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WP2.1 Summary of Courses Development

1. Bachelor of Petroleum Engineering with Honours
   Introduction to Oil & Gas Industry and Sustainable Development
2. Bachelor of Civil and Environmental Engineering with Honours
   Pipeline and Risers
3. Bachelor of Science (Hons) Petroleum Geoscience
   Physical Geology
4. MSc in Asset Maintenance and Management
   Deepwater Maintenance
5. Bachelor of Civil and Environmental Engineering with Honours
   Coastal Planning and Management
6. Bachelor of Civil and Environmental Engineering with Honours
   Ocean and Coastal Engineering

No	Subject Name	Date of approval	Approved by	Accreditation status
1	Introduction to Oil & Gas Industry and Sustainable Development (PEB1012)	January 2021	Engineering Accreditation Council	Approved
2.	Pipeline and Risers (VEB4133)	January 2021	Engineering Accreditation Council	Approved
3.	Physical Geology (QEB1013)	January 2021	Malaysian Qualifications Agency	Approved
4.	Deepwater Maintenance (EMM5103)	January 2021	Malaysian Qualifications Agency	Approved
5.	Coastal Planning and Management (VEB4233)	January 2021	Engineering Accreditation Council	Approved
6.	Ocean and Coastal Engineering (VEB4213)	January 2021	Engineering Accreditation Council	Approved

Course proposed	Introduction to Oil & Gas Industry and Sustainable Development	Pipeline and Risers	Physical Geology
Course status	Revised Subject	Revised Subject	Revised Subject
The title of the academic program involved	Bachelor of Petroleum Engineering with Honours	Bachelor of Civil and Environmental Engineering with Honours	Bachelor of Science (Hons) Petroleum Geoscience
Number of credits	2 credit (3 ECTS)	3 credit (5 ECTS)	3 credit (5 ECTS)
MARE TOPIC	(5) Offshore exploration & mining	(5) Offshore exploration & mining	(1) coastal science, (2) delta science
Contents updated	Adding a topic on marine pollution control and management: Topic on the effects of oil and gas exploration to the environment - marine pollution to be embedded in the existing course. This is to create awareness on the effects of hydrocarbon exploration in a long term and addressing sustainable development goals.	Latest tech regard to materials, installation methods, and management of integrity to be included in the existing syllabus of riser design, route selection and installation methods to create awareness on the effects of hydrocarbon exploration to the environment in a long term and in addressing sustainable development goals.	Adding a topic on the geo hazards that related to the coastal and delta environment. These topics focusing on giving early awareness towards these critical issues together with the possible solution to curb the issue.

Date of accreditation	January 2021	January 2021	January 2021
Final Accreditation body	Engineering Accreditation Council	Engineering Accreditation Council	Malaysian Qualifications Agency
Estimated starting date, dd/mm/yy	May 2021	May 2021	May 2021
Number of students accepted in the first year	360 students (per year) ; 120 students (per semester)	45 students (per year) ; 15 students (per semester)	45 students (per year) ;15 students (per semester)
Number of students to be accepted in the second year	360 students (per year) ; 120 students (per semester)	45 students (per year) ; 15 students (per semester)	45 students (per year) ;15 students (per semester)
Teaching staff	Ir. Haizatul Hafizah Hussain	Assoc. Prof. Ir. Dr. Zahiraniza Mustaffa	Mohamad Shaufi B Sokiman
Teaching methods	Teaching Method: Included guided learning approach	Proposed Teaching Method: Adjunct lecture	Included guided learning approach
Learning methods	Teaching Method: MOOC delivery	Proposed learning method: problem-based learning, blended learning & online based learning	N/A

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Changes in course materials	Course material: Topic on the effects of oil and gas exploration to the environment - marine pollution	Course material: latest technology regard to materials (nonmetallic pipeline, flexible pipeline etc.), installation methods, and management of integrity; to be included in the existing syllabus	Course material: Topic on the geo - hazards in coastal and delta area.
Evaluation methods	Evaluation method: Included additional quizzes as part of coursework marks	Evaluation method: Online assessment	Evaluation method: Included additional assignment as part of coursework marks
Any innovation?	Online Quizzes	Problem based & online learning and the assessment	Online Quizzes

Course proposed	Ocean and Coastal Engineering	Coastal Planning and Management	Deepwater Maintenance
Course status	Revised	Revised	Revised Subject
The title of the academic program involved	Bachelor of Civil and Environmental Engineering with Honours	Bachelor of Civil and Environmental Engineering with Honours	MSc in Asset Maintenance and Management
Number of credits	3 credit (5 ECTS)	3 credit (5 ECTS)	3 credit (5 ECTS)
MARE TOPIC	(1) Coastal science	(1) Coastal science and management: Coastal Engineering and Coastal Feature, Oceonographic Data & Field Investigation, Coastal Zone Management Policy and Guidelines, Assessment of Coastal Resources and Environmental Impacts, Hydraulic Study for Shoreline Management	(5) Offshore exploration & mining: Deepwater Facilities and Systems, Deepwater Maintenance.

Contents updated	Estuarine hydrodynamics and morphodynamics to be included in the existing syllabus to enable engineers help authorities in planning sustainable development of marine of coastal	Dredging, land reclamation and marine pollution to be included in the existing syallabus to enable engineers help authorities in planning sustainable development of marine of coastal	Introduction to Offshore Exploration and Mining - Definition of offshore blocks, prelminary explorations - Methods of Exploration - Reservoirs and Hydrocarbon feasibility - Project Economics and Feasibility
Date of accreditation	January 2021	January 2021	January 2021
Final Accreditation body	Engineering Accreditation Council	Engineering Accreditation Council	Malaysian Qualifications Agency
Estimated starting date, dd/mm/yy	January 2022	January 2022	May 2021
Number of students accepted in the first year	45 students (per year) ; 15 students (per semester)	45 students (per year) ; 15 students (per semester)	10 students (per year) ; It offers once in a year
Number of students to be accepted in the second year	45 students (per year) ; 15 students (per semester)	45 students (per year) ; 15 students (per semester)	10 students (per year) ; It offers once in a year
Teaching staff	TBA	TBA	Prof. Dr. Nasir Shafiq
Teaching methods	Adjunct lecture	Adjunct lecture	N/A

Learning methods	Blended learning & Game based learning	Problem-based learning (via a site visit)	N/A
Changes in course materials	Estuarine hydrodynamics and morphodynamics to be included in the existing syllabus	Dredging, land reclamation and marine pollution to be included in the existing syllabus	Contents related to offshore exploration and mining
Evaluation methods	TBA	TBA	N/A
Any innovation?	Game based learning and the assessment	Problem based learning and the assessment	Concept videos