

# University of Pretoria Yearbook 2023

## Faculty of Engineering, Built Environment and Information Technology

### Faculty regulations and information

*The regulations for the degrees published in this Yearbook are subject to change and may be amended after the publication of this information.*

*The General Academic Regulations and General Student Rules apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations.*

Please read the faculty regulations in conjunction with the General Academic Regulations.

#### 1. General Admissions Regulations

- This Admissions Regulation should be read in conjunction with General Academic Regulation G1.1.
- In order to register for a first bachelor's degree at the University, a candidate should have completed the National Senior Certificate (NSC) or an equivalent qualification and meet the minimum requirements for admission to bachelor's degree study.
- Candidates must also comply with the particular subject and level requirement as well as with the minimum Admission Point Score (APS) for the relevant degree programme.
- The APS calculation is based on a candidate's achievement in six 20-credit recognised subjects by using the NSC ratings that is the "1 to 7 scale of achievement", as explained in the table below. Thus, the highest APS that can be achieved is 42.
- Life Orientation is a 10-credit subject and is excluded from the calculation when determining the APS.
- Grade 11 results are used in the provisional admission of prospective students.
- The final NSC results will be the determining factor with regard to final admission.
- All modules will only be presented in English, as English is the language of tuition, communication and correspondence.
- Minimum requirements for admission to the relevant programmes are set out in the "Minimum admission requirements table" of this document.
- The following subject rating scores are used for calculating the APS (see Annexure A for the APS Conversion Table):

Rating code	Rating	Marks
7	Outstanding achievement	80-100%
6	Meritorious achievement	70-79%
5	Substantial achievement	60-69%

Rating code	Rating	Marks
4	Adequate achievement	50-59%
3	Moderate achievement	40-49%
2	Elementary achievement	30-39%
1	Not achieved	0-29%

## CLOSING DATES

BSc Architecture: All applicants: 31 July

All other degrees - South African citizens: 30 September - Citizens from countries other than South Africa: 31 August

### a. Registration for a specific year

A student registers for all the modules he or she intends taking in that specific year (first and second-semester modules and year modules) at the beginning of an academic year. Changes to a curriculum at the beginning of the second semester may be made only with the approval of the Dean. The students will be informed by the respective department.

Students must be registered for all modules that they intend to enrol for during the academic year **within the first two weeks of the semester** in which the module is presented. (See General Academic Regulation G2.4.)

Students who cannot register by the date of commencement of lectures must report to the lecturer **no later than the first day of lectures** and are responsible to make arrangements to keep up with the learning activities as no catching-up activities and/or assessments will be provided.

Cancellation of modules without financial and student record implications must be done **within the first four weeks of the semester** in which the module is presented. (See General Academic Regulation G2.5.)

### b. Module credits for unregistered students

There are students who attend lectures, write tests and examinations and in this manner earn "marks", but have neither registered for modules nor registered as students. These marks will not be communicated to any student before he/she has provided proof of registration. A student cannot obtain any credits in a specific academic year for a module "passed" in this manner during a previous academic year and for which he/she was not registered. This arrangement applies even where the student is prepared to pay the tuition fees.

### a. Change of field of study

Transfer from one field of study to another may only take place with the Dean's approval, after consultation with the relevant Head of Department.

## 2. Examinations

### a. Examinations, projects and research reports/mini-dissertations

An examination in a module may be written and/or oral. Projects and research reports/mini-dissertations are prepared and examined as stipulated in the study guide of the module, in accordance with the regulations and procedures as described below.

The examinations for modules of the first semester are usually held in May/June, while all other examinations (third- and fourth-quarter modules, second-semester modules and year modules) are usually held in October/November.

## b. Examination admission

A minimum semester/year mark of 40% is required in order to be admitted to the final examination in a specific module, with the exception of first-semester modules at first-year level where a minimum semester mark of 30% is required for admission to an examination. In addition, all other examination admission requirements, applicable to the relevant module, must have been met.

## c. Special examinations

Refer also to G12.4.

A medical certificate stating that a student appeared ill or declared him-/herself unfit to write the examination will not be accepted.

The doctor must be consulted on or before the date on which the examination was scheduled.

Special examinations are not arranged for students who are unable to write the examinations at the times scheduled for the exam

## d. Chancellor's examination

Refer also to G12.5.

