

# SCHOOL OF LIFE SCIENCES (Pietermaritzburg campus)

## 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.

There are staff members available for consultation throughout registration. Please ask at the School's administration offices.

You can find all relevant information regarding your qualification and rules of your degree in the 2018 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.

*(If you need assistance with the registration process, you are strongly advised to consult with a staff member prior to the start of term; contact the School's administration office for details of the scheduled consultation sessions)*

### 1. GENERAL

#### a) Students on Good Academic standing (on GREEN)

Most students on good academic standing (GREEN) can register for modules online. Should you need advice, and if you have not passed a pre-requisite to study a higher-level module, please see a member of staff on consultation duty.

#### b) Students with a term decision of RISK, RSK2, FPRR, PROB, RAPB

Students who are at risk (RISK and RSK2) or underperforming (FPRR, PROB, RAPB), as per the University Academic Monitoring and Exclusion Policy (ROBOT system), will receive a LEC (Learning Enhancement Checklist) form via email from the College office. Please print it and take it to the academic staff on consultation duty. S/he will provide advice on module selection, probation requirements, information on academic support programmes in the School, and will sign the LEC form. Then, you need to see a student counsellor in the College office (Administration building) and get his/her signature on the LEC form. If you have already done a LEC session in 2015, 2016 or 2017, please take the LEC report with you when you go to the counsellor for signature. If you have not done the LEC assessment in the previous three years, you will have to attend the LEC session. This form must be submitted to the College office for removal of academic hold, after which registration must be done online as mentioned above.

*(If there is a delay in capturing of modules on the system at the college office, keep attending the lectures, practicals and assessments and follow it up with the college office to ensure that your registration is completed for the semester.)*

## 2. QUALIFICATIONS

The qualification for which you are registered is a Bachelor of Science (BSc). This, in turn, can be structured in two ways: a BSc with major(s) or a BSc in a focused programme.

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 4. and 5. below)*

## 3. 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 Zulu 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 second or third year 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 per 7. below.

#### 4. 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.

#### Core modules for majors

##### Biochemistry

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1 or Sem 2}	MATH 150 {Sem 1}	PHYS 131 {Sem 1}
	BIMI 120 {Sem 2}	CHEM 120 {Sem 2}		
<b>YEAR 2</b>	BIOC 201 {Sem 1}	CHEM 220 {Sem 1}		
	BIOC 212 {Sem 2}	RDNA 202 {Sem 2}		
<b>YEAR 3</b>	BIOC 311 {Sem 1}	BIOC 315 {Sem 1}		
	BIOC 300 {Sem 2}	BIOC 316 {Sem 2}		

##### Biology

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	
	BIOL 102 {Sem 2}	STAT 130 {Sem 2}	ZULU 101 {Sem 1/2}	
<b>YEAR 2</b>	BIOL 213 {Sem 1}	Any 1 MODULE from BIOL 204 {Sem 1} or BIOL 205 {Sem 2} or BIOL 222 {Sem 2}		
	BIOL 211 {Sem 2}			
<b>YEAR 3</b>	BIOL 305 {Sem 1}	BIOL 324 {Sem 1}		
	BIOL 304 {Sem 2}	BIOL 315 {Sem 2}		

##### Ecology

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1 or Sem 2}	MATH 150 {Sem 1}	STAT 130 {Sem 1}
	BIOL 102 {Sem 2}			
<b>YEAR 2</b>	BIOL 204 {Sem 1}	BIOL 223 {Sem 1}		
	BIOL 211 {Sem 2} or BIOL 222 {Sem 2}			
<b>YEAR 3</b>	BIOL 322 {Sem 1}	BIOL 323 {Sem 1}	Any 1 module from BIOL 305 {Sem 1} or BIOL 304 {Sem 2} or BIOL 390 {Sem 1 or 2}	
	BIOL 325 {Sem 2}			

