




Universiti
Malaysia
PAHANG
Engineering • Technology • Creativity




**The Process and
Challenges of
International Academic
Collaboration in STEM:**
Sharing UMP Experience



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Presentation Outlines

- Learning objectives
- STEM in Malaysia
- Background of UMP and NIU
- Collaboration Process
- Issues and Challenges in international academic collaboration



Learning Objectives

At the end of presentation,
participants will be able to:

- view STEM in Malaysia.
- value the benefits of international academic collaboration.
- apply various activities in international academic collaboration.
- experience the challenges faced during the collaboration process.



STEM in Malaysia

- **National Science & Technology policy**
 - MOSTI is responsible to educate the community in science, technology and innovation
 - Encourage R&D through ScienceFund, Community Fund, TechnoFund
- **Industrial Master Plan (IMP)**
 - Strengthens science and technology in the development of industrial sector, especially manufacturing
- **Included in Nine National Strategic Challenges**
- **Science stream is declining**
 - About 30% in science stream
- **The government aims to achieve 60:40 by 2015**

UMP Initiatives in STEM

- **Egilent**
 - Science Camp
 - Outdoor Activities
- **Easy Science and Mathematics Camp (NIU Model)**
- **Program Insmartive**
- **Offer engineering technology program**











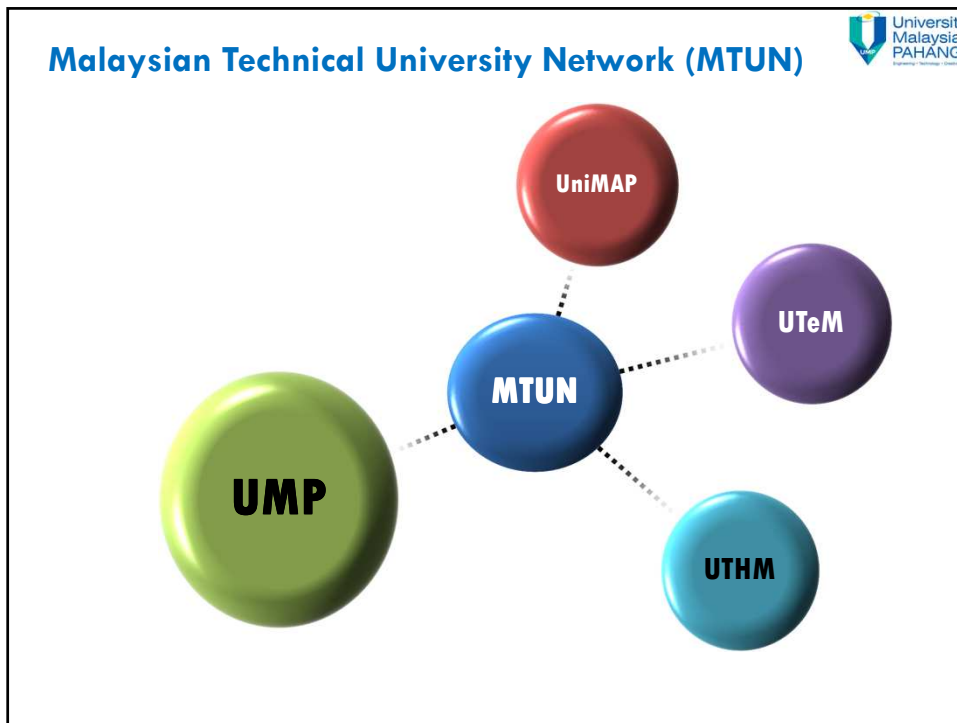
New Issue in Engineering Technology

- **About 80% of working field in engineering needs engineering technologist**
- **Out of 100,000 engineers, 80,000 doing engineering technologist work**
- **Government aims to produce 60,000 Technologists by 2020**
- **MTUN is responsible to produce Technologists**







Malaysian Technical University Network (MTUN)

A map of Malaysia with state names labeled: LANGKAWI, KEDAH, PENANG, PERAK, KELANTAN, TERENGGANU, KUALA TERENGGANU, SELANGOR, NEGERI SEMBILAN, MELAKA, JOHOR, and SINGAPORE. Major cities like George Town, Ipoh, and Kuala Lumpur are also marked. The South China Sea is labeled. Four blue arrows point from specific locations on the map to two photographs on the right. The top arrow points to the "Gambang Campus Kuantan, Pahang" photo, and the bottom arrow points to the "Kuala Pahang Campus Pekan, Pahang" photo. The acronym "UMP" is written in red on the map near the location of the arrows.

