



# Course Syllabus for Biomedical Engineering



Associate degree: 3 years

| Module Structure       | Course / Module  | Semester/ Course | Credit |
|------------------------|--|------------------|--------|
| <b>Year1 Semester1</b> |  |                  |        |
| PRD 1                  | <a href="#">English 1</a>                                | S1.1             | 1.5    |
| BTA 1                  | <a href="#">Mathematics</a>                              | S1.2             | 5      |
| BTA 2                  | <a href="#">Physics</a>                                  | S1.3             | 2      |
| MET 1                  | <a href="#">Anatomy and Physiology</a>                   | S1.4             | 3      |
| BAT 3                  | <a href="#">Biochemistry</a>                             | S1.5             | 3      |
| BTA 4                  | <a href="#">Mechanics Fundamental</a>                    | S1.6             | 2      |
| BTA 5                  | <a href="#">Plumbing Fundamental</a>                     | S1.7             | 1      |
| BTA 6                  | <a href="#">Introduction to ICT</a>                      | S1.8             | 1      |
| <b>Year1 Semester2</b> |  |                  |        |
| PRD 2                  | <a href="#">English 2</a>                                | S2.1             | 1.5    |
| BTA 7                  | <a href="#">Bio-fluid</a>                                | S2.2             | 3      |
| BTA 8                  | <a href="#">Microbiology and Immunology</a>              | S2.3             | 4      |
| BTA 9                  | <a href="#">Electrical circuit and analysis</a>          | S2.4             | 2      |
| BTA 10                 | <a href="#">Electronic devices and circuits</a>          | S2.5             | 2      |
| BTA 11                 | <a href="#">Program C</a>                                | S2.6             | 2      |
| BTA 12                 | <a href="#">Mechanics Workshop1</a>                      | S2.7             | 1      |
| BAT 13                 | <a href="#">Electrical Circuit Workshop1</a>             | S2.8             | 1      |
| PRD 3                  | Internship 1   | S2.9             | 10     |
| <b>Year2 Semester1</b> |  |                  |        |
| MET 3                  | <a href="#">Digital Electronics and Circuits</a>         | S3.1             | 2      |
| MET 4                  | <a href="#">Signal and Medical Measurements</a>          | S3.2             | 2      |
| BTA 14                 | <a href="#">Biostatistics</a>                            | S3.3             | 3      |
| BTA 15                 | <a href="#">Biosensor and Transducers</a>                | S3.4             | 2      |
| MET 5                  | <a href="#">General Medical Equipment</a>                | S3.5             | 3      |
| PRD 4                  | <a href="#">Effective Communication</a>                  | S3.6             | 2      |
| MET 6                  | <a href="#">Electrical Equipment and Safety</a>          | S3.7             | 3      |
| HTM 1                  | <a href="#">Health Care Management</a>                   | S3.8             | 2      |
| BTA 16                 | <a href="#">Mechanic Workshop 2</a>                      | S3.9             | 1      |
| <b>Year2 Semester2</b> |  |                  |        |
| BTA 17                 | <a href="#">Microprocessor</a>                           | S4.1             | 2      |
| BTA 18                 | <a href="#">Power Electronics and Power Supply</a>       | S4.2             | 2      |
| MET 7                  | <a href="#">Fundamental of X-ray and Medical Imaging</a> | S4.3             | 3      |
| BTA 19                 | <a href="#">Biomaterial</a>                              | S4.4             | 3      |
| MET 8                  | <a href="#">Medical Equipment Maintenance</a>            | S4.5             | 4      |
| HTM 2                  | <a href="#">Medical Equipment Management</a>             | S4.6             | 3      |

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|------------------------|---|------------------|--------|
| <b>BTA19</b>           | <a href="#">Mechanical Workshop 3</a>                           | S4.7             | 1      |
| <b>PRD5</b>            | Internship 2  | S4.8             | 10     |
| <b>Year3 Semester1</b> |   |                  |        |
| <b>BTA 20</b>          | <a href="#">Genetic and Molecular Biology</a>                   | S5.1             | 3      |
| <b>MET9</b>            | <a href="#">Medical Equipment Circuit and Troubleshooting</a>   | S5.2             | 3      |
| <b>MET 10</b>          | <a href="#">Entrepreneurship</a>                                | S5.3             | 2      |
| <b>HTM3</b>            | <a href="#">Bio-Safety and Security in Health Care Facility</a> | S5.4             | 3      |
| <b>HTM 4</b>           | <a href="#">Medical Equipment and Computer Networks</a>         | S5.5             | 3      |
| <b>BTA21</b>           | Mechanical Workshop 4   | S5.6             | 1      |
| <b>Year3 Semester2</b> |   |                  |        |
| <b>PRD6</b>            | Final Internship and memoire                                    | S6               | 10     |

NOTE:

**PRD:** Professional development

**BTA:** Biomedical technique and application

**MET:** Medical equipment training

**HTM:** Health technology Management