Student Selection Procedures

UMPEDAC will select students per academic session of appropriate ability and academic standard to participate in this programme (subjected to Kyoto University requirement that might be changed from time to time).

Students selected for the programme must fulfil the following requirements:

i) A relevant undergraduate specialization
ii) Appropriate English language ability (TOEFL or IELTS)
iii) An appropriate academic performance record
iv) Recommendation letters
v) Interviews

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Conferral of Degree, Tuition and Fees

Upon successful completion of the Double Master Degree Programme, students who meet the graduation requirements will be conferred a Master's Degree from University of Malaya, Malaysia and a Master's Degree from Kyoto University, Japan.

- Each student will pay the required tuition and other fees to the home institution for the duration of their study.
- This Double Master Degree Programme constitutes a student exchange programme, and so tuition, admission, examination, and registration fees at the host institution are waived.

Timetable (Semester 1)

PROGRAMME: MASTER OF RENEWABLE ENERGY TIMETABLE FOR SEMESTER 1, 2026/2027 SESSION					
COORDINATOR: DR SITI ROHANI SHEIKH RAIHAN					
DAY	**TIME**	**CODE COURSE**	**CODE TITLE**	**LECTURER**	**VENUE**
Saturday	9.00 AM-12.00 NOON	HQA7014	ENERGY STORAGE TECHNOLOGY	DR. MOHAMAD FATHI MOHAMAD ELIAS	Lecture Room, Level 20, Wisma R&D
	12.00 NOON -3.00 PM	HQA7006	FOUNDATION OF RENEWABLE ENERGY	DR AZIMAH BINTI OMAR	
	3.00 PM - 6.00 PM	HQA7001	RESEARCH METHODOLOGY	DR. SITI ROHANI SHEIKH RAIHAN	
Sunday	9.00 AM - 12.00 NOON	HQA7003	ENERGY AND SUSTAINABLE DEVELOPMENT	DR.SHAHID BASHIR	Lecture Room, Level 20, Wisma R&D
	12.00 Noon -3.00 PM	HQA7015	LOW CARBON BUILDINGS	DR. THIBEORCHEWS PRASANKUMAR	
	3.00 PM - 6.00 PM	HQA7005	ENERGY EFFICIENCY AND MANAGEMENT	Dr Jafferi Bin Jamaludin	

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ACADEMIC ADVISOR

Academic advisors are appointed from among the lecturers to guide the students in the planning of the students' academic programme of study. The academic advisors are responsible for:

1. Helping the students choose courses and the number of credits the students will take before the commencement of the semester.

2. Providing guidance to the students in overcoming problems related to learning, if any, based on the students' academic performance.

3. Students should meet with the academic advisors at least once in a semester.

4. Students who are underachieved or under probation are compulsory to meet the academic advisors more than once.

5. All meetings between the academic advisors and the students must be recorded.

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RESEARCH PROJECT FOR MASTER OF RENEWABLE ENERGY

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Research Project (HQA 7022) **12 credit hours**.

Research project must be completed in 2 consecutive semesters back-to-back, i.e. Sem. 1 (P1) + Sem. 2 (P2)

The first two weeks of each semester is for the candidates to submit the form: *Application of Appointment of Supervisor and Title of Research Project* (UMPEDAC/05/2013).

The Post Graduate office will then email these titles to the eligible candidates. They can then select the titles before the beginning of the semester.

The UMPEDAC Higher Degree Committee will have a meeting to decide on the examiners for each of the students.

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RESEARCH PROJECT FOR MASTER OF RENEWABLE ENERGY

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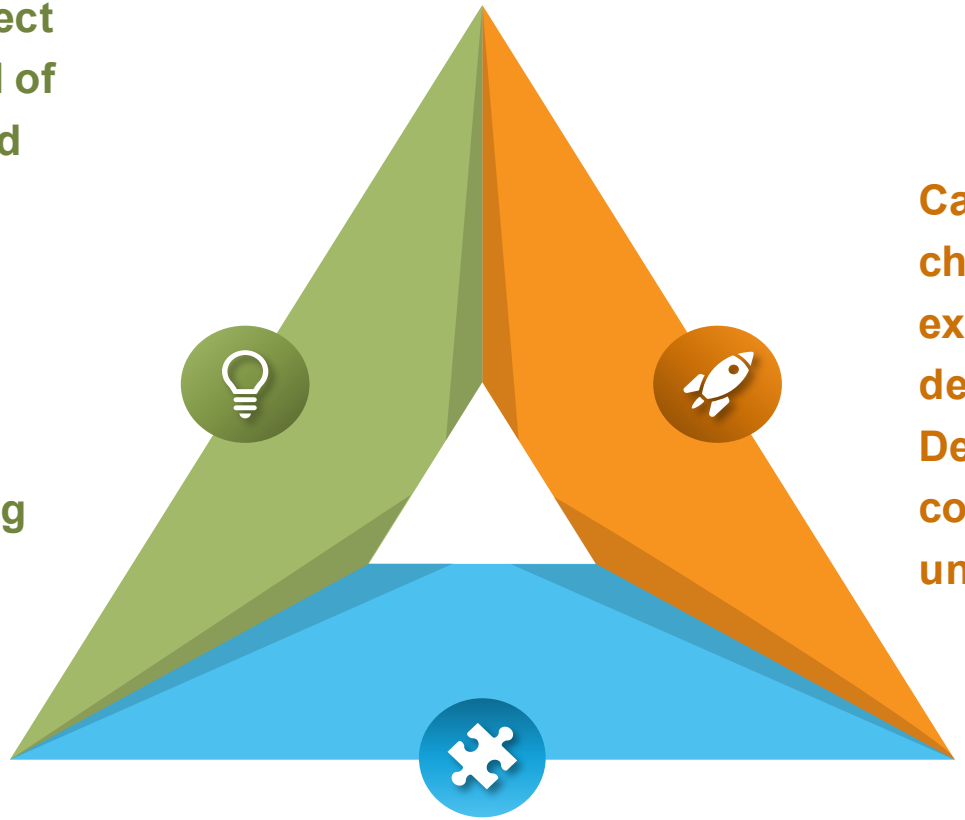
The topic titles for the Research Project course should be relevant to the field of Renewable Energy and Energy related field including the following:

- ✓Mathematical Modelling
- ✓Hardware Development
- ✓Experimental Work
- ✓Simulation and modelling Using Matlab etc.
- ✓Measurement and Monitoring.
- ✓Energy Audit and Management
- ✓Energy Economies and Policy
- ✓Energy Conversion



Candidates are not allowed to change supervisors and examiners, once it has been decided by the UMPEDAC Higher Degree Committee. The JIT committee can decide otherwise under special circumstances.

Candidates can also come up with their own topic titles but they should comply with the above conditions.

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Higher Institution Centre of Excellence (HICoE)

UM Power Energy Dedicated Advanced Centre (UMPEDAC)
Room 16, Level 18, Wisma R&D, University of Malaya
59990 Kuala Lumpur, Malaysia
+603-22463246(General Office)