

# SCHOOL OF LIFE SCIENCES (Pietermaritzburg campus)

## RULES AND GUIDELINES FOR DEGREES IN THE SCHOOL - 2020

### IMPORTANT NOTICE

**Some modules and qualifications are restricted.**

**GENT + CHEM major combinations are not advised for B.Sc. LES students due to Time Table clashes at Level 2 and Level 3, which means that the degree will only be completed after 8 semesters. This also applies to the online delivery of modules, as synchronous online activities will clash.**

### REGISTRATION PROCESSES FOR SEMESTER 2, 2020

This information has been placed on the College website and can be accessed at <https://caes.ukzn.ac.za/registration-semester-2/>

There are separate processes for students with term decisions (orange, red) and student in good standing (green).

Please follow these closely as no correspondence will be responded to if sent to the wrong email address.

### RULES AND GUIDELINES FOR DEGREES IN THE SCHOOL

This booklet is a registration guide for new and returning students of the School of Life Sciences, UKZN, and provides systematic information about the qualifications offered by the School, the rules of combinations for the majors and focussed programmes, and various other information that may be useful to you during registration.

You can find all relevant information regarding your qualification and rules of your degree in the 2020 handbook of the College of Agriculture Engineering and Science or visit the website - [http://saa.ukzn.ac.za/Forms\\_proce/Handbooks.aspx](http://saa.ukzn.ac.za/Forms_proce/Handbooks.aspx) to download an electronic copy of the Handbook.

## 1. QUALIFICATIONS

The qualification for which you are registered is a Bachelor of Science (BSc). This, in turn, can be structured in two ways: either a BSc with major(s) or a BSc in a focused programme, not both.

In our School, on the PMB campus, the majors on offer are Biochemistry, Biology, Ecology, Genetics and Microbiology, and the programmes are Biological Sciences, and Industrial and Applied Biotechnology.

*(Please note that 'LES' is not a qualification so please ensure that you write your major(s) or programme in all your forms).*

Each qualification has a curriculum that is comprised of modules (courses), most of which are equal to 16 credits (16C) but a few are 8 credits (8C). Some modules are compulsory (core) to the qualification, while others are electives, meaning that you can select from a specified list of module options. Some modules have prerequisite requirements, i.e. a specified mark or a pass in a module or any other condition, which must be met before you are allowed to register for the module.

*(Please see below)*

## **2. GENERAL RULES FOR ALL THE BSc QUALIFICATIONS**

### **Rule AES-BS1**

The qualification requires that you must pass a set of modules totalling 384 credits, subject to the following conditions:

Level 1: 96C (minimum) to 160C (maximum) – of these, 16C can be credits from another College and 16C must be ZULN101 (unless isiZulu was taken as a Grade 12 subject).

Level 2: 96C (minimum) to 128C (maximum)

Level 3: 128C

*(As a module is 16C, each degree comprises 24 modules, 8 per year).*

### **Rule AES-B5**

- a) The normal load per semester is 64C (four modules).
- b) In the first two semesters of registration, students are not allowed to do more than four modules (64C). After that, they can register for five modules (80C), provided that they are in good academic standing ('on GREEN').
- c) Students are not allowed to register for modules that clash on the timetable, even if they have exemption for the practical classes in one of them. If there is a timetable clash, the student will have to do the 'lower level' module (and not the higher-level module).
- d) Students must register for all outstanding compulsory (core) modules at the level of the lowest academic year not completed at the time of registration.
- e) Students can only register for level 2 modules if they have been previously registered for two semesters and obtained 64C of which 32C are core to their major or programme.
- f) Students can only register for level 3 modules if they have previously registered for four semesters and obtained 144C of which 32C are at level 2 and have passed all level 1 modules core to their major or programme.
- g) In exceptional circumstances, the Academic Leader for Teaching and Learning (ALT&L) in the School may grant a concession to relax one of these rules, as outlined below.

### 3. RULES OF COMBINATION FOR MAJORS

Generally, students opt to obtain their degree with two majors. However, it is also possible to obtain a degree with only one major, in which case 64C at level 1 and 32C at level 2 must be as per the rules of combination of the major. The other 64C must also be at level 3 from modules for which the student has obtained the specified prerequisites.

