

## Enrolment Program Structure

Program Code – EG8.EIE

Program Name – Bachelor of Engineering (Electrical and Information Engineering) (Honours)

| First Year        | Course Code | Course Name   | Course Rules  |
|-------------------|-------------|---|---|
| <b>Semester 1</b> |             |   |   |
|                   | ENGIN1001   | Professional Engineering                              | <b>EX:</b> ENCOR1005  |
|                   | ENGIN1002   | Engineering Physics                                   | <b>EX:</b> ENCOR1021 and ENCOR2100                                      |
|                   | ENGIN1003   | Materials in Engineering                              | <b>EX:</b> ENCOR1110  |
|                   | MATHS1001   | Modelling and Change (Introductory Level)             |   |
| <b>Semester 2</b> |             |   |   |
|                   | ENGIN1004   | Engineering Design and Drafting                       | <b>EX:</b> ENCOR1010  |
|                   | ENGIN1005   | Engineering Mechanics                                 | <b>EX:</b> ENCOR1110 and ENCOR1021                                      |
|                   | ENGIN1006   | Engineering Computer Modelling                        | <b>EX:</b> ENCOR1021  |
|                   | MATHS1005   | Secrets of the Matrix                                 |   |
| Second Year       | Course Code | Course Name   | Course Rules  |
| <b>Semester 1</b> |             |   |   |
|                   | ENGIN2001   | Professional Practice                                 | <b>PR:</b> ENGIN1001 or ENCOR1005<br><b>EX:</b> ENCOR3035               |
|                   | ENGIN2101   | Digital Logic and Design                              | <b>PR:</b> ENGIN1002  |
|                   | ENGIN2102   | Signals and Systems                                   | <b>PR:</b> MATHS1001 and MATHS1005<br><b>EX:</b> MATHS2016              |
|                   | ITECH1103   | Big Data and Analytics                                |   |
|                   | MATHS2016   | Modelling Continuous Change                           | <b>PR:</b> MATHS1001  |
| <b>Semester 2</b> |             |   |   |
|                   | ENGIN2002   | Engineering Project Management and Sustainable Design | <b>PR:</b> ENGIN1001 or ENCOR1005<br><b>EX:</b> ENMEC2121 and ENMTX2050 |
|                   | ENGIN2103   | Principles of Renewable Energy Sources                | <b>PR:</b> ENGIN1002  |
|                   | ENGIN2404   | Electrical and Electronic Drives and Actuators        | <b>PR:</b> ENGIN1002  |
|                   | MATHS3001   | Modelling and Change (Advanced Level)                 | <b>PR:</b> MATHS2001<br><b>EX:</b> MATHS2006                            |
| Third Year        | Course Code | Course Name   | Course Rules  |
| <b>Semester 1</b> |             |   |   |
|                   | ENGIN3101   | Power Electronics                                     | <b>PR:</b> ENGIN1002  |

|                    |                    |  |   |
|--------------------|--------------------|--|---|
|                    | ENGIN3102          | Power Systems Analysis                                     | <b>PR:</b> ENGIN2104  |
|                    | ENGIN3401          | Engineering Computer Application and Interactive Modelling | <b>PR:</b> ENGIN1006<br><b>EX:</b> ITECH1000  |
|                    | ENGIN3404          | System Dynamics and Control                                | <b>PR:</b> MATHS3001 or MATHS3040<br><b>EX:</b> ENMEC3500 and ENMTX3040                 |
| <b>Semester 2</b>  |                    |  |   |
|                    | ENGIN3001          | Engineering Research Methodology and Management            | <b>PR:</b> ENGIN1001 or ENCOR1005<br><b>EX:</b> ENCOR4010 and ENMTX4060                 |
|                    | ENGIN3103          | Power System Protection                                    | <b>PR:</b> ENGIN2104  |
|                    | ENGIN3104          | Digital Communication Principles                           | <b>PR:</b> ENGIN2102  |
|                    | ENGIN3405          | Digital Imaging and Artificial Intelligence                | <b>PR:</b> MATHS3001 or MATHS3040<br><b>EX:</b> ENMTX3030                               |
| <b>Fourth Year</b> | <b>Course Code</b> | <b>Course Name</b>   | <b>Course Rules</b>   |
| <b>Semester 1</b>  |                    |  |   |
|                    | ENGIN4001          | Engineering Project 1                                      | <b>PR:</b> ENGIN3001<br><b>EX:</b> ENCOR4100  |
|                    | ENGIN4101          | Electrical Power Distribution Engineering                  | <b>PR:</b> ENGIN3102  |
|                    | ENGIN5102          | Mirco-Grid and Energy Storage Systems                      | <b>PR:</b> ENGIN3102  |
| <b>Semester 2</b>  |                    |  |   |
|                    | ENGIN4002          | Engineering Project 2                                      | <b>PR:</b> ENGIN4001 or ENCOR4100<br><b>EX:</b> ENCOR4200                               |
|                    | ENGIN4102          | Power Electronic Application to Renewable Energy Systems   | <b>PR:</b> ENGIN3101  |
|                    | ENGIN4402          | Digital and Embedded Systems                               | <b>PR:</b> ENGIN2401 or ENMTX2010<br>and ENGIN3401 or ENMTX3010<br><b>EX:</b> ENMTX3050 |

### Additional Information

This program structure applies to all students.

### Glossary

**Semester:** designated teaching period.

**PR:** Pre-requisite, a course/s that must be completed prior to undertaking another course.

**CO:** Co-requisite, a course/s that must be completed simultaneously, or prior to, undertaking another course.

**EX:** Exclusion, a course/s that may not be taken.