

## RECOMMENDED STUDY PLAN

2022

DEGREE Bachelor of Engineering (Honours) – Bachelor of Information Technology

NAME \_\_\_\_\_ MAJOR Civil Engineering (CVL)

To assist you with subject information, we recommend you consult with your [CSE Course/Major Advisor](#) and refer to [Subject Search](#). If you would prefer a part-time study plan, please adjust the below planner, reviewing subject prerequisites to ensure you are on track for course completion.

|        | Study Period 1 - SP1                                                                                  | Study Period 2 - SP2                                                                       |
|--------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Year 1 | Degree Core: <u>EG1000</u> Engineering 1                                                              | Degree Core: <u>EG1010</u> Process Engineering                                             |
|        | Degree Core: <u>EG1002</u> Computing and Sensors                                                      | Degree Core: <u>EG1011</u> Statics and Dynamics<br>PREREQ: PH1005 OR (PHYSICS AND MATHS C) |
|        | Degree Core: <u>MA1000</u> Mathematical Foundations<br>PREREQ: MA1020 OR MATHS B OR MATHS C           | Degree Core: <u>EG1012</u> Electric Circuits                                               |
|        | Degree Core: <u>PH1005</u> Advanced Stream Physics 1<br>PREREQ: MATHS B OR MA1020 OR MA1000 OR MA1008 | Degree Core: <u>MA1003</u> Mathematical Techniques<br>PREREQ: MA1000 OR MA1011 OR MA1009   |

\*Students may be required to take MA1020 in SP3 which will count as an elective line.

|        | Study Period 1 - SP1                                                                  | Study Period 2 - SP2                                                                 |
|--------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Year 2 | Degree Core: <u>MA2000</u> Mathematics for Scientists and Engineers<br>PREREQ: MA1003 | Major Core: <u>CS2003</u> Introduction to Structural Design<br>PREREQ: CS2001        |
|        | Major Core: <u>CS2001</u> Engineering Strength of Materials<br>PREREQ: EG1011         | Major Core: <u>CS2005</u> Introduction to Geotechnical Engineering<br>PREREQ: EG1011 |
|        | Major Core: <u>ME2512</u> Thermofluid Mechanics<br>PREREQ: EG1011                     |                                                                                      |

| Trimester 1 (Feb-May)                            |
|--------------------------------------------------|
| Degree Core: <u>CP1402</u> Internet Fundamentals |

| Trimester 3 (Sept-Dec)                                                |
|-----------------------------------------------------------------------|
| Degree Core: <u>CP1403</u> Design Thinking                            |
| Degree Core: <u>CP1404</u> Programming II<br>PREREQ: CP1401 OR EG1002 |

| Year 3                                            | Study Period 1 - SP1                                                    | Study Period 2 - SP2                                                                                   |
|---------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                                                   | <b>Major Core:</b> <u>CS2002</u> Catchment, Stream and Lake Engineering | <b>Major Core:</b> <u>CS3002</u> Soil Mechanics and Geology<br>PREREQ: CS2005                          |
|                                                   | <b>List Options:</b> see tables below for details                       | <b>Major Core:</b> <u>CS3008</u> Fluid Mechanics<br>PREREQ: MA2000 AND ME2512                          |
|                                                   |                                                                         | <b>Trimester 3 (Sept-Dec)</b>                                                                          |
|                                                   |                                                                         | <b>Degree Core:</b> <u>CP2404</u> Database Modelling                                                   |
| <b>Trimester TBA</b>                              |                                                                         |                                                                                                        |
| <b>List Options:</b> see tables below for details | <b>Degree Core:</b> <u>CP2406</u> Programming III<br>PREREQ: CP1404     | <b>Degree Core:</b> <u>CP3407</u> Advanced Software Engineering<br>PREREQ: CP1404 AND 18CP OF SUBJECTS |