UniMAP


UTeM

UTHM

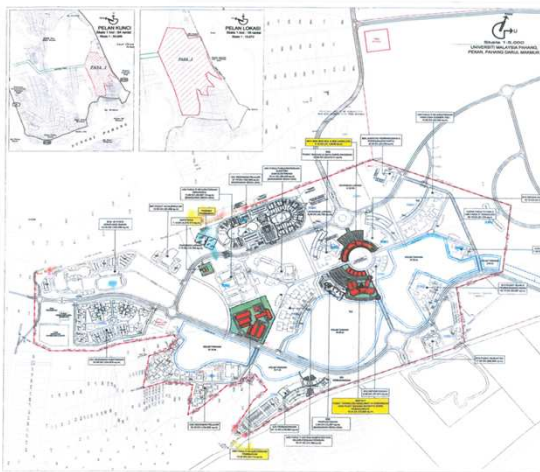
UMP

Gambang Campus Kuantan, Pahang

Kuala Pahang Campus Pekan, Pahang




Campus Area





Area: 768 acre

Gombang Campus



Pekan Campus





CAMPUS'S LOCATION



GAMBANG CAMPUS

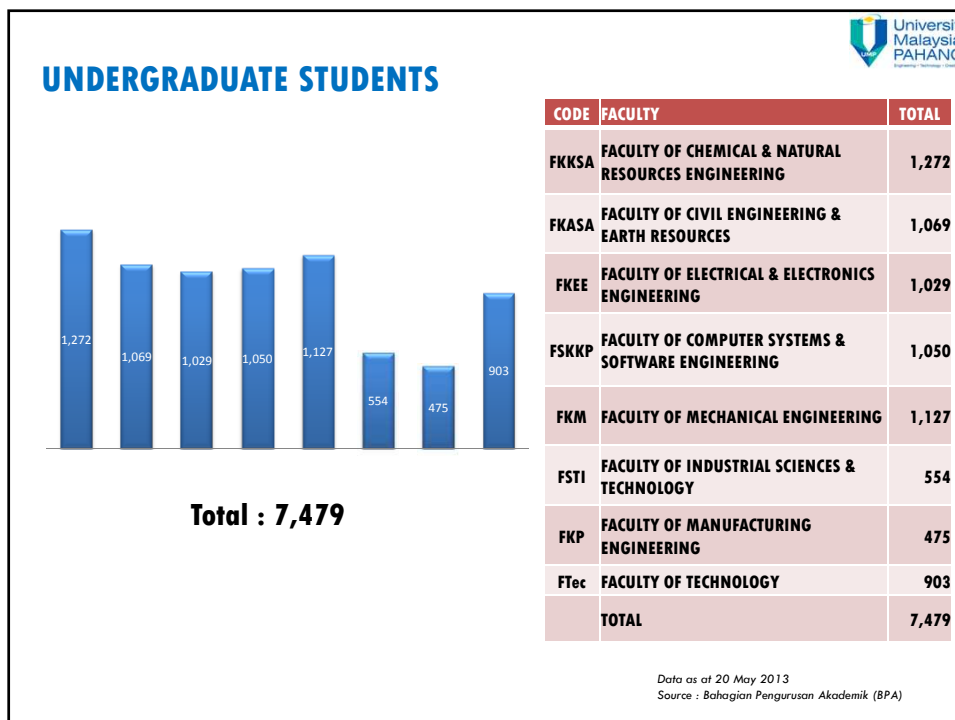
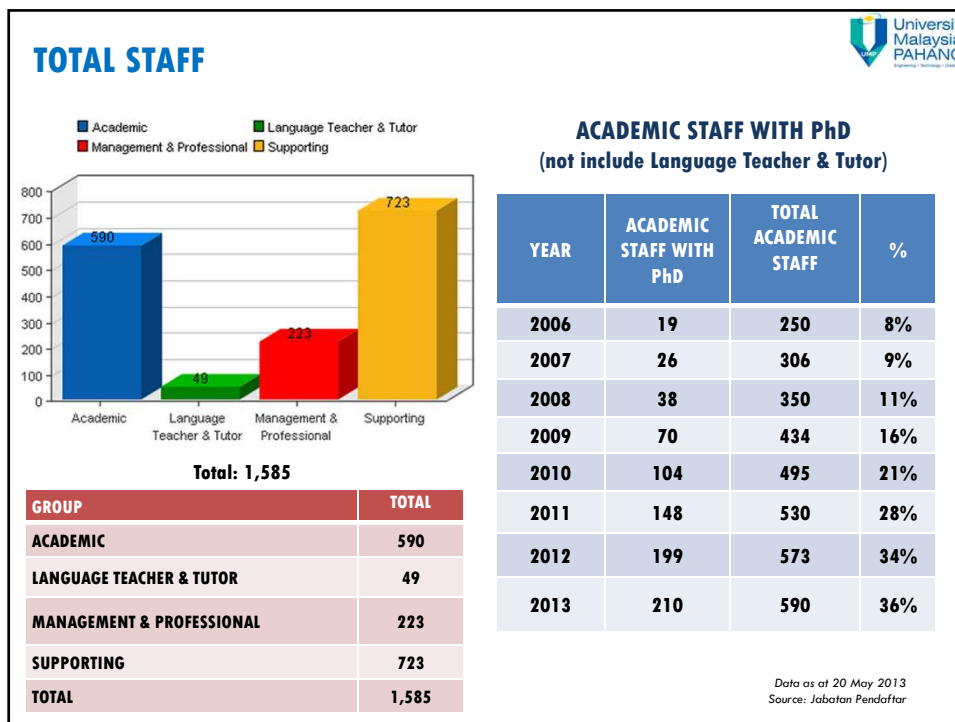
Area : 126 acre
No. of students : 4,592

