**THE NYERI NATIONAL POLYTECHNIC**

**MODULAR CURRICULUM IMPLEMENTATION COURSE PLANNER**

**PROGRAMME: TELECOMMUNICATION TECHNOLOGY LEVEL 5 PROGRAMME CODE: 0714 454A**

**MODULAR UNIT SUMMARY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MODULE** | **UNITS** | | | |
| **UNIT CATEGORY** | **UNIT CODE** | **UNIT NAME** | **DURATION(Hours)** |
| **ONE (I)** | CORE | 0714 451 09A | Electrical Installation | 200 |
| COMMON | 0732 441 06A | Engineering Drawing | 100 |
| BASIC | 0611 451 01A | Digital Skills | 40 |
|  |  |  | **Total 350 HRS** |
| **TWO (2)** | COMMON | 0541 441 05A | Engineering Technician Mathematics | 240 |
| CORE | 0714 451 16A | Specialized Power Systems Installation | 190 |
|  |  |  |  |
|  |  |  |  |
|  |  |  | **Total 460 HRS** |
| **THREE (3)** | CORE | 0612 451 10A | Computer Networks Installation | 160 |
| BASIC | 0417 441 03B | Apply Work Ethics and Practices | 40 |
| COMMON | 0713 441 07A | Electrical Principles | 190 |
|  |  |  | **Total 400 HRS** |
| **FOUR (4)** | CORE | 0714 451 13A | Electronic Circuits Fabrication | 180 |
| BASIC | 0413 441 04A | Entrepreneurial Skills | 40 |
| BASIC | 0031 441 02A | Communication Skills | 40 |
|  |  |  | **Total 280 HRS** |
|  | CORE |  | Industrial Attachment | **Total 480 HRS** |
| **TOTAL HOURS** | | | | **1910 HRS** |

| **UNIT CODE** | **UNIT OF COMPETENCE** | **ELEMENT(S)** | **DURATION (HRS)** |
| --- | --- | --- | --- |
| **MODULE 1** | | | |
| 0714 451 09A | Electrical Installation | Prepare power supply electrical drawings | **30** |
|  |  | Perform Electrical installation system sizing | **20** |
|  |  | Set up Telecommunication mains utility power supply system | **130** |
|  |  | Test electrical power supply system | **20** |
|  |  |  | **TOTAL 200 HRS** |
| 0732 441 06A | Engineering Drawing | Prepare drawing equipment and materials | **10** |
|  |  | Produce plane geometry drawings | **10** |
|  |  | Manage basic operations in AutoCAD | **10** |
|  |  | Develop 2D Drawings in AutoCAD | **40** |
|  |  | Produce pictorial and orthographic drawings of components | **30** |
|  |  |  | **TOTAL 100 HRS** |
| 0611 451 01A | Digital Skills | Operate Computer Devices | **10** |
|  |  | Solve Tasks Using Office Suite | **20** |
|  |  | Manage Data and Information | **10** |
|  |  | Perform Online Communication and Collaboration | **10** |
|  |  | Apply Cybersecurity Skills | **10** |
|  |  | Perform Online Jobs | **10** |
|  |  | Apply job entry techniques | **10** |
|  |  |  | **TOTAL 40 HRS** |
| **MODULE 2** | | | |
| 0541 441 06A | Engineering Technician Mathematics | Apply algebra | **20** |
|  |  | Apply Trigonometry and hyperbolic functions | **20** |
|  |  | Apply complex numbers | **20** |
|  |  | Perform coordinate geometry | **20** |
|  |  | Carry out mensuration | **20** |
|  |  | Apply Calculus | **60** |
|  |  | Carry out binomial expansion | **20** |
|  |  | Apply vector theory | **20** |
|  |  | Apply Statistics and probability | **20** |
|  |  | Apply matrices | **20** |
|  |  |  | **TOTAL 240 HRS** |
| 0714 451 16A | Specialized Power Systems Installation | Install Solar power supply systems | **40** |
|  |  | Set up Telecommunication UPS systems | **30** |
|  |  | Install Power Factor Correction Systems | **30** |
|  |  | Install HVAC systems | **60** |
|  |  | Install Electrical Power Regulators | **10** |
|  |  | Test electrical power supply system | **20** |
|  |  |  | **TOTAL 190** |
| **MODULE 3** | | | |
| 0612 451 06A | Computer Networks Installation | Conduct Computer Network Site survey | **10** |
|  |  | Prepare Computer Network Technical Drawings | **40** |
|  |  | Carry out Computer Network Structured Cabling | **60** |
|  |  | Install SOHO networks | **50** |
|  |  |  | **TOTAL 160** |
| 0713 441 07A | Electrical Principles | Apply Electrical quantities | **10** |
|  |  | Use cells and batteries | **10** |
|  |  | Apply Concepts of DC circuit | **40** |
|  |  | Apply Electrostatics principles | **30** |
|  |  | Apply magnetism and electromagnetism | **40** |
|  |  | Apply AC circuits | **30** |
|  |  | Perform electrical measurements | **30** |
|  |  |  | **TOTAL 190 HRS** |
| 0417 441 03B | Apply Work Ethics and Practices | Apply Financial Literacy Skills | **10** |
|  |  | Apply entrepreneurial concept | **5** |
|  |  | Identify entrepreneurial opportunities | **5** |
|  |  | Apply business legal aspects | **10** |
|  |  | Innovate Business strategies | **10** |
|  |  | Develop Business Plan | **10** |
|  |  |  | **TOTAL 40HRS** |
| **MODULE 4** | | | |
| 0714 451 13A | Electronic Circuits Fabrication | Prepare Electronic Components | **20** |
|  |  | Fabricate analog circuits | **60** |
|  |  | Fabricate digital logic circuits | **60** |
|  |  | Fabricate PCB circuits | **40** |
|  |  |  | **TOTAL 180** |
| 0413 441 04A | Entrepreneurial Skills | Apply financial literacy | **10** |
|  |  | Apply the entrepreneurial concept | **10** |
|  |  | Identify entrepreneurship opportunities | **5** |
|  |  | Apply business legal aspects | **5** |
|  |  | Innovate Business Strategies | **5** |
|  |  | Develop a business plan | **20** |
|  |  | Apply financial literacy | **5** |
|  |  |  | **TOTAL 40 HRS** |
| 0031 441 02A | Communication skills | Apply communication channels. | **5** |
|  |  | Apply written communication skills. | **10** |
|  |  | Apply non-verbal skills. | **5** |
|  |  | Apply oral communication skills. | **10** |
|  |  | Apply group communication skills. | **10** |
|  |  |  | **TOTAL 40 HRS** |
|  |  |  |  |
| **Module 5** | | | |
|  | Industrial Attachment |  | **TOTAL 480 HRS** |