جامعة الحسين التقنية
Al Hussein Technical University

School of Construction Technology and Built Environment

Department of Architectural Engineering

Specialization Pathways:

- Construction Management: BIM Operator / Manager, Construction Site Supervisor
- Architectural Technology: BIM Operator / Manager, Assistant Design Coordinator, Architect Inspector
- Building Engineering Systems (HVAC): BIM Operator / Manager, HVAC Systems Assistant Designer & Installer
- Building Engineering Systems (Electrical): BIM Operator / Manager, Lighting & Acoustics Systems Assistant Designer & Installer

Summary:

Classification	**Credit Hours**		
	Compulsory	**Elective**	**Total**
University Requirements	20	2	**22**
School Requirements	**18**	**0**	**18**
HTU Department Requirements	**16**	**0**	**16**
HNC Department Requirements	**20-28***	**4-12***	**32**
HND Department Requirements	**18**	**12**	**30**
Placement in Industry Requirements	**18**	**0**	**18**
Total =	**110-118***	**18-26***	**136**

* Depending on the specialization pathway

Practical Hours: Labs, Workshops, Studios, Seminars, Tutorials, Training, Fieldwork, Boot Camps & Excursions.

1 Practical Hour = 2-3 contact hours.

0. English Language Prerequisites:

Course No.	**Course Title**	**Cr. Hr.**	**Lecture**	**Practical**	**Prerequisite**
10301099	Pre-Foundation English Intensive + Lab	4	8	1	Placement Test 0-29

1. University Requirements: 22 Credit Hours

1.1. Compulsory University Requirements: 20 Credit Hours

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Contact Hours	Prerequisite
10301100	Foundation English Pre-Intermediate Intensive + Lab	4	8	1	10	Placement Test 30-42 or 10301099
OR 10301110	Foundation English Intermediate Intensive + Lab				10	Placement Test 43-58
10301120	English Intermediate + Lab	3	4	1	6	Placement Test 10301100
OR 10301130	English Upper-Intermediate + Lab	3			6	Placement Test 59-66 or 10301110 /10301120
10301101	Soft Skills I	2	0	2	4	-
10301102	Soft Skills II	2	0	2	4	10301101
10303202	Entrepreneurship Boot Camp	6	3	3	12	-
	Total	**20**				

* the course includes a 10-day intensive training boot camp held off-campus.

1.2. Elective University Requirements: 2 Credit Hours

Students should choose to study 3 Credit Hours from the following List:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Contact Hours	Prerequisite
10302191	Science & Society Seminar I: Arab Contributions to Science and Arts	1	0	1	2	-
10303199	Science & Society Seminar II: Philosophy of Science	1	0	1	2	-
10303196	Art Appreciation and Techniques	1	0	1	2	-
	Strategies for Industry Competitiveness: Tools & Techniques	1	0	1	2	10301101
	Civil & Professional Culture	1	0	1	2	-
	Rights and responsibilities	1	0	1	2	-
	Total Taken	**2**				

2. School Requirements: (18 Credit Hours)

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10303101	Functional Math	3	3	0	-
10303100	Functional Physics	3	3	0	-
10201100	Fundamentals of Computing	4	3	1	-
10303130	STEM Lab I	1	0	1	-
10303131	STEM Lab II	1	0	1	10303130
10101100	Workshop I	2	0	2	-
10101102	Workshop II	1	0	1	10101100
10400120	Construction Workshop	1	0	1	10101112
10401111	Introduction to Construction Information	2	0	2	-
	Total	**18**			

3. Al-Hussein Technical University (HTU) Department Requirements (16 Credit Hours):

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10401112	Construction Information (Working Designs)	4	3	1	10401111
10401131	Creative Thinking Studio	2	0	2	-
10401211	Computer Visualizations	2	0	2	10401112
10401231	Individual Project II	4	3	1	10401132
10401232	Individual Project III	4	3	1	10401231
10401270	Architectural Excursion*	0	0	1	-
	Total	**16**			

* the course is a supervised specialized excursion for 7-10-days.