### 4. CORE MODULES FOR MAJORS

#### Biochemistry

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	STAT 130 {Sem 1/2}	CHEM 120 {Sem 2}	ZULN 101 (Sem 1/2)	
YEAR 2	BIOC 201 {Sem 1}	CHEM 220 {Sem 1}		
	BIOC 212 {Sem 2}	RDNA 202 {Sem 2}		
YEAR 3	BIOC 311 {Sem 1}	BIOC 315 {Sem 1}		
	BIOC 300 {Sem 2}	BIOC 316 {Sem 2}		

#### Biology

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	BIOL 102 {Sem 2}	CHEM 120 {Sem 2}	STAT 130 {Sem 1/2}	ZULU 101 {Sem 1/2}
YEAR 2	BIOL 213 {Sem 1}	Any 1 MODULE (16C) from BIOL 204 {Sem 1} <i>or</i> BIOL 222 {Sem 2} <i>or</i> RDNA 202 {Sem 2}		
	BIOL 211 {Sem 2}			
YEAR 3	BIOL 305 {Sem 1}	BIOL 324 {Sem 1}		
	BIOL 304 {Sem 2}	BIOL 315 {Sem 2}		

#### Ecology

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	BIOL 102 {Sem 2}	CHEM 120 {Sem 2}	STAT 130 {Sem 1/2}	ZULU 101 {Sem 1/2}
YEAR 2	BIOL 204 {Sem 1}	BIOL 223 {Sem 1}		
	BIOL 211 {Sem 2} <i>or</i> BIOL 222 {Sem 2}			
YEAR 3	BIOL 322 {Sem 1}	BIOL 323 {Sem 1}	Any 1 module (16C) from BIOL 305 {Sem 1} <i>or</i> BIOL 304 {Sem 2} <i>or</i> BIOL 390 {Sem 1 or 2 }	
	BIOL 325 {Sem 2}			

## Genetics

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	BIOL 102 {Sem 2}	CHEM 120 {Sem 2}	STAT 130 {Sem 1/2}	ZULN 101 (Sem 1/2)
YEAR 2	GENE 240 {Sem 1}	BIOL 200 {Sem 1} <i>or</i> STAT 222 {Sem 2}		
	RDNA 202 {Sem 2}			
YEAR 3	GENE 310 {Sem 1}	GENE 320 {Sem 1}		
	GENE 330 {Sem 2}	Any 1 MODULE (16C) from GENE 350 {Sem 2} <i>or</i> AGPS 306 {Sem 2} <i>or</i> BIOL 304 {Sem 2}		

## Microbiology

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	STAT 130 {Sem 1/2}	CHEM 120 {Sem 2}	ZULN 101 (Sem 1/2)	
YEAR 2	MICR 213 {Sem 1}	BIOC 201 {Sem 1} <i>or</i> CHEM 220 {Sem 1}		
	MICR 214 (8C) {Sem 2}	MICR 220 (8C) {Sem 2}	RDNA 202 {Sem 2}	
YEAR 3	MICR 307 {Sem 1}	MICR 320 {Sem 1}		
	MICR 304 {Sem 2}	MICR 360 {Sem 2}		

## 5. RULES OF COMBINATION FOR FOCUSED PROGRAMMES

### Core modules and elective credits

#### Biological Sciences

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	BIOL 102 {Sem 2}	CHEM 120 {Sem 2}	STAT 130 {Sem 2}	ZULN 101 {Sem 2} <i>or</i> Level 1 <i>ELECTIVE</i> {Sem 2}
YEAR 2	BIOL 200 {Sem 1}	BIOL 204 {Sem 1}	GENE 240 {Sem 1}	Level-2 BIOL MODULE {Sem 1}
	RDNA 202 {Sem 2}	Level 1 <i>or</i> 2 <i>ELECTIVE</i> {Sem 2}	Level 1 <i>or</i> 2 <i>ELECTIVE</i> {Sem 2}	Level-2 BIOL MODULE {Sem 2}
YEAR 3	BIOL 300 {Sem 1}	BIOL 321 {Sem 1}	BIOL 324 {Sem 1}	Level-3 BIOL MODULE {Sem 1}
	BIOL 304 {Sem 2}	BIOL 390 {Sem 1 or Sem 2}	Level-3 BIOL MODULE {Sem 2}	Level-3 BIOL MODULE {Sem 2}

#### Industrial Biotechnology

YEAR 1	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1} <i>or</i> MATH 130 {Sem 1/2}	PHYS 110 {Sem 1} <i>or</i> PHYS 131 {Sem 1}
	STAT 130 {Sem 2}	CHEM 120 {Sem 2}	MATH 143 {8C} {Sem 2} <i>and</i> PHYS 133 {8C} {Sem 2}	ZULN 101 (Sem 2) <i>or</i> Level 1 <i>ELECTIVE</i> (Sem 2)
YEAR 2	BIOC 201 {Sem 1}	CHEM 220 {Sem 1}	GENE 240 {Sem 1} <i>or</i> CHEM 210 {Sem 1}	MICR 213 {Sem 1}

