# FACULTY OF ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES
## 2017 STUDY PLAN

### FOR ADVANCED STANDING - OFFICE USE ONLY

- Please mark the box to indicate advanced standing granted (use **CONDITIONAL** to denote conditional advanced standing)

<table>
<thead>
<tr>
<th>Unspecified Elective Credit:</th>
<th>Level 1:</th>
<th>units</th>
<th>Level 2:</th>
<th>units</th>
<th>Level 3:</th>
<th>units</th>
<th>Level 4:</th>
<th>units</th>
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<tbody>
<tr>
<td>Student ID Number:</td>
<td></td>
<td></td>
<td>Student Name:</td>
<td></td>
<td>Date: 1/12/16</td>
<td></td>
<td>Assessors Name:</td>
<td></td>
</tr>
<tr>
<td>Applicant’s Previous Institution:</td>
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<td></td>
<td>Applicant’s Previous Qualification:</td>
<td></td>
<td>Remaining Program Duration: 5 years</td>
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<td>Assessors Comments:</td>
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## BACHELOR OF ENGINEERING (HONOURS) (CIVIL & STRUCTURAL) WITH BACHELOR OF FINANCE

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>S1</th>
<th>C&amp;ENVENG 1008 Engineering Planning &amp; Design I (3 units)</th>
<th>C&amp;ENVENG 1010 Engineering Mechanics - Statics (3 units)</th>
<th>MATHS 1011 Mathematics IA (3 units)#</th>
<th>ECON 1012 Principles of Economics I (3 units)</th>
<th>CORPFIN 1002 Business Finance I (3 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S2</td>
<td>C&amp;ENVENG 1009 Civil &amp; Environmental Engineering I (3 units)</td>
<td>C&amp;ENVENG 1012 Engineering Modelling &amp; Analysis I (3 units)</td>
<td>MATHS 1012 Mathematics IB (3 units)</td>
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<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>S1</th>
<th>C&amp;ENVENG 2025 Strength of Materials II (3 units)</th>
<th>C&amp;ENVENG 2071 Water Engineering II (3 units)</th>
<th>MATHS 2201 Engineering Mathematics II A (3 units)</th>
<th>ECON 1009 International Financial Institutions &amp; Markets I (3 units)</th>
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<tbody>
<tr>
<td>S2</td>
<td></td>
<td>C&amp;ENVENG 2069 Geotechnical Engineering II (3 units)</td>
<td>C&amp;ENVENG 2070 Engineering Modelling &amp; Analysis II (3 units)</td>
<td>C&amp;ENVENG 2030 Structural Mechanics (3 units)</td>
<td>ACCTING 1002 Introductory Accounting I (3 units)</td>
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<table>
<thead>
<tr>
<th>YEAR 3</th>
<th>S1</th>
<th>C&amp;ENVENG 3001 Structural Mechanics III (3 units)</th>
<th>C&amp;ENVENG 3005 Reinforced Concrete Design (3 units)</th>
<th>C&amp;ENVENG 3077 Engineering Hydrology (3 units)</th>
<th>CORPFIN 2502 Business Valuation II</th>
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</thead>
<tbody>
<tr>
<td>S2</td>
<td></td>
<td>C&amp;ENVENG 3007 Structural Steel Design (3 units)</td>
<td>C&amp;ENVENG 3012 Geotechnical Engineering Design III (3 units)</td>
<td>ECON 2504 Intermediate Econometrics II or MATHS 2103 Probability and Statistics (3 units)</td>
<td>ECON 2508 Financial Economics II (3 units)</td>
<td></td>
</tr>
</tbody>
</table>

| YEAR 4 | S1 | C&ENVENG 3029 Environmental Modelling & Management or CHEM ENG 4051 Water & Wastewater Engineering (3 units) | C&ENVENG 4041 Structural Design Practice (3 units) | Level III Finance Elective (3 units) | CORPFIN 2501 Financial Institutions Management II (3 units) | |

## Additional Notes
- Some students may need to modify their enrolment based on previous study (e.g. students granted advanced standing/credit, students repeating previously failed courses).
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# FACULTY OF ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES

## 2017 STUDY PLAN

### S2
- **C&ENVENG 3222** Research Methodologies and Project Management (3 units)
- **C&ENVENG 3079** Water Engineering & Design III (3 units)
- **CORPFIN 3501** Portfolio Theory & Management III (3 units)
- **MATHS 3012** Financial Modelling: Tools & Techniques III or **CORPFIN 3502** Options, Futures & Risk Management III (3 units)

### S1
- **C&ENVENG 4222A** Research Project Part A: Civil (3 units)
- **C&ENVENG 4034** Engineering Management IV (3 units)
- **Level III Finance Elective** (3 units)
- **Engineering Elective** (3 units)

### S2
- **C&ENVENG 4222B** Research Project Part B: Civil (3 units)
- **Engineering Elective** (3 units)
- **C&ENVENG 4068** Computer Methods of Structural Analysis (3 units)

