

GRADUATION CHECKLIST

To graduate, students must pass all the stated courses in this checklist. It is the responsibility of the students to ensure that all courses are taken and passed. Students who do not complete any of the course are not allowed to graduate.

NO.	CODE	COURSE	CREDIT EARNED (JKD)	CREDIT COUNTED (JKK)	TICK (✓) IF PASSED
SCHOOL OF CIVIL ENGINEERING COURSES					
1	SEAA 1011	Introduction to Civil Engineering	1	1	
2	SEAA 1023	Engineering Surveying	3	3	
3	SEAA 1031	Survey Camp (YEAR 1 / SHORT SEMESTER)	1	HL	
4	SEAA 1213	Engineering Mechanics	3	3	
5	SEAA 1422	Engineering Drawing	2	2	
6	SEAA 1513	Fluid Mechanics	3	3	
7	SEAA 1713	Soil Mechanics	3	3	
8	SEAA 2012	Civil Engineering Laboratory 1	2	2	
9	SEAA 2032	Mechanical & Electrical Systems	2	2	
10	SEAA 2112	Civil Engineering Materials	2	2	
11	SEAA 2223	Mechanics of Materials and Structures	3	3	
12	SEAA 2413	Computer Programming	3	3	
13	SEAA 2513	Hydraulics	3	3	
14	SEAA 2712	Engineering Geology and Rock Mechanics	2	2	
15	SEAA 2722	Geotechnics 1	2	2	
16	SEAA 2832	Highway Engineering	2	2	
17	SEAA 2912	Water Treatment	2	2	
18	SEAA 2922	Wastewater Engineering	2	2	
19	SEAA 3012	Civil Engineering Laboratory 2	2	2	
20	SEAA 3022	Integrated Design Project 1	2	2	
21	SEAA 3045	Industrial Training (YEAR 3 / SHORT SEMESTER) for 12 weeks / 3 months	5	HL	
22	SEAA 3123	Construction Technology, Estimating & Contract	3	3	
23	SEAA 3243	Theory of Structures	3	3	
24	SEAA 3313	Reinforced Concrete Design 1	3	3	
25	SEAA 3323	Structural Steel & Timber Design	3	3	
26	SEAA 3412	Building Information Modelling and Data Management	2	2	
27	SEAA 3613	Hydrology and Water Resources	3	3	
28	SEAA 3712	Geotechnics 2	2	2	

29	SEAA 3842	Traffic Engineering	2	2	
30	SEAA 3913	Environmental Management	3	3	
31	SEAA 4021	Civil Engineering Seminar	1	HL	
32	SEAA 4022	Research Methodology and Pre-Project	2	2	
33	SEAA 4034	Final Year Project	4	4	
34	SEAA 4032	Integrated Design Project 2	2	2	
35	SEAA 4113	Construction & Project Management	3	3	
36	SEAA 4223	Structural Analysis	3	3	
37	SEAA 4333	Reinforced Concrete Design 2	3	3	
38	SEAA 4##3	Elective 1	3	3	
39	SEAA 4##3	Elective 2	3	3	
40	SEAA 4##3	Elective 3	3	3	
TOTAL CREDIT OF CIVIL ENGINEERING COURSES (a)			101	94	
MATHEMATICS COURSES (Faculty of Science)					
1	SSCE 1693	Engineering Mathematics I	3	3	
2	SSCE 1793	Differential Equations	3	3	
3	SSCE 1993	Engineering Mathematics II	3	3	
4	SSCE 2193	Engineering Statistics	3	3	
5	SSCE 2393	Numerical Methods	3	3	
TOTAL CREDIT OF MATHEMATICS COURSES (b)			15	15	
UNIVERSITY GENERAL COURSES					
Kluster 1: Penghayatan Falsafah, Nilai & Sejarah (Faculty of Social Sciences and Humanities)					
1	UHMS1182	Penghayatan Etika dan Peradaban (for Local Students Only)	4	4	
	UHS1022	Falsafah dan Isu Semasa (for Local Students only)			
2	UHS1022 @ UHMS1182	Falsafah dan Isu Semasa (for International Students Only) @ Penghayatan Etika dan Peradaban (for International Students Only)	4	4	
	ULAM 1012	Malay Language Communication 2 (for International Students Only)			
Kluster 2: Kemahiran Insaniah (Soft Skills)					
1	UHMT1012	Graduate Success Attributes	2	2	
2	UBSS 1032	Introduction to Entrepreneurship	2	2	
Kluster 3: Perluasan Ilmu					
1	UHIT 2302	The Thought of Science and Technology	2	2	
Kluster 4: Kurikulum Pembelajaran Servis					
1	UKQ# 2##2	Co-Curriculum & Service Learning	2	2	
2	UKQE 3001	Extracurricular Experiential Learning (EXCEL)	1	1	
Kluster 5: Kemahiran Bahasa (Language Skill)					