4. Higher National Certificate (HNC) Department Requirements (32 Credit Hours)

4.1. HNC Compulsory Requirements (20-28 Credit Hours)*:

* Depending on the specialization pathway:

4.1.1. Compulsory Core Units (12 Credit Hours):

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10401132	Individual Project I – Pearson Set	4	3	1	10401111
10401121	Construction Technology	4	3	1	10401111
10400151	Construction Practice & Management	4	3	1	10401111
	Total8	**12**			

4.1.2. Compulsory Specialist Units (8-16 Credit Hours):

Students should choose to study one of the following lists depending on the specialization pathway:

1) Construction Management & Architectural Technology Specialist Units - 8 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10400251	Legal & Statutory Responsibilities in Construction	4	3	1	10400151
10401113	Building Information Modeling (BIM)	4	3	1	10401111
	Total	**8**			

2) Building Engineering Systems - (HVAC) Specialist Units - 16 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10402101	Mathematics for Construction	4	3	1	10303101
10409241	Principles of Ventilation & Air-Conditioning Design & Installation	4	3	1	10303100
10409243	Principles of Heating Services Design & Installation	4	3	1	10303100
10409244	Scientific Principles for Building Services	4	3	1	
	Total	**16**			

3) Building Engineering Systems - (Electrical) Specialist Units - 16 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10409242	Principles of Electrical Design and Installation	4	3	1	10303100
10409261	Principles of Alternative Energy	4	3	1	10303100
10402101	Mathematics for Construction	4	3	1	10303101
10409244	Scientific Principles for Building Services	4	3	1	
	Total	**16**			

4.2. HNC Elective Requirements (4-12 Credit Hours)*:

* Students should choose to study 4-12 Credit Hours from the following list depending on the specialization pathway:

4) Construction Management and Architectural Technology - 12 Credit Hours:

5) Building Engineering Systems (HVAC & Electrical) - 4 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10402171	Science & Materials	4	3	1	10303100
10401113	Building Information Modeling (BIM)	4	3	1	10401111
10402111	Surveying, Measuring & Setting Out	4	3	1	10401112
10400252	Tender & Procurement	4	3	1	10400151
10401221	Principles of Refurbishment	4	3	1	104011212
10409261	Principles of Alternative Energy	4	3	1	10303100
10409262	Principles of Public Health Engineering	4	3	1	-
10400253	Site Supervision & Operations	4	3	1	104001512
	Total Taken	**4-12***			

* Depending on the specialization pathway

5. Higher National Diploma (HND) Requirements (30 Credit Hours):

5.1. HND Compulsory Requirement (18 Credit Hours):

5.1.1 Compulsory Core Units (6 Credit Hours):

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10401331	Group Project – Pearson Set	6	2	4	10401232
	Total	**6**			

5.1.2 Compulsory Specialist Units (12 Credit Hours)*

6) Construction Management Specialist Units - 12 Credit H2ours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequ8isite
10400351	Contracts & Management	4	3	1	10400251
10400352	Project Management	4	3	1	10400251
10400353	Management for Complex Building Projects	4	3	1	10400251
	Total	**12**			

7) Architectural Technology Specialist Units - 12 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10400351	Contracts & Management	4	3	1	10400251
10401311	Advanced Construction Drawing & Detailing	4	3	1	10401112
10401321	Construction Technology for Complex Building Projects	4	3	1	10401121
	Total	**12**			

8) Building Engineering Systems - (HVAC) Specialist Units - 12 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10402201	Further Mathematics for Construction	4	3	1	10402101
10409341	Advanced Heating, Ventilation & Air-Conditioning Design & Installation	4	3	1	120409241 & 10409243
10409245	Thermofluids & Acoustics	4	3	1	
	Total	**12**			