	BIOC 212 {Sem 2} <i>or</i> MICR 214 (8C) {Sem 2} <i>and</i> MICR 220 (8C) {Sem 2}	CHEM 230 {Sem 2}	CTEC 233 {Sem 2}	RDNA 202 {Sem 2}
YEAR 3	BIOC 311 {Sem 1}	CHEM 330 {Sem 1}	CTEC 333 {Sem 1}	MICR 320 {Sem 1}
	CTEC 343 {Sem 2}	MICR 304 {Sem 2}	MICR 360 {Sem 2}	Any 1 MODULE (16C) from BIOC 300 {Sem 1} or CHEM 320 {Sem 2} or GENE 330 {Sem 2}

## 6. LIST OF MODULES, SCHOOL OF LIFE SCIENCES (PIETERMARITZBURG)

Module	Name	Semester		Pre-requisite
BIOL 101	Smaller Side of Life	1		None
BIOL 102	Life on Earth		2	None
BIOL 195	Smaller Side of Life (Augmented)	1		None
BIOL 196	Life on Earth (Augmented)		2	None
BIOL 200	Biological Sciences Toolkit	1		64 C @ Level 1; BIOL 101; BIOL 102 & at least 40% in STAT 130
BIOL 204	Plant & Animal Ecophysiology	1		64 C @ Level 1; BIOL 101 & BIOL 102
BIOL 211	Plant Diversity and Use		2	64 C @ Level 1 & BIOL 102
BIOL 213	Invertebrate Diversity & Conservation	1		64 C @ Level 1 & BIOL 102
BIOL 222	Vertebrate Biology		2	64 C @ Level 1 & BIOL 102
BIOL 223	Rangeland Plants: Ecology and Management	1		64 C @ Level 2 & BIOL102
BIOL 300	Professional Communication for Biologists	1		64 C @ Level 2 including 32 C BIOL at level 2 & (STAT 130 or BIOL 200)
BIOL 304	Evolution & Systematics		2	64 C @ Level 2; BIOL 200 & (RDNA 202 <i>or</i> GENE 240)
BIOL 305	Population & Community Ecology	1		64 C @ Level 2 & BIOL 200
BIOL 315	Applied Biotechnology		2	64 C @ Level 2 & BIOL 101
BIOL321	Plant Growth & Development	1		64 C @ Level 2; BIOL101 & BIOL102
BIOL322	Insect Diversity & Evolution	1		64 C @ Level 2 & BIOL102
BIOL323	Advanced Rangeland Ecology	1		64C @ L2 incl. 32C BIOL modules; BIOL223 & (BIOL200 or STAT130)
BIOL324	Evolutionary Animal Physiology	1		64 C @ Level 2 incl. 32C BIOL modules & (BIOL200 or STAT130)
BIOL325	Reproductive & Behavioural Ecology		2	64 C @ Level 2 incl. 32C BIOL modules & (BIOL200 or STAT130)
BIOL390	Biology/Ecology Research Project	1	2	96C@L2 of which 48C in BIOL & (BIOL200 or STAT130)
BIOC 201	Introduction to Biomolecules	1		(BIMI 120 <i>or</i> BIOL 101); CHEM 110 & CHEM 120 <b>May be restricted to students for which this module is core or core elective</b>
BIOC 212	Signal Transduction and Metabolism		2	40% in (BIMI 120 or BIOL 101)
BIOC 300	Cellular Regulation and Signalling		2	BIOC 201 & BIOC 212
BIOC 311	Biochemical Methods	1		BIOC 201; BIOC 212 & PHYS 131