### YEAR 5

#### SEMESTER 1
- **C&ENVENG 4108** Environmental Systems Dynamics (3 units)
- **C&ENVENG 4107** Prestressed Concrete Structures (3 units)
- **CHEM ENG 4051** Water & Wastewater Engineering (3 units)
- **C&ENVENG 4073** Water Distribution Systems & Design (3 units)

#### WINTER
- **C&ENVENG 3029** Environmental Modelling & Management (3 units)
- **C&ENVENG 4097** Analysis of Rivers & Sediment Transport (3 units)
- **C&ENVENG 4112** Advanced Civil Geotechnical Engineering (3 units)
- **MINING 3072** Mining Geomechanics (3 units)

- **C&ENVENG 4069** Advanced Reinforced Concrete (3 units)
  *NOT OFFERED 2017*
- **C&ENVENG 4056** Linear Geostatistics (3 units)**
- **Level II or III Mathematics Course** (3 units)

- **C&ENVENG 4114** Advanced Hydrological Modelling & Water Resource Management (3 units)
  *NOT OFFERED 2017*
- **C&ENVENG 4113EX** Christchurch Earthquake Study Tour (3 units)

#### SEMESTER 2
- **C&ENVENG 4110** Soil & Groundwater Remediation (3 units)
- **C&ENVENG 4070** Seismic Design of Masonry Buildings (3 units)
- **C&ENVENG 4115** Advanced Topics in Flood Hydrology (3 units)
- **C&ENVENG 4109** Designing Water Resource Systems for Urban Environments (3 units)

- **ENTREP 3900** Entrepreneur's Challenge (3 units)
- **C&ENVENG 4111** Structural Dynamics & Applications (3 units)
- **C&ENVENG 4085** Traffic Engineering (3 units)
- **Level II or III Mathematics Course** (3 units)

- **C&ENVENG 4042** Design of Steel Concrete Composites (3 units)

### CHOOSE FROM THE FOLLOWING ENGINEERING ELECTIVES

- **C&ENVENG 4108** Environmental Systems Dynamics (3 units)
- **C&ENVENG 4107** Prestressed Concrete Structures (3 units)
- **CHEM ENG 4051** Water & Wastewater Engineering (3 units)
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FACULTY OF ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES
2017 STUDY PLAN

**SUMMER**

| C&ENVENG 4106 Introduction to Geostatistics (3 units)** | SOIL&WAT 3007WT GIS for Environmental Management III (3 units) |  |

#Students who have not passed SACE Stage 2 Specialist Maths are required to enrol in MATHS 1013 Mathematics IM as a prerequisite to enrolling in MATHS 1011 Mathematics IA. The satisfactory completion of MATHS 1013 Mathematics IM is in addition to the normal requirements of this program. Students may manage their enrolment by enrolling in MATHS 1013 Mathematics IM in semester I, followed by MATHS 1011 Mathematics IA in semester 2, and MATHS 1012 Mathematics IB in Summer.

*Either one of these courses can also be taken on lieu of a Level III Finance Elective

**C&ENVENG 4106 Introduction to Geostatistics is a pre-requisite to C&ENVENG 4056 Linear Geostatistics.

RESEARCH PROJECT INFORMATION

The 9 unit Research project must be undertaken in three consecutive semesters. Students form their groups and formulate their Research Proposal in C&ENVENG 3222. The group then develop the Research Project in C&ENVENG 4222A Part A and C&ENVENG 4222B Part B.
This study plan should be used to guide enrolment for the current academic year. Some students may need to modify their enrolment based on previous study (e.g. students granted advanced standing/credit, students repeating previously failed courses).

### BACHELOR OF ENGINEERING (HONOURS) (CIVIL & STRUCTURAL) WITH BACHELOR OF FINANCE – Semester 2 Start

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>S 2</th>
<th>C&amp;ENVENG 1009 Civil &amp; Environmental Engineering I (3 units)</th>
<th>C&amp;ENVENG 1012 Engineering Modelling &amp; Analysis I (3 units)</th>
<th>MATHS 1011 Mathematics IA (3 units)#</th>
<th>CORPFIN 1002 Business Finance I (3 units)</th>
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<td>YEAR 2</td>
<td>S 1</td>
<td>C&amp;ENVENG 1008 Engineering Planning &amp; Design I (3 units)</td>
<td>C&amp;ENVENG 1010 Engineering Mechanics - Statics (3 units)</td>
<td>MATHS 1012 Mathematics IB (3 units)</td>
<td>ECON 1012 Principles of Economics I (3 units)</td>
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<td>S 2</td>
<td>C&amp;ENVENG 2069 Geotechnical Engineering II (3 units)</td>
<td>C&amp;ENVENG 2070 Engineering Modelling &amp; Analysis II (3 units)</td>
<td>C&amp;ENVENG 2030 Structural Mechanics (3 units)</td>
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<td>S 2</td>
<td>C&amp;ENVENG 3012 Geotechnical Engineering Design III (3 units)</td>
<td>C&amp;ENVENG 3007 Structural Steel Design (3 units)</td>
<td>C&amp;ENVENG 3079 Water Engineering &amp; Design III (3 units)</td>
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<td>YEAR 4</td>
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Unspecified Elective Credit:  
Level 1: [ ] units  
Level 2: [ ] units  
Level 3: [ ] units  
Level 4: [ ] units