9) Building Engineering Systems - (Electrical) Specialist Units - 12 Credit Hours:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10402201	Further Mathematics for Construction	4	3	1	10402101
10409342	Advanced Electrical Design & Installation	4	3	1	10409242
10409343	Building Management System	4	3	1	10401112
	Total	**12**			

5.2. HND Elective Requirements (12 Credit Hours):

Students should choose to study 12 Credit Hours from the following list:

Course No.	Course Title	Cr. Hr.	Lecture	Practical	Prerequisite
10401322	Alternative Methods for Construction	4	3	1	10401121
10401312	Advanced Building Information Modeling	4	3	1	10401212
10409362	Environmental Assessment and Monitoring	4	3	1	10303100
10400354	Personal Professional Development	4	3	1	10400251
10409344	Transport Systems in Buildings	4	3	1	10401112
10409361	Alternative Energy Systems Design and Installation	4	3	1	10409261
10402211	Advanced Surveying and Measurements	4	3	1	10402111

10402302	Advanced Materials	4	3	1	10303100
10400354	Construction Data Management	4	3	1	10400151
	Total Taken	**12**			

6. Placement in Industry Requirements (18 Credit hours)

Course No.	Course Title	Cr. Hr.	Lecture	Lab.	Prerequisite
10400999	On-Job Training	18			3rd Year
	Total	**18**			

School of Construction Technology and Built Environment

Department of Architectural Engineering

Technical Degree in Architectural Engineering

English Language Prerequisites:

Depending on the results of the English language Placement Test

Course No.	Course Title	Cr. hr.	Prerequisite
10301099	Pre-Foundation English Intensive + Lab	4	Placement Test 0-29

Study Plan Guide:

First Year - Fall Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10301100	Foundation English Pre-Intermediate Intensive +Lab	4	Placement Test 30-42
OR 10301110	Foundation English Intermediate Intensive + Lab		Placement Test 43-58
10303100	Functional Physics	3	-
10303101	Functional Math	3	-
10303130	STEM Lab I	1	-
10301101	Soft Skills I	2	-
10101100	Workshop I	2	-
10401131	Creative Thinking Studio	2	-
10401111	Introduction to Construction Information	2	-
	Elective University Requirement 1	1	-
	Total	**20**	

First Year - Spring Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10301120	English Intermediate + Lab	3	Placement Test 43-50 or
Or 10301130	English Upper-Intermediate + Lab		Placement Test 59-66 or 10301110 /10301120
10401121	Construction Technology	4	10401111
10401132	Individual Project I – Pearson Set	4	10401111
10400151	Construction Practice & Management	4	10401111
10301102	Soft Skills II	2	10301101
10303131	STEM Lab II	1	10303130
10101102	Workshop II	1	10101100
	Elective University Requirement 2	1	-
	Total	**20**	

First Year - Summer Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10400112	Construction Information (Working Designs)	4	10401111
	HNC Elective 1	4	
10201100	Fundamentals of Computing	4	-
10400120	Construction Workshop	1	10101112
	Total	**13**	

Construction Management:

Second Year - Fall Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10301130	English Upper-Intermediate + Lab	3	Placement Test 59-66 or 10301110 /10301120
10401231	Individual Project II	4	10401131
10401103	Building Information Modelling	4	
10400251	Legal & Statutory Responsibilities in Construction	4	10400151
10401211	Computer Visualizations	2	10400112
	HNC Elective 2	4	
	Total	**21**	

Second Year - Spring Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10401232	Individual Project III	4	10401131
10400351	Contracts & Management	4	10400151
10400352	Project Management	4	10400151
10400353	Management for Complex Building Projects	4	10400151
	HNC Elective 3	4	
	Total	**20**	

Second Year – Summer Semester2			
Course No.	**Course Title**	**Cr. Hr.**	**Prerequisite**
10303202	Entrepreneurship Boot Camp	6	-
	HND Elective 1	4	
	HND Elective 2	4	
10401270	Architectural Excursion*	0	-
	Total	**14**	

* the course is a supervised specialized excursion for 7-10-days.