| Year 4                                                                  | Study Period 1 - SP1                                                                                                                                                                                            | Study Period 2 - SP2                                                                                           |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
|                                                                         | <b>Degree Core:</b> <u>EG3000</u> Introduction to Systems Engineering and Project Management<br>PREREQ: EG1000 AND EG1002 AND EG1010 AND EG1011 AND EG1012 AND MA1000 AND MA1003 AND (PH1005 OR EG1001) OR 36CP | <b>Major Core:</b> <u>CS3003</u> Design of Steel and Concrete Structures<br>PREREQ: CS2003 AND CS3000          |
|                                                                         | <b>Major Core:</b> <u>CS3000</u> Structural Analysis<br>PREREQ: CS2003 AND MA2000                                                                                                                               | <b>Major Core:</b> <u>CS3004</u> Transportation Engineering – <i>only offered EVEN years *</i><br>PREREQ: 48CP |
| <b>Major Core:</b> <u>CS3001</u> Concrete Engineering<br>PREREQ: CS2001 |                                                                                                                                                                                                                 |                                                                                                                |
| <b>Trimester TBA</b>                                                    |                                                                                                                                                                                                                 |                                                                                                                |
| <b>List Options:</b> see tables below for details                       | <b>List Options:</b> see tables below for details                                                                                                                                                               | <b>List Options:</b> see tables below for details                                                              |

*\*Will need to swap with a List subject depending on the year.*

| Year 5 | Study Period 1 - SP1                                                                                                     | Study Period 2 - SP2                                                                                          |
|--------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|        | <b>Degree Core:</b> <u>EG4011</u> Thesis Part 1 of 2<br>PREREQ: 72CP                                                     | <b>Degree Core:</b> <u>EG4012</u> Thesis Part 2 of 2<br>PREREQ: EG4011                                        |
|        | <b>Major Core:</b> <u>CS4001</u> Foundation Engineering and Rock Mechanics<br>PREREQ: CS3002                             | <b>Major Core:</b> <u>CS4005</u> Civil Engineering Design<br>PREREQ: CS3001 AND CS3003 AND CS40001 AND CS4002 |
|        | <b>Major Core:</b> <u>CS4002</u> Hydraulic and Coastal Engineering<br>PREREQ: CS3008                                     | <b>Major Core:</b> <u>CS4008</u> Water and Wastewater Engineering<br>PREREQ: 48CP INCLUDING CS2002 AND EG1010 |
|        | <b>Major Core:</b> <u>CS4010</u> Finite Element Analysis and Structural Dynamics<br>PREREQ: EG1002 AND CS3000 AND MA2000 | <b>List Options:</b> see tables below for details                                                             |

**Further Degree Options:**

Select 1 subject from List 1 **AND** Select 3 subjects from List 2 **AND** Select any 2 undergraduate subjects OR if required to take MA1020 select 1 undergraduate subject.

| <b>List 1:</b> Select 1 subject                                            |                                                                            |                                                                           |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------|
| <b>Trimester 1</b> (Feb-May)                                               | <b>Trimester 2</b> (Jun-Aug)                                               | <b>Trimester 3</b> (Sept-Dec)                                             |
| <u>CP1406</u> Web Design and Development                                   | <u>CP1407</u> Introductory Machine Learning and Data Science               |                                                                           |
| <b>Trimester TBA</b>                                                       |                                                                            |                                                                           |
| <u>CP2410</u> Algorithms and Data Structures<br>PREREQ: 6CP OF CP SUBJECTS | <u>CP2405</u> Collective Intelligence and Entrepreneurship<br>PREREQ: 24CP | <u>CP2409</u> Network Forensics and Data Communications<br>PREREQ: CP1402 |
| <u>CP2411</u> 3D Modelling and Animation<br>PREREQ: 6CP OF CP SUBJECTS     | <u>CP2408</u> Design Thinking and Creative IT Industries<br>PREREQ: CP1403 | <u>CP2412</u> Game Design and Technologies<br>PREREQ: 6CP OF CP SUBJECTS  |

| <b>List 2:</b> Select 3 subjects                                                                                                                  |                                                                                  |                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Trimester TBA</b>                                                                                                                              |                                                                                  |                                                                                                 |
| <u>CP3402</u> Content Management Systems<br>PREREQ: (CP1404 OR CP1804 AND CP1406 OR CP1806) OR CP2010, AND 24CP OF CP SUBJECTS                    | <u>CP3404</u> Information Security<br>PREREQ: 18CP OF SUBJECTS, INCLUDING CP1402 | <u>CP3406</u> Mobile Computing<br>PREREQ: CP1404 OR CP1804                                      |
| <u>CP3403</u> Data Mining<br>PREREQ: (CP2403 AND CP2404) OR (18 CREDIT POINTS OF UNDERGRADUATE SUBJECTS INCLUDING 6 CREDIT POINTS OF CP SUBJECTS) | <u>CP3405</u> Design Thinking and Project Management<br>PREREQ: CP2408           | <u>CP3408</u> Game Engine and Simulation<br>PREREQ: (CP1404 OR CP1804) AND 18 CP OF CP SUBJECTS |