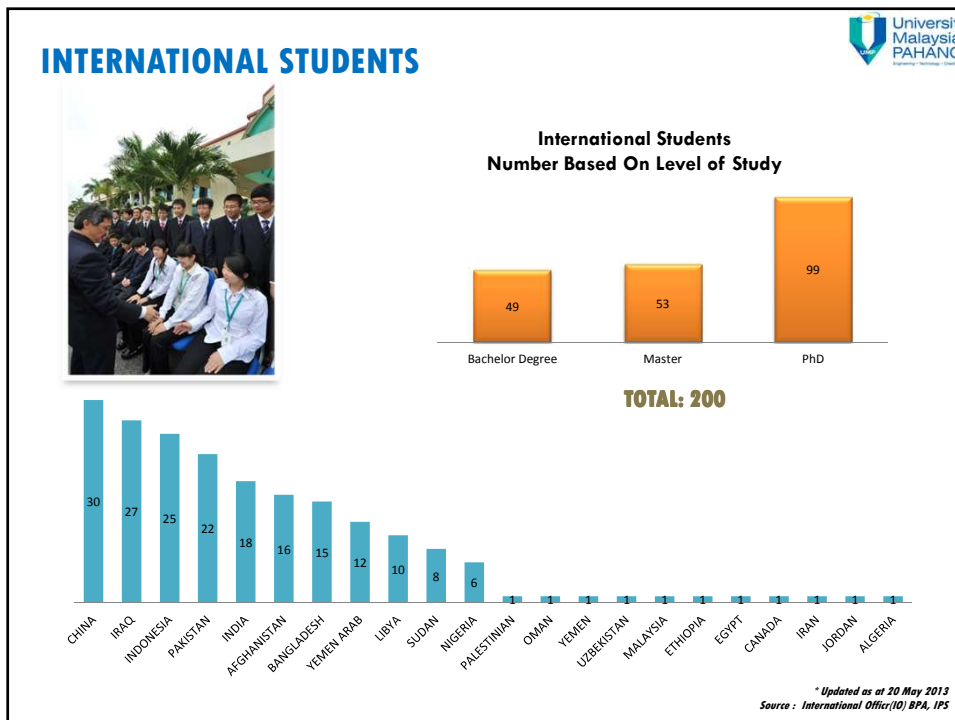
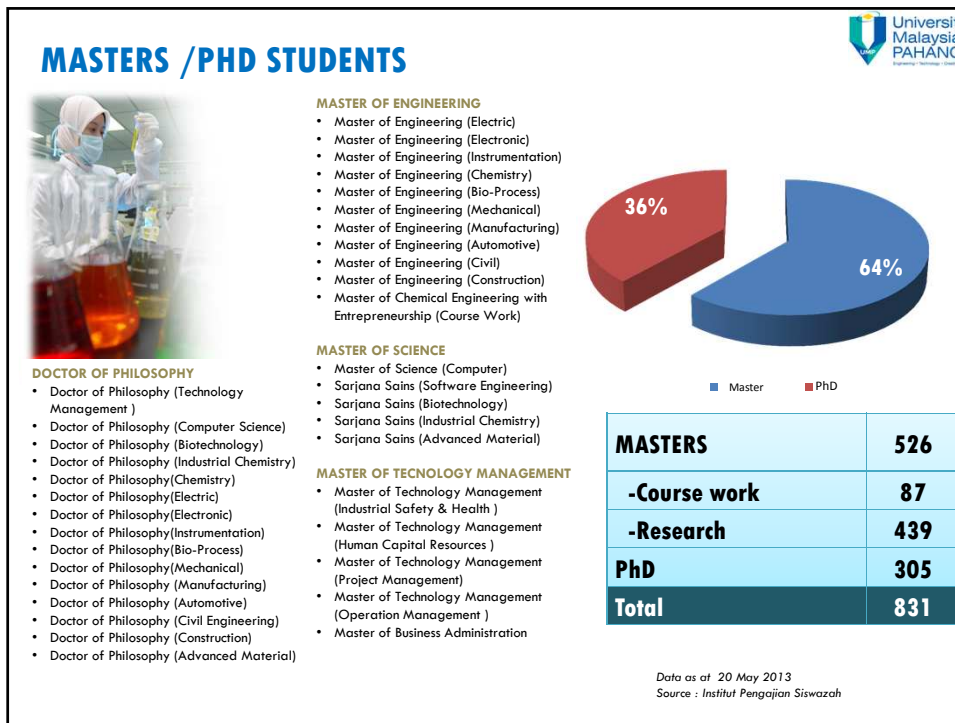
PEKAN CAMPUS

