

School of Engineering Technology

Department of Electrical Engineering

Technical Degree – Electrical Engineering: 132 Credit Hours

Summary:

| Classification | Credit Hours | | |
|------------------------------------|--------------|-----------|------------|
| | Compulsory | Elective | Total |
| University Requirements | 20 | 2 | 22 |
| School Requirements | 17 | 0 | 17 |
| HTU Department Requirements | 4 | 7 | 11 |
| HNC Department Requirements | 32 | 0 | 32 |
| HND Department Requirements | 32 | 0 | 32 |
| Placement in Industry Requirements | 18 | 0 | 18 |
| Total | 122 | 10 | 132 |

0. 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: 22 Credit Hours (Mandatory: 20, Elective: 2)**1.1. Mandatory: 20 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 |
| 10303101 | Soft Skills I | 2 | 0 | 2 | - |
| 10303102 | Soft Skills II | 2 | 0 | 2 | 10301101 |
| 10303202 | Entrepreneurship Boot Camp | 6 | 3 | 3 | - |
| Total | | 20 | | | |

1.2. Electives: 2 Credit hours

Students should choose 2 courses (2 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 | |
| 10303201 | Leadership Camp * | 1 | 1 | 1 | 10301101 |
| Total Taken | | 2 | | | |

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

2. School Requirements – Mandatory: 17 Credit Hours

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|-------------------------------------|-----------|---------|------|--------------|
| | Functional Math | 3 | 3 | 0 | - |
| | Functional Physics | 3 | 3 | 0 | - |
| | Fundamentals of Computing | 4 | 3 | 1 | - |
| | STEM Lab I | 1 | 0 | 1 | - |
| | Workshop I | 2 | 0 | 2 | - |
| | Workshop II | 1 | 0 | 1 | Workshop I |
| | STEM Lab II | 1 | 0 | 1 | STEM I |
| | Introduction to Engineering Drawing | 1 | 0 | 1 | |
| | Advanced workshop | 1 | 0 | 1 | |
| | Total | 17 | | | |

3. Department Requirements: 11 Credit Hours:

3.1. Mandatory: 4 Credit Hours

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|--------------|----------|---------|------|--------------|
| | Mechatronics | 4 | 3 | 1 | |
| | Total | 4 | | | |

3.2. Electives: 7 Credit Hours

The student should choose to study two courses from the following list based on the specialization.

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|---|----------|---------|------|--------------|
| | Signal Analysis | 3 | 3 | 0 | |
| | Electrical Machines | 4 | 3 | 1 | |
| | Communication Systems | 4 | 3 | 1 | |
| | Electromagnetic Principles | 3 | 3 | 0 | |
| | Data Networks | 3 | 3 | 0 | |
| | Mathematical Modelling and Simulations | 4 | 3 | 1 | |
| | Distributed Control Systems | 4 | 3 | 1 | |
| | Automation, Robotics, and Programmable Logic Controllers (PLCs) | 4 | 3 | 1 | |
| | Computer Aided Design and Manufacture (CAD/CAM) | 4 | 3 | 1 | |
| | Total Taken | 7 | | | |

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

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|---|-----------|---------|------|--------------|
| | Engineering Math | 4 | 3 | 1 | |
| | Engineering Design | 4 | 3 | 1 | |
| | Engineering Science | 4 | 3 | 1 | |
| | Managing A Professional Engineering Project (Pearson-set) | 4 | 3 | 1 | |
| | Electrical and Electronic Principles | 4 | 3 | 1 | |
| | Digital Principles | 4 | 3 | 1 | |
| | Electronic Circuits and Devices | 4 | 3 | 1 | |
| | Instrumentation and Control Systems | 4 | 3 | 1 | |
| | Total | 32 | | | |

5. Higher National Diploma (HND) Requirements (32 Credit Hours):

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|--|-----------|---------|------|--------------|
| | Research Project – Pearson Set | 8 | 6 | 2 | |
| | Professional Engineering Management (Pearson-set) | 4 | 3 | 1 | |
| | Industrial Power, Electronics and Storage | 4 | 3 | 1 | |
| | Industrial Systems | 4 | 3 | 1 | |
| | Further Mathematics | 4 | 3 | 1 | |
| | Further Electrical, Electronic, and Digital Principles | 4 | 3 | 1 | |
| | Further Control Systems Engineering | 4 | 3 | 1 | |
| | Total | 32 | | | |

6. Placement in Industry Requirements (18 Credit hours)

| Course No. | Course Title | Cr. Hr. | Lecture | Lab. | Prerequisite |
|------------|--------------------|-----------|---------|------|--------------|
| | Practical Training | 18 | 0 | 40 | |
| | Total | 18 | | | |