## Genetics

<b>YEAR 1</b>	BIOL 101 {Sem 1} or BIMI 120 {Sem 2}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	
		CHEM 120 {Sem 2}	STAT 130 {Sem 2}	
<b>YEAR 2</b>	GENE 240 {Sem 1}			
	RDNA 202 {Sem 2}	BIOL 200 {Sem 1} or STAT 222 {Sem 2}		
<b>YEAR 3</b>	GENE 310 {Sem 1}	GENE 320 {Sem 1}		
	GENE 330 {Sem 2}	Any 1 from or GENE 350 {Sem 2} or AGPS 306 {Sem 2} or BIOL 304 {Sem 2}		

## Microbiology

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	<b>PHYS131</b> {Sem 1}
	BIMI 120 {Sem 2}	CHEM 120 {Sem 2}		
<b>YEAR 2</b>	MICR 213 {Sem 1}	BIOC 201 {Sem 1} or CHEM 220 {Sem 1}		
	MICR 214 (8C) {Sem 2}	RDNA 202 {Sem 2}	MICR 220 (8C) {Sem 2}	
<b>YEAR 3</b>	MICR 307 {Sem 1}	MICR 320 {Sem 1}		
	MICR 304 {Sem 2}	MICR 360 {Sem 2}		

## 5. RULES OF COMBINATION FOR FOCUSED PROGRAMMES

### Rules of combination (core and elective credits)

#### Biological Sciences

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1}	ELECTIVE 1 {Sem 1}
	BIOL 102 {Sem 2}	STAT 130 {Sem 2}	ELECTIVE 2 {Sem 2}	ELECTIVE 3 {Sem 2}
<b>YEAR 2</b>	BIOL 200 (Sem 1)	BIOL 204 (Sem 1)	GENE 240 (Sem 1)	Level-2 BIOL MODULE (Sem 1)
	BIOL 205 (Sem 2)	Level 1 or 2 ELECTIVE 3 (Sem 2)	Level 1 or 2 ELECTIVE 4 (Sem 2)	Level-2 BIOL MODULE (Sem 2)
<b>YEAR 3</b>	BIOL 300 (Sem 1)	BIOL321 (Sem 1)	BIOL324 (Sem 1)	
	BIOL 304 (Sem 2)	BIOL 390 (Sem 1 or Sem 2)	Level-3 BIOL MODULES (Sem 2)	

## Industrial Biotechnology

<b>YEAR 1</b>	BIOL 101 {Sem 1}	CHEM 110 {Sem 1}	MATH 150 {Sem 1} or MATH 130	PHYS 110 {Sem 1} or PHYS 131 {Sem 1}
	BIMI 120 {Sem 2}	CHEM 120 {Sem 2}	MATH 143 (8C) {Sem 2} and PHYS 133 (8C) {Sem 2}	ELECTIVE 1 {Sem 2}
<b>YEAR 2</b>	BIOC 201 {Sem 1}	CHEM 220 {Sem 1}	GENE 240 {Sem 1} or CHEM 210 {Sem 1}	MICR 213 {Sem 1}
	BIOC 212 {Sem 2} or MICR 214 (8C) {Sem 2} and MICR 220 (8C) {Sem 2}	CHEM 230 {Sem 2}	CTEC 233 {Sem 2}	RDNA 202 {Sem 2}
<b>YEAR 3</b>	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 from BIOC 300 {Sem 1} or CHEM 320 (Sem 2) or GENE 330 {Sem 2}