(Language Academy, Faculty of Social Sciences and Humanities)					
1	UHLB 1122	Academic English Skills	2	2	
2	UHLB 2122	Advanced Academic English Skills	2	2	
3	UHLB 3132	English for Professional Purposes	2	2	
4	ULAX 1122	Elective Of Foreign Language	2	2	
TOTAL CREDIT of UNIVERSITY GENERAL COURSES (c)			21	21	
TOTAL CREDIT TO GRADUATE (a + b + c)			137	130	
OTHER COMPULSORY COURSES					
Professional Skills Certificate (PSC) (UTMSPACE/ School)					
1	GLL 1001	How to Get Your Self Employed			
2	GLL 1029	ISO 9001:2008 Quality Management System Requirement			
3	GLL 1040	Occupational Safety, Health and Environment			
4	GLL 1041	How to Manage Your Personal Finance			
Test of English Communication Skill (TECS) (Language Academy, Faculty of Social Sciences and Humanities)					
1	TECS 1001	Oral Interaction			
2	TECS 1002	Writing			

Elective Courses

1. Materials, Management and Construction

- SEAA 4133 Construction Laws and Contract
SEAA 4143 Construction Plants and Equipment
SEAA 4153 Offshore Structures
SEAA 4163 Concrete Technology

2. Structural Analysis and Design

- SEAA 4203 Stability and Dynamics of Structures
SEAA 4243 Finite Element Method
SEAA 4263 Earthquake and Wind Engineering
SEAA 4273 Maintenance of Seismic Structures and Materials
SEAA 4293 Advanced Solid Mechanics
SEAA 4313 Advanced Reinforced Concrete Design
SEAA 4323 Prestressed Concrete Design
SEAA 4383 Analysis and Design of Tall Building Systems

3. Information Technology

- SEAA 4433 Advanced Computer Programming
SEAA 4463 Construction Integration Environment
SEAA 4473 Geographic Information System

4. Hydraulics and Hydrology

- SEAA 4523 Coastal Engineering
SEAA 4613 Water Resources Management
SEAA 4623 Urban Stormwater Management
SEAA 4633 Groundwater Hydrology

5. Geotechnics and Transportation

SEAA 4713	Geotechnical Analysis and Design
SEAA 4723	Engineering Rock Mechanics
SEAA 4733	Advanced Foundation Engineering
SEAA 4813	Pavement Design and Construction
SEAA 4823	Transportation Planning

6. Environmental Engineering

SEAA 4923	Advanced Water and Wastewater Treatment
SEAA 4943	Solid Waste Management
SEAA 4973	Industrial and Hazardous Waste Treatment
SEAA 4983	Water Quality Management

COURSE SYNOPSIS

CORE COURSES

First Year

SEAA 1011 Introduction to Civil Engineering

This course is only offered in the 1st Semester to all new students of Faculty of Civil Engineering. The course includes a general introduction to the field of civil engineering and the engineer's responsibilities to society. Main subfields in the discipline such as Structural Engineering, Transportation and Geotechnical Engineering, Hydraulics and Hydrology and Environmental Engineering will be highlighted by experts of the respective subfields. The course also exposes the students to generic skills related to engineering practices such as team working, making ethical decisions and communication skills through the lectures and group projects. Prior to the weekly lectures and presentations, a special welcoming lecture will be given by the Dean of Faculty.

SEAA 1023 Engineering Surveying

This course provides the basic theory and practice of surveying to civil engineering students. Methods of establishing horizontal & vertical control for construction and design are explained, compared and practiced via fieldworks. Since accuracy of survey work is vital in ensuring designs are exactly positioned, students must be able to analyse errors so that standard accuracies are met. Detailing for producing site plans, area and volume estimations, road curves geometric design are also discussed. The concept of field survey automation and the usage of software are explained. At the end of the course, students are expected to be able to plan, execute, compute and analyse surveying works involved in establishing horizontal & vertical controls and producing plans for civil engineering applications. Students should also be able to geometrically design horizontal and vertical curves according to standards, perform area calculations and volume estimation for earthwork activities in civil engineering.