Student ID Number:  
Assessor Name:  
Applicant’s Previous Institution:  
Applicant’s Previous Qualification:  
Assessor’s Comments:  

Advanced Standing Granted: [ ] units  
Remaining Program Duration: 5 years

Date: 1/12/16
## FACULTY OF ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES
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<th>SEMESTER 1</th>
<th>C&amp;ENVENG 4108 Environmental Systems Dynamics (3 units)</th>
<th>Level II or III Mathematics Course (3 units)</th>
<th>CHEM ENG 4051 Water &amp; Wastewater Engineering (3 units)</th>
<th>C&amp;ENVENG 4073 Water Distribution Systems &amp; Design (3 units)</th>
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<td>C&amp;ENVENG 3029 Environmental Modelling &amp; Management (3 units)</td>
<td>C&amp;ENVENG 4097 Analysis of Rivers &amp; Sediment Transport (3 units) *NOT OFFERED 2017</td>
<td>C&amp;ENVENG 4112 Advanced Civil Geotechnical Engineering (3 units)</td>
<td>MINING 3072 Mining Geomechanics (3 units)</td>
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<tr>
<td>WINTER</td>
<td>C&amp;ENVENG 4069 Advanced Reinforced Concrete (3 units) *NOT OFFERED 2017</td>
<td>C&amp;ENVENG 4056 Linear Geostatistics (3 units)**</td>
<td>C&amp;ENVENG 4107 Prestressed Concrete Structures (3 units)</td>
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**COMBINED PROGRAMME**

<table>
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<tr>
<th>YEAR 5</th>
<th>S 2</th>
<th>C&amp;ENVENG 3222 Research Methodologies and Project Management (3 units)</th>
<th>ECON 2504 Intermediate Econometrics II or MATHS 2103 Probability and Statistics (3 units)</th>
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<th>CORPFIN 2501 Financial Institutions Management II (3 units)</th>
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<td>C&amp;ENVENG 4222A Research Project Part A: Civil (3 units)</td>
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<td>C&amp;ENVENG 4041 Structural Design Practice (3 units)</td>
<td>MATHS 3012 Financial Modelling: Tools &amp; Techniques III or CORPFIN 3502 Options, Futures &amp; Risk Management III (3 units) *</td>
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<td>S 2</td>
<td>C&amp;ENVENG 4222B Research Project Part B: Civil (3 units)</td>
<td>C&amp;ENVENG 4068 Computer Methods of Structural Analysis (3 units)</td>
<td>Engineering Elective (3 units)</td>
<td>Level III Finance Elective (3 units)</td>
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<tr>
<td>YEAR 6</td>
<td>S 1</td>
<td>Engineering Elective (3 units)</td>
<td>Engineering Elective (3 units)</td>
<td>C&amp;ENVENG 4034 Engineering Management IV (3 units)</td>
<td>Level III Finance Elective (3 units)</td>
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**CHOOSE FROM THE FOLLOWING ENGINEERING ELECTIVES**

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<tr>
<th>SEMESTER 1</th>
<th>C&amp;ENVENG 4112 Advanced Civil Geotechnical Engineering (3 units)</th>
<th>MINING 3072 Mining Geomechanics (3 units)</th>
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<tr>
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<td>C&amp;ENVENG 4107 Prestressed Concrete Structures (3 units)</td>
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**META PROGRAMME**

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<th>YEAR 6</th>
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<th>Engineering Elective (3 units)</th>
<th>Engineering Elective (3 units)</th>
<th>C&amp;ENVENG 4034 Engineering Management IV (3 units)</th>
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**CHOOSE FROM THE FOLLOWING ENGINEERING ELECTIVES**

| WINTER     | C&ENVENG 4114 Advanced Hydrological Modelling & Water Resource Management (3 units) | C&ENVENG 4113EX Christchurch Earthquake Study Tour (3 units) *NOT OFFERED 2017 | |
|------------|------------------------------------------------------|-------------------------------------------------|
## FACULTY OF ENGINEERING, COMPUTER AND MATHEMATICAL SCIENCES
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<td>Level II or III Mathematics Course (3 units)</td>
<td>C&amp;ENVENG 4111 Structural Dynamics &amp; Applications (3 units)</td>
<td>C&amp;ENVENG 4085 Traffic Engineering (3 units)</td>
<td>ENTREP 3900 Entrepreneur’s Challenge (3 units)</td>
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<td>C&amp;ENVENG 4042 Design of Steel Concrete Composites (3 units)</td>
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<tr>
<td>SUMMER</td>
<td>C&amp;ENVENG 4106 Introduction to Geostatistics (3 units)**</td>
<td>SOIL&amp;WAT 3007WT GIS for Environmental Management III (3 units)</td>
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