



# D372.3

Campus of Offer: Geelong Waurm Ponds Campus (G)

Duration: 5.5 years full time or part time equivalent

Course code: D372

## Bachelor of Engineering / Bachelor of Science MECHANICAL ENGINEERING MAJOR

| year |  |  |   |  |  |
|------|--|--|---|--|--|
| 1    | Trimester 1                                    | SEE010 Safety Induction Program – 0 credit point compulsory unit<br>(Compulsory: 50-minute safety training session conducted at the beginning of the your first Trimester) |   |  |  |
|      |  | SLE010 Safety Induction Program – 0 credit point compulsory unit<br>(Compulsory: 50-minute safety training session conducted at the beginning of the your first Trimester) |   |  |  |
| 1    | Trimester 1                                    | SEB121<br>Engineering Practice   | SEB101 <sup>^</sup><br>Engineering Fundamentals | SIT199<br>Applied Algebra and Statistics   | SED102<br>Engineering Graphics and CAD     |
|      | Trimester 2                                    | SEE103<br>Electrical Systems   | SEM111<br>Engineering Materials 1               | SIT194<br>Introduction to Mathematical Modelling   | SIT172<br>Programming for Engineers        |
| 2    | Trimester 1                                    | SEP291<br>Engineering Modelling  | SEM223<br>Engineering Mechanics                 | <sup>^</sup> Choose one of:<br>SLE133 Chemistry in Our World (B,G) (Tri-1) <b>or</b><br>SLE155 Chemistry for the Professional Sciences (B,G) (Tri-2) | SLE111<br>Cells and Genes                  |
|      | Trimester 2                                    | SEB223<br>The Professional Environment for Engineers & Scientists  | SEM222<br>Stress Analysis                       | Science  | Science                                    |
| 3    | Trimester 1                                    | SEM218 Fluid Mechanics   | SEM212 Materials 2                              | SLE103<br>Ecology & the Environment  | EES101<br>Communicating Science            |
|      | Trimester 2                                    | SEM313 Manufacturing   | SED202 Mechanical Design and CAM                | Science  | Science                                    |
|      | SEP490: Engineering Work Experience (12 weeks) |  |   |  |  |
| 4    | Trimester 1                                    | SEM327 Dynamics of Machines*   | SEE321 Electro-Mechanical Systems               | SED302 Computer Aided Engineering  | SEM329 Materials Selection and Performance |
|      | Trimester 2                                    | SEB324<br>Project Management   | SEM202 <sup>#</sup><br>Thermodynamics           | SEE344 Control Engineering   | SEM422 Advanced Stress Analysis            |
| 5    | Trimester 1                                    | SEJ441<br>Engineering Project A Offered T1, T2 and T3  | SEM405 Heat Transfer                            | SEM406<br>Modelling and Simulation B   | Science                                    |
|      | Trimester 2                                    | SEJ446<br>Engineering Project B (2cp) Offered T1, T2 and T3  |   | SED402 Advanced Design Methodologies   | Science                                    |
| 5.5  | Trimester 1                                    | Science – Level 3  | Science – Level 3                               | Science – Level 3  | Science – Level 3                          |

<sup>^</sup> SEB101 replaces SEP101 from 2016<sup>#</sup> SEM202 replaces SEM314 from 2016<sup>\*</sup> SEM327 will be offered in Trimester 2 from 2017

This map is a guide only and should be used in conjunction with the 2016 on-line Handbook.

Rev: 1 September 2015

## COURSE RULES:

This combined course comprises a total of 44 credit points which must include the following:

### Engineering component:

- 30 credit points of core engineering units
- One approved Engineering major:
  - civil
  - electrical and electronics
  - mechanical
  - mechatronics and robotics
- Combined Engineering students are exempt from engineering elective requirements.
- See course entry for the [Bachelor of Engineering \(S367\)](#) for details of core units.

### Science component:

- 16 credit points of Science units including:
  - 7 Bachelor of Science core units
  - One 8 credit point major from the Bachelor of Science:
    - - Biology
    - - Biological Chemistry
    - - Chemistry
    - - Mathematical Modelling
    - - Zoology
- 2 Engineering units course grouped for Science: SEP101 and SIT194
- See course entry for the [Bachelor of Science \(S320\)](#) for further details.

Students must meet the minimum requirements for each award.

### Science component:

16 credit points (cps) of Science units including:

- 7 Bachelor of Science core units (1 cps each)
  - SLE111 Cells and Genes Tri-1
  - SLE103 Ecology & the Environment Tri-1
  - EES101 Communicating Science Tri-1
  - SEB101<sup>^</sup> Engineering Fundamentals Tri-1
  - SIT194<sup>^</sup> Intro to Math Modelling Tri-2
- Minimum of 1 cp of professional practice  
(choose from SLE390, SLE352, SLE314, STP321) Tri-1, Tri-2
- # Chemistry - choose one from:
  - SLE133 Chemistry in Our World Tri-1
  - SLE155 Chemistry for the Professional Sciences Tri-2

*# Note: Students who have not completed Year 12 Chemistry or equivalent may choose to do SLE133 Chemistry in Our World in Trimester 1. Students who have completed Year 12 Chemistry or equivalent may choose to do SLE155 Chemistry for the Professional Sciences in Trimester 2.*

Students who are intending on completing a Biological Chemistry or Chemistry major must complete SLE155 Chemistry for the Professional Sciences.

- One 8 credit point major from the Bachelor of Science (refer to the online handbook for details on the major sequence):
  - MJ-S000008 Biology
  - MJ-SU00012 Biological Chemistry
  - MJ-S000009 Chemistry
  - MJ-S000007 Mathematical Modelling
  - MJ-S000025 Zoology

<sup>^</sup>2 Engineering units course grouped for Science: SEP101/SEB101 and SIT194

Students must meet the minimum requirements for each award.

Please note that some units are available in Trimester 3, please refer to the online handbook