

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 courses are not allowed to graduate.

NO.	CODE	COURSE	CREDIT EARNED (JKD)	CREDIT COUNTED (JKK)	TICK (✓) IF PASSED
NUCLEAR ENGINEERING COURSES					
1	SECP 2273	Programming for Engineer	3	3	
2	SETN 1113	Modern Physics	3	3	
3	SETN 1123	Fluid Mechanics	3	3	
4	SETN 1133	Engineering Drawing	3	3	
5	SETN 1143	Introduction to Engineering	3	3	
6	SETN 1224	Electrical Eng. Fundamental with Lab	4	4	
7	SETN 1243	Statics	3	3	
8	SETN 1711	Fluid Mechanics Lab	1	1	
9	SETN 2113	Thermodynamics	3	3	
10	SETN 2123	Strength of Materials	3	3	
11	SETN 2133	Dynamics	3	3	
12	SETN 2213	Nuclear Physics	3	3	
13	SETN 2223	Heat Transfer	3	3	
14	SETN 2243	Nuclear Engineering Fundamentals	3	3	
15	SETN 2393	Numerical Methods for Nuclear Engineers	3	3	
16	SETN 2711	Thermodynamics & Mechanics of Material Lab	1	1	
17	SETN 3113	Nuclear Radiation Protection	3	3	

18	SETN 3123	Nuclear Reactor Materials	3	3	
19	SETN 3173	Engineering Economics & Project Management	3	3	
20	SETN 3213	Nuclear Reactor Theory	3	3	
21	SETN 3223	Instrumentation and Control Eng.	3	3	
22	SETN 3224	Thermal Hydraulics with Lab	4	4	
23	SETN 3233	Radiation Detection and Measurement	3	3	
24	SETN 3253	Nuclear Safety, Safeguard, Security & Regulation	3	3	
25	SETN 3711	Nuclear Physics Lab	1	1	
26	SETN 3721	Nuclear Reactor Lab	1	1	
27	SETN 3915	Industrial Training	5	HL	
28	SETN 4113	Nuclear Fuel Cycle & Waste Management	3	3	
29	SETN 4453	Nuclear Power Plant System	3	3	
30	SETN 4611	Nuclear Eng. Professional Practice	1	1	
31	SETN 4711	Rad. Detection & Measurement Lab	1	1	
32	SETN 4812	Undergraduate Project I	2	2	
33	SETN 4824	Undergraduate Project II	4	3	
34	SETN 4833	Nuclear Eng. System & Design I	3	3	
35	SETN 4834	Nuclear Eng. System and Design II	4	4	
36	SETN 4**3	Elective Nuclear I	3	3	
	SET* 5**3	PRISMS Elective I			
37	SETN 4**3	Elective Nuclear II	3	3	
	SET* 5**3	PRISMS Elective II			
		TOTAL CREDIT OF NUCLEAR	104	99	

		ENGINEERING COURSES (a)			
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	
		TOTAL CREDIT OF MATHEMATICS COURSES (b)	12	12	
UNIVERSITY GENERAL COURSES					
Cluster 1: Appreciation of Philosophy, Value and History (Faculty of Social Sciences and Humanities)					
1	UHMS 1182	Appreciation of Ethics and Civilizations (for Local Students)	2	2	
	UHMS 1022	Philosophy and Current Issues (for International Students)			
	OR UHMS 1182	OR Appreciation of Ethics and Civilizations (for International Students)			
2	UHS 1022	Philosophy and Current Issues (for Local Students)	2	2	
	UHLM 1012	Malay Language Communication 2 (for International Students)			
Cluster 2: Generic Skills					
1	UHMT 1012	Graduate Success Attributes	2	2	
2	U*** 2**2	University General Elective	2	2	
Cluster 3: Knowledge Enhancement					
1	UHIT 2302	The Thought of Science and Technology	2	2	
Cluster 4: Co-Curriculum and Service Learning					

1	UKQF 2**2	Co-Curriculum	2	2	
2	UKQT 3001	Extracurricular Experiential Learning (ExCEL)	1	1	
Cluster 5: Language Skills					
(Language Academy, Faculty of Social Sciences and Humanities)					
1	UHLB 1112	English Communication Skills	2	2	
2	UHLB 2122	Academic Communication Skills	2	2	
3	UHLB 3132	Professional Communication Skills	2	2	
4	UHL* 1112	Foreign Language Elective	2	2	
Cluster 6: Entrepreneurial Skills					
1	UBSS 1032	Introduction to Entrepreneurship	2	2	
		TOTAL CREDIT of UNIVERSITY GENERAL COURSES (c)	23	23	
		TOTAL CREDIT TO GRADUATE (a + b + c)	139	134	
OTHER COMPULSORY COURSES - PROFESSIONAL SKILLS CERTIFICATE (PSC).					
<ul style="list-style-type: none"> • Students are required to enrol and pass FIVE (5) PSC courses, in order to be eligible to graduate. • Please refer to page FE 8 in the UG Academic Handbook, for more information about PSC courses. 					
COMPULSORY PSC COURSES (Enrol all 4 courses)					
1	GSPX XXXX	Design Thinking for Entrepreneur			
2	GSPX XXXX	Talent and Competency Management			
3	GSPX XXXX	Faculty Engineering Safety Pass (FESP) <i>MODULE 1 - compulsory for SKM, SKT and SKE students</i> <i>MODULE 2 – compulsory for SKA, SC, SKBSK students</i>			
4	GSPX XXXX	English Communication Skills for Graduating Students (ECS)			

ELECTIVE PSC COURSE (Choose 1 only)

1	GSPX XXXX	Data Analytics for Organization	
2	GSPX XXXX	Writing	
3	GSPX XXXX	Construction Measurement (Mechanical & Electrical Works)	
4	GSPX XXXX	Professional Ethics and Integrity	
5	GSPX XXXX	More elective courses to be added in future	

COURSE SYNOPSIS**CORE COURSES****SETN 1143 Introduction to Engineering**

The objective of this course is to introduce and prepare students for learning engineering and how to become engineers of the future. This course serves to bridge pre-university education to university life and provide support for adjusting to learning and expectations in tertiary education. This course introduces the students to the engineering profession, how to prepare for an exciting engineering career, the design process, engineering communication, thinking skills and ethics. The students will also be introduced with systematic approaches to deal with basic engineering problems. Special emphasis will be on enhancing students' communication skills. Problem-Based Learning (PBL) case study on sustainable development will be implemented for a mini project consisting of three stages.

SETN 1113 Modern Physics

The course begins with a brief discussion on the nature of science in the quest of better understanding of the natural phenomena, the inadequacy and failures of classical physics. It is then followed by an introductory lesson on Special Relativity Theory and relevant consequences of this theory. A modern quantum mechanics interpretation on blackbody radiation, photoelectric and Compton effect will also be discussed. It will then proceed to the lesson on atomic models and quantum numbers. Finally, formalities of quantum mechanics are introduced by discussing the 1-D time independent Schrodinger equation (TISE), applied to an idealized infinite square potential well.

SETN 1243 Statics

This course is designed to introduce students to the basic principles and concepts in mechanics. It deals with the resultant and resolution of force(s) acting on a particle, the equilibrium of a particle, the effect of force(s) on rigid bodies, how to replace a force system with an equivalent system and the equilibrium of rigid bodies. This course also includes the determination of centroid, analysis of structure and friction. At the end of the course, students