



# IIE Bachelor of Engineering in Civil Engineering

School of Engineering

The IIE Bachelor of Engineering in Civil Engineering is an integrated curriculum designed by top engineers. It equips you with a solid scientific foundation in modern civil engineering design and the skills to create physical and social environments for the 21st Century.

Based on contemporary sustainability theory, the degree will introduce you to issues like the fundamental mathematical and physical sciences in theory and practice, the application of engineering sciences to civil engineering projects and key expertise in geotechnical, hydraulic, structural and transportation engineering. This is a degree for people who want to build a better world.

This professional degree is endorsed by the Engineering Council of South Africa (ECSA).

[DEGREE](#)

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## Career opportunities

The programme prepares graduates to assume engineering positions within the construction sector, structural design, environmental, hydraulic engineering, transportation, and geotechnical engineering fields.

## Curriculum

| Year 1     |                             |     |         |            |                             |     |         |
|------------|-----------------------------|-----|---------|------------|-----------------------------|-----|---------|
| Semester 1 |                             |     |         | Semester 2 |                             |     |         |
| Code       | Module Name                 | NQF | Credits | Code       | Module Name                 | NQF | Credits |
| CIED5111   | Civil Engineering Design 1A | 5   | 12      | CIED5112   | Civil Engineering Design 1B | 5   | 12      |
| ECHE5111   | Engineering Chemistry 1A    | 5   | 14      | EMEC5112   | Engineering Mechanics 1B    | 5   | 14      |
| EMTH5111   | Engineering Mathematics 1A  | 5   | 18      | EMTH5112   | Engineering Mathematics 1B  | 5   | 18      |
| EPHY5111   | Engineering Physics 1A      | 5   | 14      | ESCIE5112  | Earth Sciences 1B           | 5   | 14      |
| SAPR5111   | Society and Practice 1A     | 5   | 12      | SAPR5112   | Society and Practice 1B     | 5   | 12      |

| Year 2     |                             |     |         |            |                                   |     |         |
|------------|-----------------------------|-----|---------|------------|-----------------------------------|-----|---------|
| Semester 3 |                             |     |         | Semester 4 |                                   |     |         |
| Code       | Module Name                 | NQF | Credits | Code       | Module Name                       | NQF | Credits |
| CIED6211   | Civil Engineering Design 2A | 6   | 12      | CIED6212   | Civil Engineering Design 2B       | 6   | 12      |
| EMAT6211   | Engineering Materials 2A    | 6   | 14      | GEOT6212   | Geotechnical Engineering 2B       | 6   | 12      |
| EMEC6211   | Engineering Mechanics 2A    | 6   | 14      | RUIN6212   | Rural and Urban Infrastructure 2B | 6   | 12      |
| EMTH6211   | Engineering Mathematics 2A  | 6   | 14      | SAPR6212   | Society and Practice 2B           | 6   | 12      |
| SAPR6211   | Society and Practice 2A     | 6   | 12      | STRU6212   | Structural Engineering 2B         | 6   | 12      |
|            |                             |     |         | WAEN6212   | Water Engineering 2B              | 6   | 12      |

| Year 3     |                                   |     |         |            |                                   |     |         |
|------------|-----------------------------------|-----|---------|------------|-----------------------------------|-----|---------|
| Semester 5 |                                   |     |         | Semester 6 |                                   |     |         |
| Code       | Module Name                       | NQF | Credits | Code       | Module Name                       | NQF | Credits |
| CIED7311   | Civil Engineering Design 3A       | 7   | 12      | CIED7312   | Civil Engineering Design 3B       | 7   | 12      |
| GEOT7311   | Geotechnical Engineering 3A       | 7   | 12      | GEOT7312   | Geotechnical Engineering 3B       | 7   | 12      |
| RUIN7311   | Rural and Urban Infrastructure 3A | 7   | 12      | RUIN7312   | Rural and Urban Infrastructure 3B | 7   | 12      |
| SAPR7311   | Society and Practice 3A           | 7   | 12      | SAPR7312   | Society and Practice 3B           | 7   | 12      |
| STRU7311   | Structural Engineering 3A         | 7   | 12      | STRU7312   | Structural Engineering 3B         | 7   | 12      |
| WAEN7311   | Water Engineering 3A              | 7   | 12      | WAEN7312   | Water Engineering 3B              | 7   | 12      |

| Year 4     |                                   |     |         |            |   |     |         |
|------------|-----------------------------------|-----|---------|------------|---|-----|---------|
| Semester 7 |                                   |     |         | Semester 8 |   |     |         |
| Code       | Module Name                       | NQF | Credits | Code       | Module Name                                       | NQF | Credits |
| RUIN8411   | Rural and Urban Infrastructure 4A | 8   | 18      | DEPC8412   | Design Project 4B                                 | 8   | 36      |
| SAPR8411   | Society and Practice 4A           | 8   | 18      | EGAC8412   | Engineering Graduate Attribute Competence (Civil) | 8   | 0       |
| STRU8411   | Structural Engineering Design 4A  | 8   | 18      |            |   |     |         |
| WAEN8411   | Water Engineering 4A              | 8   | 18      | REPC8412   | Research Project 4B                               | 8   | 36      |



## Admission requirements

|                                       |                                   |   |
|---------------------------------------|-----------------------------------|---|
| <b>Minimum Admission Requirements</b> | <b>NSC: Bachelor pass with</b>    | <b>English 50%, Mathematics 70% and Physical Science 60%</b>  |
|                                       | <b>NC (V): Bachelor pass with</b> | <b>English 50%, Mathematics 70% and Physical Science 60%</b>  |
|                                       | <b>SC: Endorsement</b>            | <b>English 50%, Mathematics 70% and Physical Science 60%</b>  |
|                                       | <b>SC(a): Bachelor pass with</b>  | <b>English 50%, Mathematics 70% and Physical Science 60%</b>  |
|                                       | <b>International</b>              | <p><b>USAf exemption certificate with 70% or equivalent for Maths and 50% or equivalent for English AND 60% or equivalent for Physical Science or both Physics and Chemistry.</b></p> <p><b>A cognate Higher Certificate OR cognate 240 credit Diploma OR an Advanced Certificate OR 360 credit Diploma may satisfy the minimum admission requirements to degree studies.</b></p> |

Should you have any other school leaving qualification not mentioned above, please contact a student advisor.

**THE IIE IS ACCREDITED AS AN INDEPENDENT HIGHER EDUCATION INSTITUTION BY THE BRITISH ACCREDITATION COUNCIL.**

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