- i. The Dean may, on the recommendation of the relevant head of department, grant a Chancellor's examination in a module to a student who failed that module in the final year of study, and consequently does not comply with degree requirements.
- ii. A student may at most, be admitted to either one. Chancellor's examination in a year module or two Chancellor's examinations in semester modules or four Chancellor's examinations in quarter modules. A student will be allowed to write a Chancellor's examination for a specific module only once. Should the student fail the Chancellor's examination the student needs to reregister for the module, in which case all regulations are applicable to the module enrolment.
- iii. To be taken into consideration for a Chancellor's examination, a student should have written the examination and failed the module(s) and should also have complied with all other examination admission requirements which are applicable to the relevant module.
- iv. Extraordinary cases may be considered by the Dean. In this case a student must apply in writing to the Dean before consideration will be given for admission to a Chancellor's examination. The relevant head of department decides when the Chancellor's examination will take place and may prescribe work that must be satisfactorily completed before a student may write the examination.
- v. The candidate should also comply with the subminimum requirements. The highest final mark that may be awarded is 50%.
- vi. No Chancellor's examinations will be allowed for modules with a project or design component in any discipline.

### Please note:

- In the **School for the Built Environment**, the pass mark required for a Chancellor's examination is 50%, a higher mark is not allocated and the semester/year mark is not taken into consideration.
- In the **School of Information Technology**, the pass mark required for a Chancellor's examination is 50%, a higher mark is not allocated and the semester/year mark is not taken into consideration.
- In the **School of Engineering**, the pass mark required for a Chancellor's examination is 50%, the semester mark is retained during calculation of the final mark and the final mark is calculated as the weighted average of the Chancellor's examination mark and the semester mark, in accordance with the formula as published in the study guide of the specific module. No other special Chancellor's examinations are granted in the School of

Engineering.

**e. Perusal and re-marking of examination scripts**

Refer also to G14.

**f. Re-marking and/or re-evaluation for modules with a project or design component**

No re-marking of reports submitted for examination or re-evaluation of oral presentations for examination will be allowed for modules with a project or design component in any discipline of the School of Engineering, School for the Built Environment and the School of Information Technology.

**g. Supplementary examinations in the School of Engineering**

Refer also to G12.3.

In the School of Engineering a supplementary examination is only granted in instances where:

- i. A final mark of between 45% and 49% was achieved;
- ii. A final mark of between 40% and 44% was achieved and where the candidate also achieved either a semester mark or an examination mark of 50% or higher;
- iii. A pass mark has been obtained, but the required subminimum in the examination section of the module or divisions thereof has not been obtained.
- iv. A final mark of between 40% and 49% has been obtained in first-year modules in the first semester.

Calculation of the final supplementary examination mark:

- a. The semester mark is retained and the final mark is calculated as the weighted average of the supplementary examination mark and the semester mark, in accordance with the formula as published in the study manual of the specific module, with the proviso that the maximum final mark awarded may be no more than 50%. The only exception to this rule is in the case of first-year modules at first-semester level, where the semester mark is not considered, and where the supplementary examination mark is taken as the final mark, with the proviso that the maximum final mark awarded may be no more than 50%.
- b. All other pass requirements, as published in the study manual of each specific module, remain so and are applicable during the determination of the final result of a supplementary examination in the module. Special supplementary examinations will not be arranged for students who were not able to write the supplementary examinations during scheduled times, as given in the examinations timetable.

**h. Supplementary examinations in the School for the Built Environment**

Refer also to G12.3.

Except for first-semester modules in the first year where supplementary examinations are compulsory between 40% and 49%, a supplementary examination is only granted in instances where:

- i. a final mark of between 45% and 49% was obtained;
- ii. a final mark of between 40% and 44% was obtained and where the candidate also obtained either a semester mark or an examination mark of 50% or higher;
- iii. a pass mark has been obtained, but the required subminimum in the examination section of the module or divisions thereof has not been obtained.

(i) to (iii) do not apply to third-year or honours modules of any of the programmes in the Department of Architecture. No supplementary examinations are granted in any year of study for design and panel-assessed modules.

#### i. **Supplementary examinations in the School of Information Technology**

Refer also to G12.3.