## 6. LIST OF MODULES

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 & 40% in STAT 130
BIOL 204	Plant & Animal Ecophysiology	1		64 C @ Level -1 & BIOL 101 & BIOL 102
BIOL 205	Modern Applications of Molecular Biology		2	64 C @ Level -1 & CHEM 110 & STAT 130
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 300	Professional Communication for Biologists	1		64 C @ Level -2 including 32 C BIOL at level 2 & (STAT 130 or BIOL 200)
BIOL 223	Rangeland Plants: Ecology and Management	1		64 C @ Level -2, BIOL102
BIOL 304	Evolution & Systematics		2	64 C @ Level-2 & BIOL 200 & BIOL 205 or RDNA 202 or 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		64C @ L2 incl. BIOL101 and BIOL102
BIOL322	Insect Diversity & Evolution	1		64C @ L2 incl. BIOL102
BIOL323	Advanced Rangeland Ecology	1		64C @ L2 incl. 32C BIOL modules. BIOL200 or STAT130. BIOL223.
BIOL324	Evolutionary Animal Physiology	1		64C @ L2 incl. 32C BIOL modules. BIOL200 or STAT130.
BIOL325	Reproductive & Behavioural Ecology		2	64C @ L2 incl. 32C BIOL modules. BIOL200 or STAT130.

BIOL390	Biology/Ecology Research Project	1	2	96C@L2 of which 48C in BIOL, incl BIOL200 or STAT130
BIMI 120	Introductory Biochemistry and Microbiology		2	40% in CHEM 110
BIOC 201	Introduction to Biomolecules	1		(BIMI 120 or BIOL 101); CHEM 110 & CHEM 120
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%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 BIMI 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 or BIOL 205
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)
MICR 214	Introductory Food Microbiology		2	(BIOL 101 OR BIMI 120) & CHEM 110
MICR 220	Introductory Microbial Ecology		2	(BIOL 101 OR BIMI 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 BIMI 120); CHEM 110 & CHEM 120

### 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 2018 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).
- It is the students' responsibility to collect all types of signed forms from the School's office and submit them to the the College office.
- For modules offered by other Schools (e.g. STAT, ZULU, etc.), students must go to the relevant School for advice and signatures.

*(You are strongly advised to get advice and process all required forms before lectures start)*

### 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 registration procedures.

### Extended DP

This is only for a module being repeated and this registration means that students only pay a small proportion of the fee to write the exam, i.e. students do not attend lectures and practical classes, and do not write tests. Consequently, this is only allowed under very special circumstances (e.g. last outstanding module for the degree). Please collect the relevant form from the School's office and hand it in for consideration by the ALT&L.

*(This is different from a practical concession, please see below)*

### 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:

Please collect the relevant form from the School's administration offices and submit the completed form at the School's office for consideration by the ALT&L. It is strongly advised that you first consult a staff member on duty to discuss your options.

### **Practical exemptions**

Students who are repeating a module may apply for exemptions from repeating the practical classes, 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:

Please collect the relevant form from the School's administration offices and submit the completed form at the School's office for consideration of the module coordinator. Completed forms have to be submitted as early as possible during the registration period.

*(Please note that you must continue to attend practical classes until you are officially informed that your application was approved)*

