جامعة الحسين التقنية
Al Hussein Technical University

School of Engineering Technology

Department of Energy Engineering

Bachelor Degree – Energy Engineering: 166 Credit Hours

Energy Engineering BSc 166

Classification	Credit Hours		
	Compulsory	Elective	Total
University Requirements	24	03	27
School Requirements	16	0	16
HTU Department Requirements	28	13	41
HTU HND and HNC Department Requirements	64	0	64
Placement in Industry Requirements	18	-	18
Total =	150	16	166

English language Prerequisites:

Depends on the results of English language placement test

Course No.	Course Title	Cr. Hr.	Lecture	Lab.	Prerequisite
10301099	Foundation English Pre-Intermediate Intensive + Lab	4	8	1	Placement Test <30

1. University Requirements: 27 Credit Hours (Mandatory: 24, Elective: 3)

1.1. Mandatory: 24 Credit hours

Course No.	Course Title	Cr. Hr.	Lecture	Lab.	Prerequisite
10301100	Foundation English Intermediate Intensive + Lab	4	8	1	Placement Test 30-42 or 10301099
OR *10301110*	Foundation English Intermediate Intensive + Lab				Placement Test 43-58
10301120	English Intermediate + Lab	3	4	1	Placement Test *10301100*
10301130	English Upper-Intermediate + Lab	3	4	1	Placement Test 59-66 or 10301110 / *10301120*
10301140	English Advanced	3	4	1	Placement Test 67-75 or *10301130*
10303101	Soft Skills I	2	0	2	-
10303102	Soft Skills II	2	0	2	*10301101*
10303202	Entrepreneurship Boot Camp	6	3	3	-
	Leadership Camp*	1	0	1	*10301101*
	Total	24			

* This course includes 10-days intensive training bootcamp held off-campus.

1.2. Electives: 3 Credit hours

Students should choose 3 courses (3 credit hours) from the following list:

Course No.	Course Title	Cr. Hr.	Lecture	Lab.	Prerequisite
10302191	Science & Society Seminar I: Arab Contributions to Science and Arts	1	0	1	-
10303199	Science & Society Seminar II: Philosophy of Science	1	0	1	-
10303196	Art Appreciation and Techniques	1	0	1	-
	Strategies for Industry Competitiveness: Tools & Techniques	1	0	1	*10301101*
	Rights and responsibilities	1	1	0	
	Civil & Professional Culture	1	1	0	
	Total Taken	3			

2. School Requirements: 16 Credit Hours

Course No.	Course Title	Cr. Hr.	Lecture	Lab.	Prerequisite
010303100	*Functional Math*	*3*	*3*	*0*	-
010303110	*Functional Physics*	*3*	*3*	*0*	-
010201100	*Fundamentals of Computing*	*4*	*3*	*1*	-
010303130	*STEM Lab I*	*1*	*0*	*1*	-
010101100	*Workshop I*	*2*	*0*	*2*	-
020101102	*Workshop II*	*1*	*0*	*1*	010101100
010303131	*STEM Lab II*	*1*	*0*	*1*	010303130
010401199	*Introduction to Engineering Drawing*	*1*	*0*	*1*	-

Total	*16*

3. Al-Hussein Technical University (HTU) Department Requirements: 41 Credit Hours:

3.1. HTU Mandatory Requirements: 28 Credit Hours

Course No.	**Course Title**	Cr. Hr.	**Theo. Cr. Hrs**	**Prac. Cr. Hrs.**	Prerequisite
010101101	Advanced Workshop	1	*0*	*1*	020101102
010101173	Fundamentals of Thermodynamics and Heat Engines	4	*3*	*1*	010303110
010101130	Electrical and Electronic Principles	4	*3*	*1*	010303110
	Industrial Power Electronics and Storage	3	2	0	010101130
	Thermal Fluids	3	*2*	1	010101173
	Utilisation of Electrical Energy	3	2	1	010101130
	Sustainability in Energy Systems	2	1	0	010101127
	Heating, Ventilation, Air Conditioning (HVAC) Systems	3	2	1	010101183
	Maintenance in Energy Engineering	2	1	0	010101123
010101297	Major Research Project	3	0	0	010301194
	Total	**28**			

3.2. HTU Elective Requirements: 13 Credit Hours

Course No.	**Course Title**	**Cr. Hr.**	**Theo. Cr. Hrs**	**Prac. Cr. Hrs.**	**Prerequisite**
	Photovoltaics and Wind Energy System•	3	2	1	010101124
	Energy Economics♦	3	3	0	010101124
	Energy Auditing & Data Analysis♦	2	2	0	010101124
010101283	Industrial Services	2	2	1	010101135
	Electrical Power Generation, Transmission & Distribution♦	3	2	1	010101243
	Solar Energy♦	1		1	010101124
	Further Control System Engineering	2	2	1	010101133
	Data analysis and Signal Processing	4	3	1	010101221
	Grid Connection Codes and Regulations•	3	2	1	010101124
	Total Taken	**13**			

♦Student must select a total of 13 credit hours of the available units.

4. Higher National Certificate (HNC) & Higher National Diploma (HND) Department Requirements (64 Credit Hours)

Course No.	**Course Title**	Cr. Hr.	**Theo. Cr. Hrs**	**Prac. Cr. Hrs.**	Prerequisite
010101121	Engineering Math's	4	*3*	*1*	010303100
010101120	Engineering Design	4	*3*	*1*	010303110
010101123	Engineering Science	4	*3*	*1*	010303110
010101194	Managing a Professional Engineering (Pearson-set)	4	*3*	*1*	010101120
010101184	Operations and Plant Management	4	3	1	010101120
010101143	Electrical Machines	4	3	1	010101130
010101291	Professional Engineering Management (Pearson-set)	4	3	1	010301194
010101211	Further Mathematics	4	3	1	010101121
010101281	Lean Manufacturing	4	3	1	010101182
010101124	Renewable Energy	4	3	1	010101123
010101126	Fluid Mechanics	4	3	1	010101173
010101221	Further Thermodynamics	4	*3*	1	010101173
010101134	Electronic Circuits and Devices	4	3	1	010101130
010101133	Instrumentation and Control Systems	4	3	1	010101130
010101297	Research Project – Pearson Set	8	6	2	010101291
	Total	**64**			

5. Placement in Industry Requirements (18 Credit hours)

Course No.	**Course Title**	**Cr. Hr.**	**Theo. Cr. Hrs**	**Prac. Cr. Hrs.**	**Prerequisite**
010101397	Practical Training	18	0	40	Department Approval
	Total	**18**			