



IIE Bachelor of Engineering in Civil Engineering

Faculty of Science & Technology

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

CONTACT

FULL-TIME

www.iiems.co.za

IIE MSA is an educational brand of The Independent Institute of Education (Pty) Ltd.

IIE Bachelor of Engineering in Civil Engineering

4 OR 5 YEARS FULL-TIME | NQF LEVEL 8 | MINIMUM 480 Credits | SAQA ID: 118321

Curriculum

| MODULES | | | | | |
|----------|-----------------------------------|---------|----------|---|---------|
| YEAR 1 | | | | | |
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED5111 | Civil Engineering Design 1A | 12 | CIED5112 | Civil Engineering Design 1B | 12 |
| ECHE5111 | Engineering Chemistry 1A | 14 | EMEC5112 | Engineering Mechanics 1B | 14 |
| EMTH5111 | Engineering Mathematics 1A | 18 | EMTH5112 | Engineering Mathematics 1B | 18 |
| EPHY5111 | Engineering Physics 1A | 14 | ESCI5112 | Earth Sciences 1B | 14 |
| SAPR5111 | Society and Practice 1A | 12 | SAPR5112 | Society and Practice 1B | 12 |
| YEAR 2 | | | | | |
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED6211 | Civil Engineering Design 2A | 12 | CIED6212 | Civil Engineering Design 2B | 12 |
| EMAT6211 | Engineering Materials 2A | 14 | GEOT6212 | Geotechnical Engineering 2B | 12 |
| EMEC6211 | Engineering Mechanics 2A | 14 | RUIN6212 | Rural and Urban Infrastructure 2B | 12 |
| EMTH6211 | Engineering Mathematics 2A | 14 | SAPR6212 | Society and Practice 2B | 12 |
| SAPR6211 | Society and Practice 2A | 12 | STRU6212 | Structural Engineering 2B | 12 |
| | | | WAEN6212 | Water Engineering 2B | 12 |
| YEAR 3 | | | | | |
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED7311 | Civil Engineering Design 3A | 12 | CIED7312 | Civil Engineering Design 3B | 12 |
| GEOT7311 | Geotechnical Engineering 3A | 12 | GEOT7312 | Geotechnical Engineering 3B | 12 |
| RUIN7311 | Rural and Urban Infrastructure 3A | 12 | RUIN7312 | Rural and Urban Infrastructure 3B | 12 |
| SAPR7311 | Society and Practice 3A | 12 | SAPR7312 | Society and Practice 3B | 12 |
| STRU7311 | Structural Engineering 3A | 12 | STRU7312 | Structural Engineering 3B | 12 |
| WAEN7311 | Water Engineering 3A | 12 | WAEN7312 | Water Engineering 3B | 12 |
| YEAR 4 | | | | | |
| Code | Module Name | Credits | Code | Module Name | Credits |
| SAPR8411 | Society and Practice 4A | 18 | DEPC8412 | Design Project for Civil Engineering | 36 |
| STRU8411 | Structural Engineering Design 4A | 18 | REPC8412 | Research Project for Civil Engineering | 36 |
| INFD8411 | Infrastructure Design 4A | 18 | EGAC8412 | Engineering Graduate Attribute Competence (Civil) | 0 |
| WAED8411 | Water Engineering Design 4A | 18 | | | |

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Curriculum (Extended Programme)

| MODULES | | | | | |
|----------|----------------------------|---------|----------|----------------------------|---------|
| YEAR 1 | | | | | |
| Code | Module Name | Credits | Code | Module Name | Credits |
| ECHE5111 | Engineering Chemistry 1A | 14 | EMTH5112 | Engineering Mathematics 1B | 18 |
| EMTH5111 | Engineering Mathematics 1A | 18 | EMEC5112 | Engineering Mechanics 1B | 14 |
| EPHY5111 | Engineering Physics 1A | 14 | ESCI5112 | Earth Sciences 1B | 14 |

| YEAR 2 | | | | | |
|----------|-----------------------------|---------|----------|-----------------------------------|---------|
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED5111 | Civil Engineering Design 1A | 12 | CIED5112 | Civil Engineering Design 1B | 12 |
| EMTH6211 | Engineering Mathematics 2A | 14 | RUIN6212 | Rural and Urban Infrastructure 2B | 12 |
| SAPR5111 | Society and Practice 1A | 12 | SAPR5112 | Society and Practice 1B | 12 |
| | | | WAEN6212 | Water Engineering 2B | 12 |