Area : 642 acre
No. of students : 3,718

TOTAL CURRENT STUDENTS : 8,310







VISION

To be a world-class Technological University.


MISSION

We provide high quality education, research and services in engineering and technology in a culture of creativity and innovation.

OBJECTIVE

- 1. To produce outstanding graduates by providing competitive engineering and technological programmes.**
- 2. To spearhead cutting edge industry-relevant research initiatives.**
- 3. To be a leading service provider to industries and community based on our niche and areas of expertise.**
- 4. To be recognized as an institution for excellent management and work culture.**

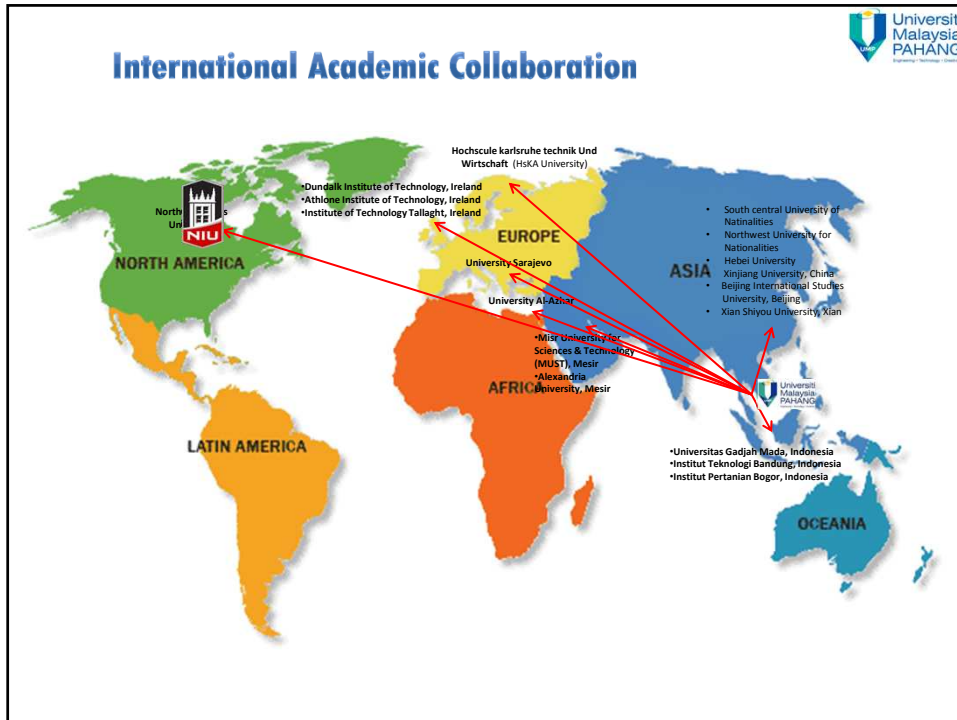


Faculty of Technology

Programs Offered

No	Program
1	Bachelor of Project Management with Honors
2	Bachelor of Industrial Technology Management with Honors
3	Bachelor of Occupational Safety and Health with Honors
4	Bachelor of Engineering Technology (Electrical) with Honors
5	Bachelor of Engineering Technology (Manufacturing) with Honors
6	Bachelor of Engineering Technology (Energy & Environment) with Honors



WHY

NIU
NORTHERN ILLINOIS UNIVERSITY

ENGINEERING TECHNOLOGY PROGRAM

The advertisement features a blue banner with the text "ENGINEERING TECHNOLOGY PROGRAM" and a background image of interlocking gears. The NIU logo is prominently displayed in the center.






Academic Quality

- National Recognition of academic excellence
- World-renowned faculty who teach undergraduates
- Undergraduate research opportunities
- Exceptional resources of a major comprehensive university, including top-level facilities
- Student / Faculty ratio (17 students to 1 Professor)

Abundant Academic Option

- 6 Business program, including Accounting
- 4 Engineering Programs
- 8 Health Science Programs, including Nursing
- More than 70 Graduates Programs








COLLEGES

- College of Business
- College of Education
- College of Engineering and Engineering Technology
- College of Health and Human Sciences
- College of Law
- College of Liberal Arts and Sciences
- College of Visual and Performing Arts


RECOGNITIONS



Nationally recognized for community services




Ranked in top 100 universities




Academic Prestige

Ref: <http://www.niu.edu/academics/departments.shtml>





NORTHERN ILLINOIS UNIVERSITY

College of Engineering and Engineering Technology



- The undergraduate programs in electrical engineering, industrial and systems engineering, and mechanical engineering are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).
- In the technology program, the emphases in **electrical engineering technology and manufacturing engineering technology** are accredited by the Technology Accreditation Commission of ABET, and the emphasis in industrial technology is accredited by the National Association of Industrial Technology