In the School of Information Technology all supplementary examinations are considered and granted in accordance with the stipulations of G Regulation G12.3, and is calculated as follows:

- i. The semester mark is retained and the final mark is calculated as the weighted average of the supplementary examination mark and the semester mark, in accordance with the formula as published in the study manual of the specific module, with the proviso that the maximum final mark awarded may be no more than 50%. The only exception to this rule is in the case of first-year modules at first-semester level, where the semester mark is not considered, and where the supplementary examination mark is taken as the final mark, with the proviso that the maximum final mark awarded may be no more than 50%. For modules linked to continuous assessment, the department involved will share the supplementary exam model to be followed in the study guide of the module.
- ii. All other pass requirements, as published in the study manual of each specific module, remain so and are applicable during the determination of the final result of a supplementary examination in the module
- iii. No supplementary examinations are granted to third-year modules in the Department of Computer Science.

Special supplementary examinations will not be arranged for students who were not able to write the supplementary examinations during scheduled times, as provided in the examinations timetable.

#### j. **Pass requirements**

Refer also to G11 and G12.2.

- a. In order to pass a module, a student must obtain an examination mark of at least 40% and a final mark of at least 50% except if stated otherwise in the study guide. A student passes a module with distinction if a final mark of at least 75% is obtained. The final mark is compiled from the semester/year mark and the examination mark.
- b. Please note: In the Faculty of Engineering, Built Environment and Information Technology borderline cases (e.g. a mark of 49% or 74%) must be reconsidered by both the internal and external examiners, for determination of the possible merit of an upward adjustment of the mark. Marks may not be adjusted downwards, except when obvious marking and adding errors were detected. The pass mark is a minimum final mark of 50% and a student fails the module if a lower mark (e.g. 49%) was obtained.
- c. Calculation of the final mark: The semester/year mark must account for no less than 40% and no more than 60% of the final mark, with the exception of modules such as design and research projects and research reports/essays, as well as in modules where the development of general skills is the primary learning activity, where appropriate alternative norms are determined individually by schools or departments. The specific details and/or formula for the calculation of the final mark are set out in the study guide of each module. Also, a schedule listing this information (for all the modules presented in each school) will be compiled, for approval by the Dean.
- d. Calculation of the semester/year mark: The semester/year mark is compiled from formative assessment of learning activities such as assignments, presentations, practicals and group projects, as well as from class tests and semester tests. For each module the specific formula for the calculation of the semester/year mark is determined by the lecturer(s) responsible for the presentation of the module and the details are set out in the study guide. Also, a schedule listing this information for all the modules presented in each school will be compiled, for approval by the Dean. (Refer also to G11.)
- e. In some modules specific requirements in respect of certain components of the semester/year mark may be set in order for a student to pass the module (for example that satisfactory performance in and attendance of practical classes are required). Thus, even if a pass mark is obtained in the module, a pass is not granted

unless these requirements are met. For such modules these specific requirements are set out in the study guide. Also, a schedule containing this information (for all such modules presented in each school) will be compiled, for approval by the Dean.

- f. A student must comply with the subminimum requirements in subdivisions of certain modules. For such modules these specific requirements are set out in the study guide of the module. Also, a schedule containing this information (for all such modules presented in each school) will be compiled, for approval by the Dean.

**Please note:**

G10.3 is normally not applied by the School of Engineering, School for the Built Environment and School of Information Technology and no promotion (exemption from the examination) is allowed in any module, except in special cases where permission of the Dean is required.

### 3. Summer and Winter schools

Refer also to G11.2(2.1) and G12.6(6.5).

- i. To gain entry into a Summer or Winter school that is presented, a student:
  - a. must have obtained exam entry for the module in the preceding year and received a final mark of at least 40%.
  - b. may be allowed into a Summer School if exam entry was obtained in the previous exam, the final mark of 40% was not obtained AND it is the only outstanding first year module OR second year module.
  - c. may be allowed into a Summer School if exam entry was obtained in the preceding preceding November exam, the final mark of 40% was not obtained AND it is the only outstanding module from the previous academic year.
- ii. If a student fails the Summer/Winter School presented, the module needs to be repeated.
- iii. If a student qualifies to do more than one Summer/Winter School and there is an overlap between the Summer/Winter School, the student needs to select between the two and can't do both.
- iv. No first-year students who have failed to achieve more than 30% of the total credits, excluding non-core modules, may enrol for the Summer/Winter School.

