UNIMAS
UNIVERSITI MALAYSIA SARAWAK
30 years
Crossing frontiers
1992–2022

SHORT-TERM MOBILITY PROGRAMME

Faculty of Engineering, UNIMAS

Renewable Energy

(Science and Technology)

What makes a global graduate?

Global graduates move beyond their own worldviews, creating inclusiveness out of diverseness.

Sarawak offers authentic, diversity-filled environment which adds to its capability to nurture a holistic, global mindset.

Whilst many turn their gaze towards the trendiest technology; we believe that to grapple with the future, you need to learn from the present and connect to the past.

Proposed duration:
8th – 14th May 2023 (7 days)

Locations:
- UNIMAS
- Sibu
- Mukah
- Igan
- Dalat
- Oya

Theme:
Science & Technology

Target Participants:
15-25 participants (Min. 15 pax)

Fees:
- International Students: USD 750 per person
- Malaysian Students: RM 1500.00
- UNIMAS Students: RM 800.00

Eligibility:
To be eligible to enroll for these courses, students must fulfill the following criteria:
- Currently enrolled as an undergraduate student in a university with credit transfer arrangements with UNIMAS
- A second- or third-year student

Aims and Objectives

The mobility programme aims to provide opportunities to the participants to learn the different types of energy as well as renewable energy technologies. Through the activities crafted under each module, participants will be able to learn how to solve economic analysis for renewable energy technologies. Participants will also get to engage with the local communities and demonstrate engineering practices of renewable energy technologies they have acquired to come up with potential solutions to the real-life issues faced by the local community.

Sustainable Development Goals

The short mobility programme is designed in alignment with the following SDGs:

Application Procedures:

Check if there is an exchange agreement

Email the contact person

Fill up Mobility Application form

Get ready to fly!

Transfer of Credit:

- Credits will be awarded to students who have successfully completed the courses.

- As credit transfer policies vary among universities, you are advised to check with your home university if the credits you earn in the course that you enroll in at UNIMAS can be transferred over to your home university.

- Transfer of credit formula:
  - 40 SLT (Student Learning Time) = 1 credit

Module Contents

Module 1: Solar

- Sun
- Solar Power
- Electromagnetic Spectrum
- Energy Balance of the Earth
- Insolation, solar resource and greenhouse effect
- Solar Heating and Cooling
- Building, Passive, windows and Glazings
- Passive Heating and Cooling
- Active cooling and Heating
- Daylighting, Hybrid and other

Module 2: Microhydro

- Water
- World Resource
- Hydroelectric Turbines
- Water Flow
- Tides and oceans
- Storage
- Pumped Hydro
- Compressed Air
- Flywheels
- Batteries
- Other Storage System

Module 3: Other Renewable Energy Sources

- Tidal, Wind, & Hydrogen
- Fundamental, mapping & hardware

Module 4: Impact to the communities (Impact & Actions)

- Local Partnership: Involve member of affected communities
- Technology Transfer: Collaborate with local industry
- Economic & Social: Establish recruitment network
- Knowledge Building: Forge alliances with local universities

**Modules are subject to change at any time*

Module Outcomes:

By the end of the programme, students will be able to:

- **Identify** different types of energy and renewable energy technologies;
- **Appreciate** the best practices for renewable energy system management;
- **Experiment** a real working renewable energy system; and
- **Explore** the lifestyle of local communities and the issues pertaining to energy resources they are facing.

Programme

Day 1 :
- Arrival of participants
- Briefing and icebreaking
- Welcoming dinner

Day 2 :
- Renewable energy course (Module 1 & 2)
- UNIMAS campus tour
- Technical visit to masjid Kampung Lintang (Solar PV)
- Kuching tour

Day 3 :
- Technical visit to Kampung Assum (Micro-Hydro)
- Visit to Annah Rais long house

Day 4 :
- Kuching-Sibu (Flight)
- Renewable energy course (Module 3 & 4)
- Sibu tour and Dinner

Day 5 :
- Renewable energy course (Part 3)
- Sibu-Mukah (Bus)
- Technical visit to Kampung Igan, Mukah (Solar PV)
- Homestay at Dalat, Mukah

Day 6 :
- Melanau cultural museum visit
- Oya beach activities
- Local seafood lunch, Oya
- Oya-Sibu (Bus)
- Sibu-Kuching (Flight)

Day 7 :
- Group presentation
- Kuching River Cruise
- Farewell Dinner & Closing Ceremony

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E-brochure version is available at:
https://www.global.unimas.my/images/PDF/FK_-_Short_Mobility_Programme_30822.pdf

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