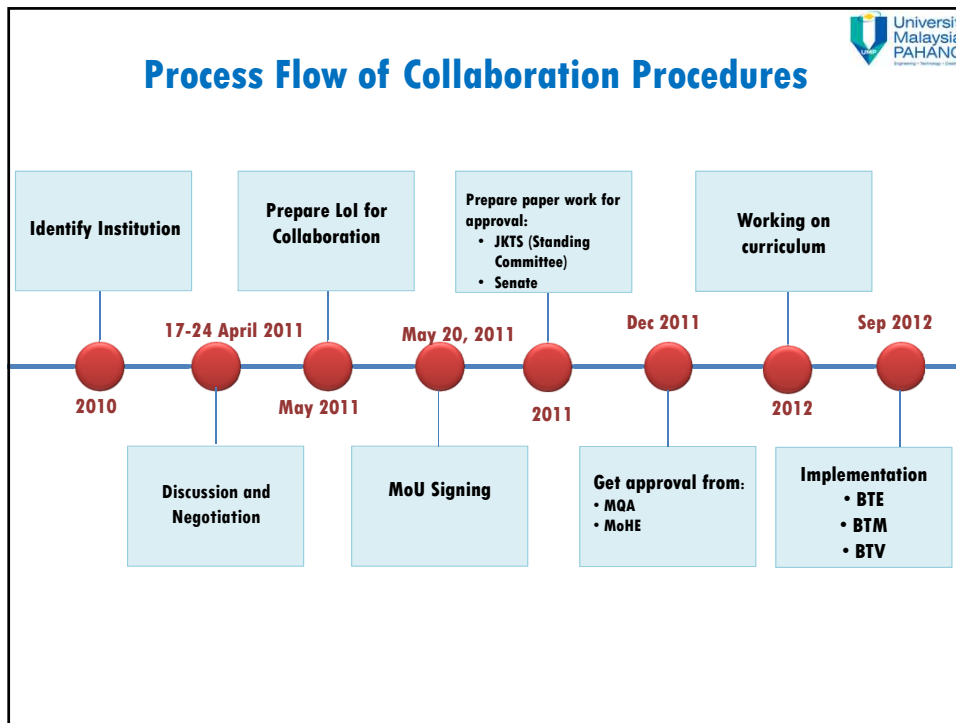
Opportunities



International ization	Recognition	Mobility	Fellowship
<ul style="list-style-type: none"> • Branding • Competitive 	<ul style="list-style-type: none"> • Washington Accord • World Recognition 	<ul style="list-style-type: none"> • Student Exchange • Staff