

100 Level – Mechatronics Engineering

First Semester

- GST 111: Communication in English (2, C)
- MTH 101: Elementary Mathematics I: Algebra and Trigonometry (2, C)
- PHY 101: General Physics I: Mechanics (2, C)
- PHY 107: General Practical Physics I (1, C)
- CHM 107: General Practical Chemistry I (1, C)
- CHM 101: General Chemistry I (2, C)
- BUT-CPE 103: Introduction to Computer Programming (2, C)
- BUT-MTH 103: General Mathematics III (2, C)
- BUT-STA 112: Probability I (2, C)
- BUT-GST 107: Use of Library (1, C)
- BUT-ICT 115: AutoCAD 2D (1, C)
- **Total Units: 18**

Second Semester

- GST 113: Nigerian Peoples and Culture (2, C)
- MTH 102: Elementary Mathematics II: Calculus (2, C)
- PHY 102: General Physics II: Behaviour of Matter (2, C)
- PHY 108: General Practical Physics II (1, C)
- GET 102: Engineering Graphics and Solid Modelling I (2, C)
- MCE 101: Introduction to Mechatronics Engineering (1, C)
- GET 101: Engineer in Society (1, C)
- CHM 102: General Chemistry II (2, C)
- CHM 108: General Practical Chemistry II (1, C)
- BUT-PHY 104: General Physics IV (2, C)
- BUT-ICT 116: AutoCAD 3D (1, C)
- **Total Units: 18**

200 Level – Mechatronics Engineering

First Semester

- ENT 211: Entrepreneurship and Innovation (2, C)
- GET 201: Applied Electricity I (3, C)
- GET 203: Engineering Graphics & Solid Modelling II (2, C)
- GET 205: Fundamentals of Fluid Mechanics (3, C)
- GET 209: Engineering Mathematics I (3, C)
- GET 211: Computing and Software Engineering (2, C)
- GET 207: Applied Mechanics (2, C)

- BUT-ICT 215: Robotics I (0, C)
- BUT-GST 207: Life and Works of Olusegun Obasanjo I (0, C)
- **Total Units: 18**

Second Semester

- GST 212: Philosophy, Logic and Human Existence (2, C)
- GET 202: Engineering Materials (3, C)
- GET 204: Students Workshop Practice (2, C)
- GET 206: Fundamentals of Thermodynamics (3, C)
- GET 210: Engineering Mathematics II (3, C)
- BUT-MCT 204: Industrial Health & Safety (1, R)
- BUT-GET 208: Strength of Materials (2, C)
- BUT-ICT 216: Robotics 2 (0, C)
- BUT-GST 208: Life and Works of Olusegun Obasanjo II (0, C)
- **Total Units: 17**

300 Level – Mechatronics Engineering

First Semester

- MCT 301: Introduction to Mechatronics Engineering (1, C)
- MCT 303: Mechatronics Engineering Virtual Laboratory (2, C)
- MCT 305: Elect. Circuit Theory (2, C)
- MEE 303: Mechanics of Machines (2, R)
- MEE 307: Machine Drawing (2, C)
- ENG 301: Engineering Mathematics III (3, C)
- EEE 305: Electronic Engineering I (2, C)
- EEE 313: Basic Electrical Machines I (2, R)
- CEN 301: Applied Computer Programming (2, R)
- TCE 301: Signals & Systems (2, R)
- BUS 311: Analysis Introduction to Entrepreneurial Studies (2, R)
- ICT 323: Python Programming (1, C)
- **Total Units: 24**

Second Semester

- MCT 302: Fluidics Laboratory (2, C)
- MCT 304: Fluid Mechanics II (2, C)
- MCT 308: Mechatronics Engineering Design (2, C)
- PHY 312: Electromagnetic Theory (3, C)
- ENG 302: Engineering Mathematics IV (3, C)
- EEE 304: Basic Electrical Machines II (2, R)
- EEE 306: Electronic Engineering II (3, C)

- CEN 304: Software Packages in Engineering (2, R)
- GES 302: Introduction to Philosophy (2, R)
- ENG 320: Students Industrial Work Experience Scheme I (SIWES I) (2, C)
- ICT 324: Python Programming for Machine Learning I (1, C)

Total Units: 24

400 Level – Mechatronics Engineering

First Semester

- MCT 401: Control Systems (3, C)
- MCT 405: Computer Aided Design and Manufacturing (2, C)
- MCT 407: Computer Hardware Engineering (2, C)
- MCT 411: CAD/CAM/CNC Laboratory (2, C)
- MEE 407: Heat and Mass Transfer (3, C)
- ENG 401: Research Methods in Engineering (2, C)
- MCT 403: Digital Systems and PLCs (2, C)
- MCT 409: Microcomputers and Microprocessor Systems (2, R)
- BUS 411: Entrepreneurial Skills Development Studies (2, R)
- ICT 423: Python Programming for Machine Learning 2 (Deep Learning) (1, C)
- **Total Units: 21**

Second Semester

- ENG 402: Students Industrial Work Experience (SIWES II) (6, C)
- Total Units: 6**

500 Level – Mechatronics Engineering

First Semester

- MCT 501: Hydraulic and Pneumatic Systems (3, C)
- MCT 507: Sensors and Actuators (3, C)
- MCT 503/EEE 503: Advanced Control Engineering (2, C)
- MEE 505: Valuation of Engineering Systems (2, R)
- MEE 527: Engineering Management (2, R)
- MEE 523: Operations Research (2, R)
- ISO 45001: Foundation and Lead Implementer (Occupational Health and Safety Management System) (1, C)
- ICT 515: ICT 515 Foundation and Lead Implementer (Occupational Health and Safety Management System) (1, C)
- Electives: 4 units (see below)

- **Total Units:** 19

Electives (Choose a minimum of 4 units):

- MEE 515/PMT 401: Operations Management (2, E)
- EEE 511: Communication Systems (2, E)
- EEE 509: Digital Signal Processing (2, E)
- MEE 513/PMT 305: Industrial Engineering I (2, E)
- MCT 511: Artificial Neural Network (2, E)

Second Semester

- MCT 502: Neuro-Fuzzy Logic Controllers (2, C)
- MCT 504/EEE 504: Control Systems III (2, C)
- MCT 506: Robotics & Automation (3, C)
- MCT 508: Students' Research Project (6, C)
- EEE 512: Engineering Law (2, R)
- ICT 516: Design Thinking (1, C)
- Electives: 4 units (see below)
- **Total Units:** 20

Electives (Choose a minimum of 4 units):

- MEE 514: Industrial Engineering II (2, E)
- MEE 516: Advanced Mechanical Design (2, E)
- MEE 518: Auto-Mechanical Systems Engineering (2, E)
- MEE 526: Subsea Control Systems (2, E)
- BUS 518: Human Resources Management (2, E)
- BUS 520/MKT 202: Elements of Marketing (2, E)

Notes:

- **Status Definitions:**
 - **C:** Compulsory (must register and pass).
 - **R:** Required (must take, pass with at least 30% as per departmental rules).
 - **E:** Elective (optional, choose a minimum of 4 units where specified).