BIOC 315	DNA Chemistry	1		40% in CHEM 220; BIOC 201; (BIOC 202 or BIOC 212) & RDNA 202
BIOC 316	Immune and Protein Chemistry		2	BIOC 201; (BIOC 202 or BIOC 212); CHEM 220 & RDNA 202
GENE 240	Introductory Genetics	1		(BIOL 101 or BIM1 120) & MATH 150
GENE 310	Population and Quantitative Genetics	1		GENE 240 & (STAT 222 or BIOL 200)
GENE 320	Bioinformatics	1		GENE 240 or RDNA 202
GENE 330	Genomics and Molecular Diagnostics		2	GENE 240 & RDNA 202
GENE 350	Animal Genetics		2	GENE240
MICR 213	Bacteriology	1		CHEM 110 & (BIMI 120 or BIOL 101) <b>May be restricted to students for which this module is core or core elective</b>
MICR 214	Introductory Food Microbiology		2	(BIOL 101 or BIM1 120) & CHEM 110
MICR 220	Introductory Microbial Ecology		2	(BIOL 101 or BIM1 120) & CHEM 110
MICR 304	Microbial Processing		2	MICR 213 & RDNA 202
MICR 306	Advances Applications of Fungi and Viruses		2	MICR 215 & RDNA 202
MICR 307	Environmental Microbial Biotechnology	1		MICR 213
MICR 320	Advanced Micro metabolism & Ecophysiology	1		MICR 213 & (BIOC 201 or CHEM 220)
MICR 360	Death & Control of Microorganisms		2	MICR 213
RDNA 202	Molecular DNA Technology		2	(BIOL 101 or BIM1 120); CHEM 110 & CHEM 120 <b>May be restricted to students for which this module is core or core elective</b>

### Modules from another School but core to Industrial Biotechnology programme

Module	Name	Semester		Pre-requisite
CTEC 233	Chemical Analysis		2	CHEM 110; CHEM 120 & (MATH 130, 150 or 195)
CTEC 323	Materials	1		CHEM210 & CHEM220
CTEC 333	Process Technology	1		CHEM 220
CTEC 343	Industrial Chemistry		2	40% in CHEM 330 & CHEM 230

For more information on the modules (e.g. content), please consult the 2020 AES College Handbook on [http://saa.ukzn.ac.za/Forms\\_proce/Handbooks.aspx](http://saa.ukzn.ac.za/Forms_proce/Handbooks.aspx)

## 7. OTHER IMPORTANT INFORMATION

Please note:

- ZULN101 must be passed to complete the degree (rule BR9) UNLESS competent through prior learning, in which case, must get exemption and substitute ZULN101 with another 16 credit elective (rule BR9).
- You are strongly advised to process all required forms before the semester starts.

## **Changes in the registration of modules**

After the initial registration, students may withdraw from some modules and register for others, provided that they are not core modules or modules that impact on progress of the degree. Use a curriculum form and follow the electronic registration procedures.

## **Extended DP**

Not available in 2020 semester 2 due to differences in contact (2019) and online (2020) offerings.

## **Concessions**

In exceptional cases, the Academic Leader for Teaching and Learning (ALT&L) may allow the relaxing of an element of Rule AES-B5. Applications must be submitted at the start of the relevant semester.

### *Criteria:*

- a) To take a module without having met its prerequisite(s):

This is usually only awarded in the last three semesters before completion of the degree; student must have attempted the module before and obtained at least 40% in the prerequisite module; the concession promotes progress (i.e. 'saves a semester'); student is not on Probation; student will not be registered for more than 64C; there is no timetable clash.

*(Please note that you still need to pass the prerequisites).*

- b) Relaxing of other components of the rule:

Must make academic sense and promote progress.

### *Procedures:*

Download and email the appropriate form as outlined above.

## **Practical exemptions**

Students who are repeating a module may be allowed an exemption from repeating the practical component of the module, provided that they meet the criteria below. However, please note that no concession will be given if there has been a change in the content of the practical classes.

### *Criteria:*

Previous class mark  $\geq 50\%$  AND practical mark  $\geq 60\%$  AND practical test mark  $\geq 60\%$  (if applicable for the module).

### *Procedures:*

There is no need to apply. You will be pre-screened based on the 2019 results and will be informed by the module administrator if you are exempted from practicals.

## **Medical and Death certificates**

As per UKZN rules, only medical or death of close family member are acceptable reasons for missing compulsory activities. Medical and Death certificates must be submitted (*only* to the admin office of the School) within one week of the missed practical or test. Students admitted to medical facilities need

to submit a medical certificate on the first day after being discharged. All medical certificates will be confirmed for authenticity (see below).

*(Please note that fraudulent medical certificates and other reports will be forwarded to the university proctor for disciplinary action. This is considered a serious offence requiring university action.)*

### **Mark changes/corrections to tests and practical reports**

These will only be considered within one week of the results having been released to students. It is the student's responsibility to check his/her marks regularly on Student Central. The School will not consider any late requests for mark changes or corrections. The university policy for changes to exam marks will be strictly applied.

### **Change of qualifications**

This pertains to students wishing to transfer from other Schools into SLS. This is discouraged for 2020 semester 2, and will depend on having a valid curriculum for the semester and on module restrictions.

#### *Procedures:*

Download and email the appropriate form as outlined above.

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