Attachment 	<ul style="list-style-type: none"> • Fellowship Program

Companies that employ NIU's Eng Tech graduates





MoU Signing

Materializing Memorandum of Understanding (MoU) with Northern Illinois University (NIU) on May 20, 2011

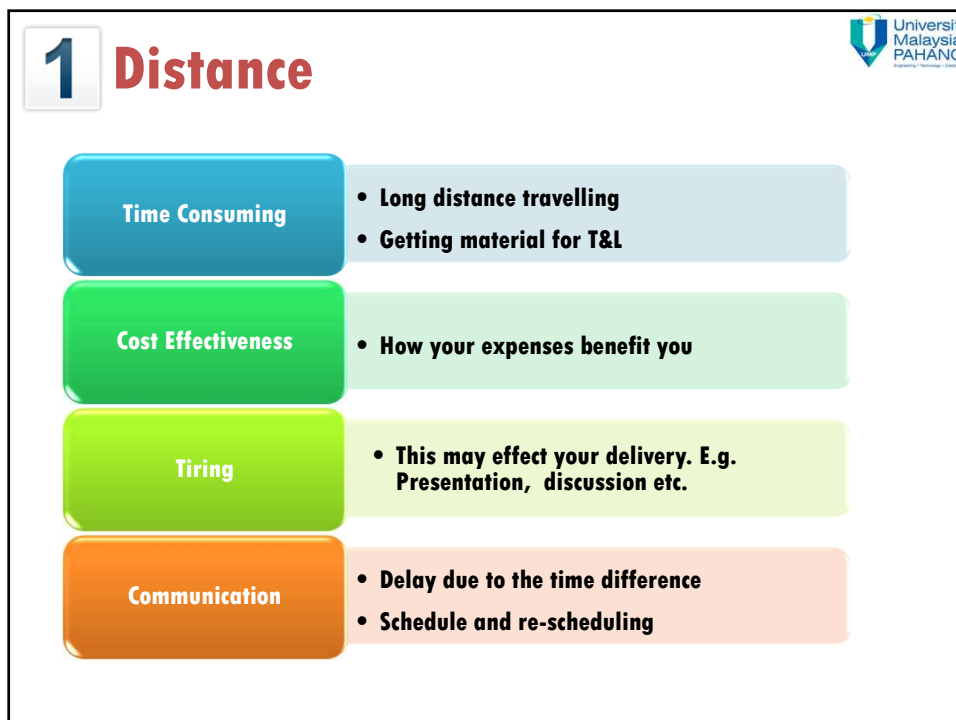
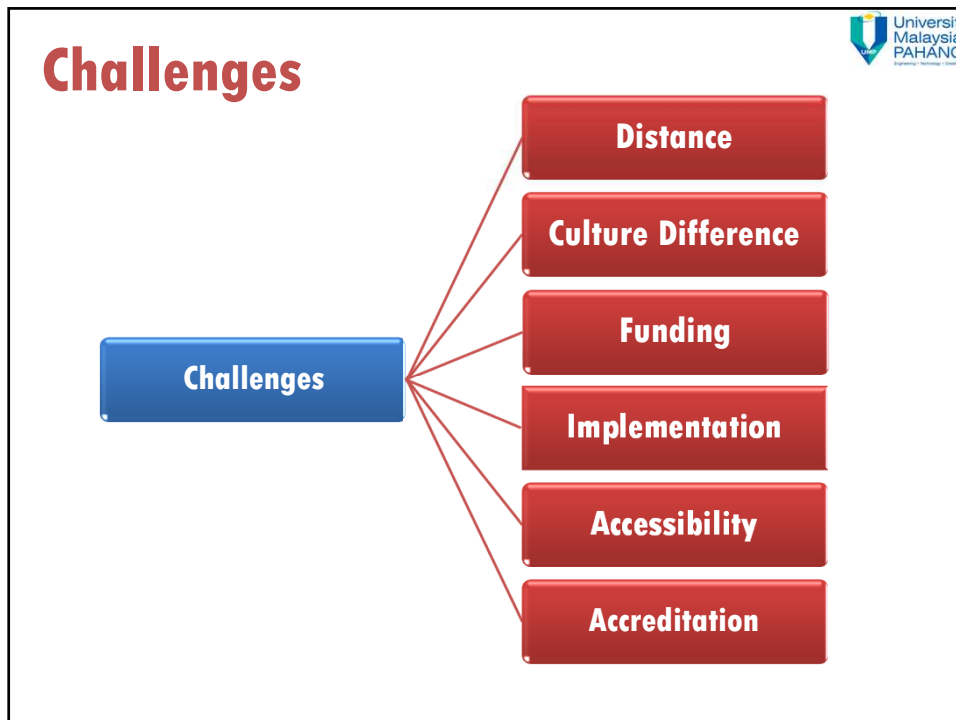