### 4. Academic progress regulations

- i. Students who, after repeating a year of study, fail to pass all outstanding modules in the year of repetition, will be excluded and forfeit their right of admission.
- ii. Students whose academic progress is not acceptable can be suspended from further studies. Refer to the following important regulations: G3 and/or regulations as they appear for the applicable programmes.
- iii. A student who is excluded from further studies in terms of the stipulations of the abovementioned regulations will be notified in writing by the Dean or admissions committee at the end of the relevant semester as communicated via online student portals.
- iv. A student who has been excluded from further studies may apply in writing to the Faculty Appeals Committee for readmission by 12 January.
- v. If the excluded students are to be readmitted, the Faculty Appeals Committee will determine the conditions of readmission.
- vi. Should the student not be readmitted to further studies by the Faculty Appeals Committee, he/she will be informed in writing as communicated via online student portals.
- vii. Students who are not readmitted by the admissions committee have the right to appeal to the Senate Review Committee.
- viii. Any decision taken by the Senate Review Committee is final.
- ix. No first-year students who have failed to achieve more than 30% of the total credits, excluding non-core



modules, may enrol for Winter/Summer School.

## 5. Pass with distinction

### a. Pass with distinction in the School of Engineering

A student graduates with distinction if:

- i. no module of the third or fourth year of study of the four-year programme or of the fourth or fifth year of the ENGAGE programme was repeated and a weighted average of at least 75% (not rounded) was obtained in one year in all the modules of the final year of study; and
- ii. the degree programme was completed within the prescribed four years for the four-year programme and within the prescribed five years of the ENGAGE programme.

Exceptional cases to the above will be considered by the Dean.

### b. Pass with distinction in the School for the Built Environment

Please refer to the program specific information in the yearbook

### c. Pass with distinction in the School of Information Technology

A degree (undergraduate) in the School of IT is conferred with distinction on a student who did not repeat any module of his/her final year, obtained a weighted average of at least 75% (not rounded) in all the prescribed modules for the final year, provided that a subminimum of 65% is obtained in each of these modules and provided that the degree is completed in the prescribed minimum period of time. Ad hoc cases will be considered by the Dean, in consultation with the relevant head of department.

## 6. Dean's Merit List

### a. Dean's Merit List in the School of Engineering

The Dean's Merit List will be published annually on the website of the Faculty and will contain the names of the students whose academic performance over the year has been excellent and deserves recognition. Letters of commendation will be sent to students who qualify for inclusion on the Dean's Merit List.

To be eligible for inclusion in the Dean's Merit List, a student in the School for Engineering must pass all the modules as prescribed in the curriculum of a specific year of study as published. A student registered for the first, second or third year of the four-year programme must obtain a minimum weighted average of 75% (not rounded) and a student registered on the first, second, third or fourth year of the five-year programme must obtain a minimum weighted average of 75% (not rounded).

### b. Dean's Merit List in the School for the Built Environment

The Dean's Merit List will be published annually on the website of the Faculty and will contain the names of students whose academic performance over the year has been excellent and deserves recognition. Letters of commendation will be sent to students who qualify for inclusion on the Dean's Merit List.

To be eligible for inclusion in the Dean's Merit List, a student in the School for the Built Environment must pass all the modules as prescribed in the curriculum of a specific year of study as published. A student registered for the first or second of the three-year programme must obtain a minimum weighted average of 75% (not rounded) and a student registered for the first, second or third year of the four-year programme must obtain a minimum weighted average of 75% (not rounded).

### c. Dean's Merit List in the School of Information Technology

The Dean's Merit List will be published annually on the website of the Faculty and will contain the names of students whose academic performance over the year has been excellent and deserves recognition. Letters of commendation will be sent to students who qualify for inclusion on the Dean's Merit List.

To be eligible for inclusion in the Dean's Merit List, a student in the School of Information Technology must pass all the modules as prescribed in the curriculum of a specific year of study as published. A student registered for the first or second year of the three-year programme must obtain a minimum weighted average of 75% (not rounded).

## **7. Additional regulations and information for the School of Engineering**

### **a. Selection**

A selection procedure takes place prior to admission to any programme in the School of Engineering. Restrictions may be placed on the number of students admitted to the School and/or its departments. Postgraduate selection takes place as stipulated in the respective departmental rules.

### **b. Renewal of registration**

Should a student who is repeating a year of study, with the exception of first-year students, fail to obtain sufficient credits to be promoted to the subsequent year of study at the end of the year of repetition, he or she will forfeit his or her right to readmission. Students who forfeit the right to readmission, may apply in writing to the Admissions Committee for readmission to the Faculty. Provisions regarding promotion, including provisions for first-year students, appear in the regulations of the relevant fields of study.

