

6. Electronic Engineering

YEAR 1

| Semester 1 | | Semester 2 | |
|--|--|--|--|
| CHEM181 Chemistry for Engineers 1A (8) Or CHEM163 Chemistry & Society 1 (8) | | CHEM191 Chemistry for Engineers 1B (8) or CHEM173 Chemistry & Society 2 (8) | |
| ENCH1TC Tech. Communication for Engineers (8) | | ENEL1ED Electrical Design 1 (8) or ENAG1DE Introduction to Engineering Design (8) | |
| ENME1DR Engineering Drawing (8) | | ENME1EM Intro. to Engineering Materials (8) or ENAG1MT Intro. to Engineering Materials (8) | |
| MATH131 Mathematics 1A(Eng) (16) | | MATH141 Mathematics 1B(Eng) (16) | |
| MATH132 Applied Mathematics 1A(Eng) (16) | | MATH142 Applied Mathematics 1B(Eng) (16) | |
| PHYS151 Engineering Physics 1A (16) or PHYS110 Mech., Optics & Thermal Phys (16) | | PHYS120 Electromag, Waves & Mod. Phys (16) or PHYS152 Engineering Physics 1B (16) | |

YEAR 2

| Semester 1 | | Semester 2 | |
|--------------------------------------|--|---------------------------------------|--|
| ENEL2CA Computer Methods 1 (8) | | ENEL2CB Computer Methods 2 (8) | |
| ENEL2EA Electrical Principles 1 (16) | | ENEL2ED Electrical Design 2 (8) | |
| ENEL2PA Physical Electronics 1 (8) | | ENEL2EB Electrical Principles 2 (16) | |
| ENME2TF Thermofluids (8) | | ENEL2EN Environmental Engineering (8) | |
| MATH238 Mathematics 2A (Eng) (16) | | ENEL2FT Field Theory (8) | |

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| MATH239 Applied Finite Mathematics (8) | ENEL2PB Physical Electronics 2 (8) |
| PHYS251 Optics and Wave Motion (8) | MATH248 Mathematics 2B (Eng) (16) |
| | ENEL2WS Workshop Training (DP) |

YEAR 3

| Semester 1 | Semester 2 |
|---|------------------------------------|
| ENEL3CC Computer Methods 3 (8) | ENEL3AE Analogue Electronics 2 (8) |
| ENEL3DA Electronic Design 1 (8) | ENEL3CO Communications (16) |
| ENEL3DS Digital Systems (16) | ENEL3CS Control Systems 1 (8) |
| ENEL3SS Systems and Simulation (8) | ENEL3DB Electronic Design 2 (8) |
| ENEL3TA Analogue Electronics 1 (8) | ENEL3DE Digital Electronics (8) |
| MATH354 Mathematics 3 (Eng) (8) | ENEL3EM E-M Theory (8) |
| STAT370 Engineering Statistics (8) | ENEL3PE Power Electronics 1 (8) |
| ENCH4ML Engineering Mgmt & Labour Relns (8) | MATH360 Numerical Methods (8) |

YEAR 4

| Semester 1 | Semester 2 |
|--|--|
| Compulsory modules | |
| ENEL4DA Electronic Design 3 (16) | ENEL4EB Engineering Business (8) |
| ENEL4EC Analogue Electronics 3 (8) | ENEL4ED Electronic Design Project (32) |
| ENEL4EE Engineering Entrepreneurship (8) | ENEL4TB Selected Topics in Electronic Eng. (8) |
| | ENEL4VW Vacation Work (DP) |
| Two 8C or one 16C module from outside the College taken in either semester and chosen with approval of the School. | |
| Optional modules. These must be chosen to account for 48C in total. | |
| Between 24C and 32C from | |
| ZULUN101 Basic isiZulu Language Studies A (16) | |
| ENEL4CS Control Systems 2 (8) | |
| ENEL4DC Digital Communications (8) | |
| ENEL4DP Digital Processes (8) | |
| ENEL4DS Digital Signal Processing (8) | |
| Between 16C and 24C from | |
| ENEL4AC Acoustics (8) | ENEL4AI Artificial Intelligence (8) |
| ENEL4DT Data Communications (8) | ENEL4AM Automation (8) |
| ENEL4IN Instrumentation (8) | ENEL4ES Embedded Systems (8) |
| ENEL4PA Power Electronics 2 (8) | ENEL4IP Image Processing (8) |
| ENEL4TA Selected topics in Electronic Eng 1 (8) | ENEL4MS Microwave Systems (8) |
| | ENEL4SC Superconductivity (8) |
| | ENEL4SY Communication Systems (8) |