| YEAR 3 | | | | | |
|----------|-----------------------------|---------|----------|-----------------------------|---------|
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED6211 | Civil Engineering Design 2A | 12 | CIED6212 | Civil Engineering Design 2B | 12 |
| EMAT6211 | Engineering Materials 2A | 14 | GEOT6212 | Geotechnical Engineering 2B | 12 |
| EMEC6211 | Engineering Mechanics 2A | 14 | SAPR6212 | Society and Practice 2B | 12 |
| SAPR6211 | Society and Practice 2A | 12 | STRU6212 | Structural Engineering 2B | 12 |

| YEAR 4 | | | | | |
|----------|-----------------------------------|---------|----------|-----------------------------------|---------|
| Code | Module Name | Credits | Code | Module Name | Credits |
| CIED7311 | Civil Engineering Design 3A | 12 | CIED7312 | Civil Engineering Design 3B | 12 |
| GEOT7311 | Geotechnical Engineering 3A | 12 | GEOT7312 | Geotechnical Engineering 3B | 12 |
| RUIN7311 | Rural and Urban Infrastructure 3A | 12 | RUIN7312 | Rural and Urban Infrastructure 3B | 12 |
| SAPR7311 | Society and Practice 3A | 12 | SAPR7312 | Society and Practice 3B | 12 |
| STRU7311 | Structural Engineering 3A | 12 | STRU7312 | Structural Engineering 3B | 12 |
| WAEN7311 | Water Engineering 3A | 12 | WAEN7312 | Water Engineering 3B | 12 |

| YEAR 5 | | | | | |
|----------|----------------------------------|---------|----------|---|---------|
| Code | Module Name | Credits | Code | Module Name | Credits |
| SAPR8411 | Society and Practice 4A | 18 | DEPC8412 | Design Project for Civil Engineering | 36 |
| STRU8411 | Structural Engineering Design 4A | 18 | REPC8412 | Research Project for Civil Engineering | 36 |
| INFD8411 | Infrastructure Design 4A | 18 | EGAC8412 | Engineering Graduate Attribute Competence (Civil) | 0 |
| WAED8411 | Water Engineering Design 4A | 18 | | | |

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4 OR 5 YEARS FULL-TIME | NQF LEVEL 8 | MINIMUM 480 Credits | SAQA ID: 118321

Career Opportunities

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

NQF 5 Higher Certificate

NQF 7 Bachelor's Degree (360 credits)

NQF 8 Bachelor's Degree (480 credits)

NQF 9 Master's Degree

Admission Requirements

There are prerequisites for this programme that must be met in order to progress through the qualification.

Minimum Admission Requirements: 4-year programme

National Senior Certificate (NSC)

Bachelor pass with English 50%, Mathematics 70% and Physical Science 60%

National Certificate (Vocational) (NC(V))

Bachelor pass with English 50% (3), Mathematics 70% and Physical Science 60%

SC: Endorsement with

Bachelor pass with English 50%, Mathematics 70% and Physical Science 60%

Senior Certificate (Amended) (SC(a))

Bachelor pass with English 50%, Mathematics 70% and Physical Science 60%

International

An USAf Exemption Certificate with 70% or equivalent for Maths AND 50% or equivalent for English AND 60% or equivalent is also required for either Physical Science or both Physics and Chemistry.

A cognate Higher Certificate OR any cognate 240 credit Diploma OR an Advanced Certificate OR 360 credit Diploma OR an appropriate IIE MSA Foundation Programme may satisfy the minimum admission requirements to degree studies.

NOTE: A student may not proceed to the next year if all the stipulated pre- and co-requisites have not been satisfied because he/she will require these requisites to be able to undertake the level of study required in the next year.

Minimum Admission Requirements: 5-year programme

National Senior Certificate (NSC)

Bachelor pass with English 50%, Mathematics 60% and Physical Science 50%

National Certificate (Vocational) (NC(V))

Bachelor pass with English 50%, Mathematics 60% and Physical Science 50%

SC: Endorsement with

Endorsement with English 50%, Mathematics 60% and Physical Science 50%

Senior Certificate (Amended) (SC(a))

Bachelor pass with English 50%, Mathematics 60% and Physical Science 50%. Where applicants have not met the minimum entry requirements, but have obtained at least 45% in English, 55% in Mathematics and 45% in Physical Science, they may be admitted if they pass a proficiency test in the subject(s) where they have not met the minimum entry requirements.

International Requirements for 5-year programme

USAf Exemption Certificate with 60% or equivalent for Maths AND 50% or equivalent for English AND 50% or equivalent is also required for either Physical Science or both Physics and Chemistry.

SHAPE YOUR DEGREE. YOUR FUTURE. YOUR CAREER.