### **c. Equivalent modules**

A BEng student may be permitted by the Dean, on recommendation of the relevant head of department, to register for an equivalent module in an alternate semester, although the module is normally offered to the student's group in another semester, and providing that no timetable clashes occur.

### **d. Registration of modules**

- i. Final cut-off dates are set for the change of modules (removing or adding) for each academic year. These dates are available from the Student Administration offices.
- ii. A student may not register for a module of a subsequent year if a timetable clash occurs with a module of a previous year which has not yet been passed and which is prescribed for his or her field of study, unless exemption is obtained from class attendance in the module of the previous year.
- iii. Should a student register for modules of the second semester at the beginning of a year of study, and it becomes evident at the end of the first semester, that he or she does not comply with the prerequisites of the second-semester modules, the registration of such modules will be cancelled. It is also the student's responsibility to ensure at the beginning of the second semester that the cancellation has been brought about.

### **e. Recognition of modules/study units passed at other tertiary institutions**

Refer also to G9.

- i. A bachelor's degree for which the period of attendance is four academic years, at least during the final two academic years;
- ii. Credit may be awarded for modules passed at another university in the third and fourth year, if this was preapproved by the Head of Department (based on substantially equivalent material and all outcomes achieved as prescribed by ECSA), for special arrangements and/or exchange programmes.



**f. Duration of examinations in undergraduate modules in the School of Engineering**

The duration of an examination in an 8-credit module will not exceed 90 minutes and in a 16-credit module will not exceed 180 minutes, except where special approval is granted by the Dean to exceed these limits.

The duration of a supplementary examination or a special examination in all under-graduate modules will not exceed 90 minutes, except where special approval is granted by the Dean to exceed this limit. In the event of an aegrotat, the duration of the examination can be extended to a maximum period of 180 minutes, depending on an arrangement made between the lecturer and the student.

**g. Exposure to the practice of engineering**

Engineering students are exposed in three ways to the practice of engineering during the course of their studies:

- i. Workshop practice – a module comprising a period at the end of the first year of study during which students are trained in workshop practice. Students in electrical, electronic and computer engineering attend the Introduction to Laboratory Measurements and Computer Simulations' module.
- ii. Practical training – specific periods of work at firms during which experience is gained in the practice of engineering. Students may deviate from this stipulation only with the permission of the Dean.
- iii. Excursions – study excursions arranged for students to visit various engineering firms and installations in order to obtain insight into the industry. This training is compulsory. Details of the modules regarding these aspects of training are explained in the sections of this publication which deal with the curricula and syllabi of the various programmes.

**h. Promotion to the second semester of the first year**

A new first-year student who did not pass enough credits that will enable them to complete the year with at least 70% of the total number of credits at the end year, is dismissed from studies in the School of Engineering. A student who is registered for the Engineering Engage degree programme and has passed only 24 in the first semester credits, will also be dismissed.

**8. Additional regulations and information for the School of Information Technology**

**a. Academic literacy**

All first-year students in the School of Information Technology enrol for ALL 121, a specialised module in academic literacy for Information Technology.

**b. Requirements for specific modules**

A candidate who has:

- i. not passed at least four Computer science modules at second-year level, will not be permitted to register for the Computer science modules at third-year level, unless special permission has been granted by the relevant head of department.
- ii. selected a module presented by another faculty or department must take note of the admission requirements of such a module, subminimum required in examination papers and supplementary examinations.

**c. Minimum study period (G7)**

The minimum period of study for the degree is indicated at the relevant degree programme.

**d. Promotion to the second semester of the first year**

A new first-year student who did not pass enough credit that will enable them to complete the year with at least 70% of the total number of credits at the end of the year, is dismissed from studies in the School of Information Technology.

## 9. Additional regulations and information for the School for the Built Environment

### a. Selection

A selection procedure takes place prior to admission to any programme in the Department of Architecture as limited places are available. The BSc Architecture programme follows a four-step selection process and will only be considered as an applicant's first choice of study. Consult departmental guidelines on the undergraduate and postgraduate selection processes.

### b. Promotion to the second semester of the first year

A new first-year student who did not pass enough credits that will enable them to complete the year with at least 70% of the total number of credits at the end of the year, is dismissed from studies in the School for the Built Environment.

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### Regulations and rules

The regulations and rules for the degrees published here are subject to change and may be amended after the publication of this information.

The [General Academic Regulations \(G Regulations\)](#) and [General Student Rules](#) apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations.

### University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.