Architectural Technology:

Second Year – Fall Semester			
Course No.	**Course Title**	**Cr. Hr.**	**Prerequisite**
10301130	English Upper-Intermediate + Lab	3	2Placement Test 59-66 or 10301110 /10301120
10401231	Individual Project II	4	10401131
10401103	Building Information Modelling	4	
10400251	Legal & Statutory Responsibilities in Construction	4	10400151
10401211	Computer Visualizations	2	10400112
	HNC Elective 2	4	
	Total	**21**	

Second Year – Spring Semester			
Course No.	**Course Title**	**Cr. Hr.**	**Prerequisite**
10401232	Individual Project III	4	10401131
10400351	Contracts & Management	4	10400151
10401311	Advanced Construction Drawing & Detailing	4	10401112
10401321	Construction Technology for Complex Building Projects	4	10401121
	HNC Elective 3	4	
	Total	**20**	

Second Year – Summer Semester			
Course No.	**Course Title**	**Cr. Hr.**	**Prerequisite**
10303202	Entrepreneurship Boot Camp	6	-
	HND Elective 1	4	
	HND Elective 2	4	
10401270	Architectural Excursion*	0	-
	Total	**14**	

* the course is a supervised specialized excursion for 7-10-days.

Building Engineering Systems (HVAC):

Second Year - Fall Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10301130	English Upper-Intermediate + Lab	3	Placement Test 59-66 or 10301110 /10301120
10401231	Individual Project II	4	10401131
10409241	Principles of Ventilation & Air-conditioning Design & Installation	4	10303100
10409243	Principles of Heating Services Design & Installation	4	10303100
10402101	Mathematics for Construction	4	10303101
10401211	Computer Visualizations	2	10400112
	Total	**21**	

Second Year - Spring Semester			
Cou2rse No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10401232	Individual Project III	4	10401131
10409244	Scientific Principles for Building Services	4	
10409341	Advanced Heating, Ventilation & Air-Conditioning Design & Installation	4	10409241 & 10409243
10402201	Further Mathematics for Construction	4	10303101
10409245	Thermofluids & Acoustics	4	
	Total	**20**	

Second Year - Summer Semester2			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10303202	Entrepreneurship Boot Camp	6	-
	HND Elective 1	4	
	HND Elective 2	4	
10401270	Architectural Excursion*	0	-
	Total	**14**	

* the course is a supervised specialized excursion for 7-10-days.

Building Engineering Systems (Electrical):

Second Year - Fall Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10301130	English Upper-Intermediate + Lab	3	Placement Test 59-66 or 10301110 /10301120
10401231	Individual Project II	4	10401131
10409241	Principles of Ventilation & Air-conditioning Design & Installation	4	10303100
10409243	Principles of Heating Services Design & Installation	4	10303100
10402101	Mathematics for Construction	4	10303101
10401211	Computer Visualizations	2	10400112
	Total	**21**	

Second Year - Spring Semester			
Cou2rse No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10401232	Individual Project III	4	10401131
10409244	Scientific Principles for Building Services	4	
10409342	Advanced Electrical Design and Installation	4	10409242
10402201	Further Mathematics for Construction	4	10303101
1040343	Building Management System	4	10401112
	Total	**20**	

Second Year - Summer Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10303202	Entrepreneurship Boot Camp	6	-
	HND Elective 1	4	
	HND Elective 2	4	
10401270	Architectural Excursion*	0	-
	Total	**14**	

* the course is a supervised specialized excursion for 7-10-days.

Third Year - Fall and Spring Semesters			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10400999	On-Job Training	18	3rd Year
	Total	**18**	

Third Year - Summer Semester			
Course No.	**Course Title**	**Cr. hr.**	**Prerequisite**
10401331	Group Project – Pearson Set	6	10401232
	HND Elective 3	4	
	Total	**10**	