Implementation



- **Bachelor of Engineering Technology (Electrical) with Honors.**
- **Bachelor of Engineering Technology (Manufacturing) with Honors.**
- **Bachelor of Engineering Technology (Energy & Environmental) with Honors.**



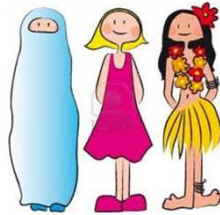


2 Culture Difference

Religion



Ethnicity



Socialization



3 Funding

UMP has to bear the cost for

- Travelling
- Curriculum development
- Administrative works

Government Fund

- Limited funding
- Delay or uncertain

4 Impelementation

Fellowship Program	<ul style="list-style-type: none"> • Searching for candidates • Dealing with host institutions
Delivery	<ul style="list-style-type: none"> • Curriculum • Teaching materials
Administrative	<ul style="list-style-type: none"> • Academic visits • Management meeting
Dual Degree Program	<ul style="list-style-type: none"> • To be discussed in phase 5 and 6

5 Accessibility

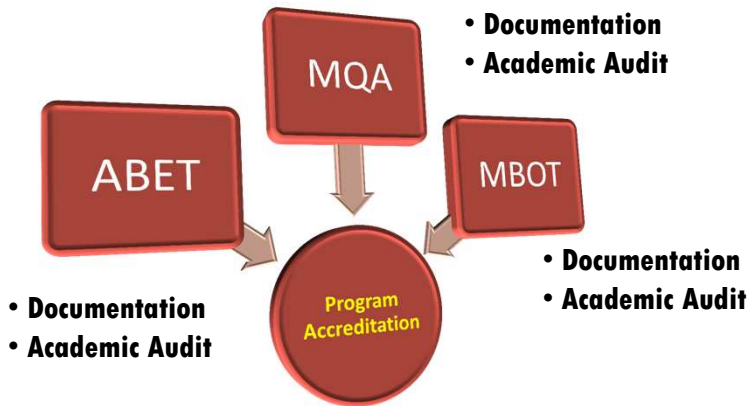
VISA



Immigration



6 Accreditation



Thank You