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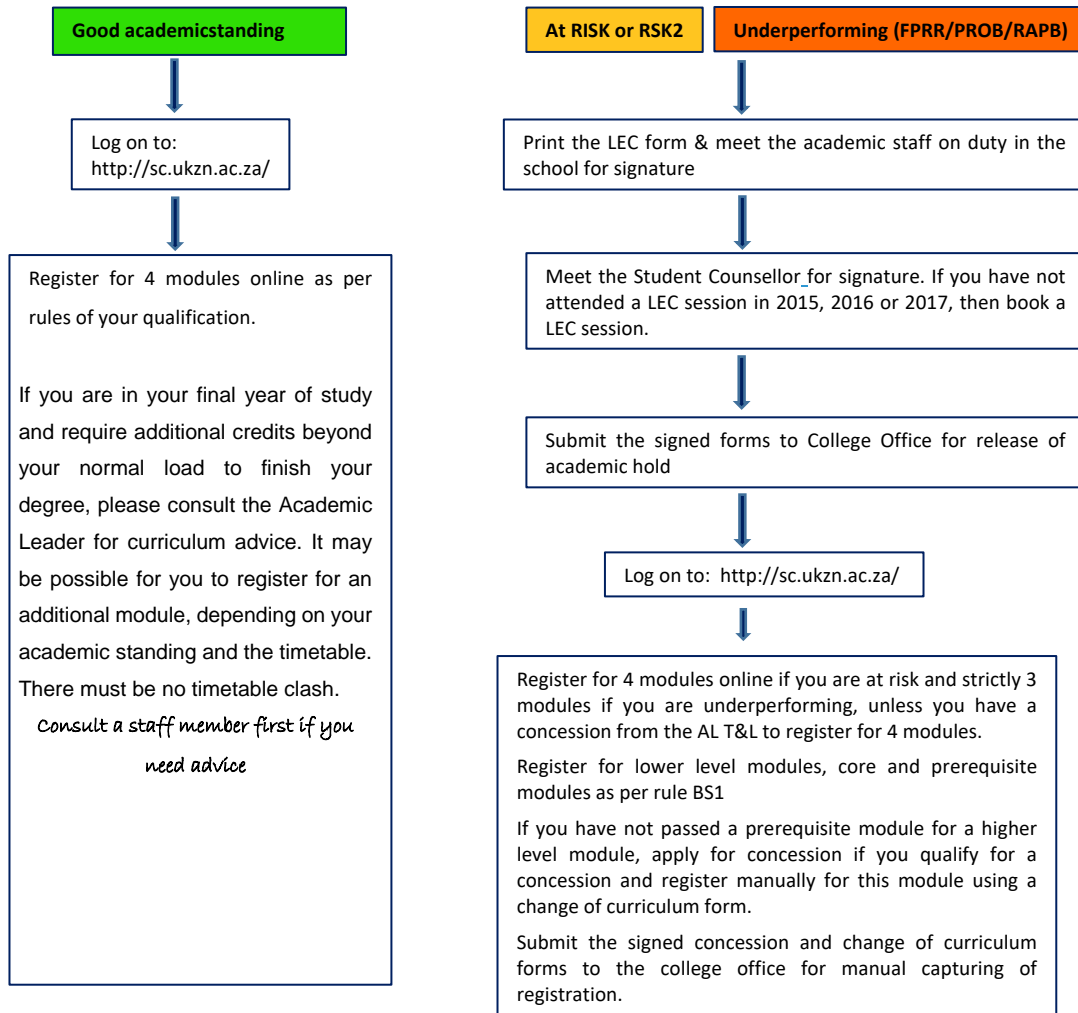
R. Tshibangu, B. Varghese, P. Watt

School of Life Sciences, UKZN, 4/10/2017, updated 15/5/2018



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## QUICK STEP BY STEP REGISTRATION



2018 PIETERMARITZBURG CAMPUS MODULE BLOCKS						
LEVEL ONE SEMESTER TWO						
COLLEGE	A	B	C	D	E	F
Agriculture, Engineering & Science	MATH143 A1	BIOL196	BIOL102	CHEM110 R3	CHEM120 R4	BIMI120
	MATH196	CHEM173	CHEM196	ENVS120	COMP102	COMP107
	PHYS120	COMP106	ENAG1DE	MATH142	ENAG1MT	MATH130 R2
	PHYS133 A2	STAT130 R3	FSCI120	MATH194 (BCom4) R2	STAT130 R4	MATH141
			MATH140 R2	STAT140		NUTR124
		PHYS196			STAT130 R5	
Humanities	ACCS110 R5	ACCS120 R2	DRAM102	ACCS120 R3	ACCS120 R4	ACCS120 R5
	ANTH102	BILA120	PHIL102	AHIS110	ENGL102 R2	CFSD102
	BIST120	DIGA101	PSYC102 R1	HIST105	ETHS102	FIAR102
	EDDE120	ENGL102 R1	SOCY102	POLS102 R1	PRTH110	LIIS120
	FREN102 R1	FREN102 R2	ZULN101 R9	ZULN102		POLS102 R2
	MECS102	PSYC102 R2		ZULN101 R10		RELG101
	ZULN101 R7	ZULM102				SYTH120
						ZULN101 R12
Law & Mng	ACCT103	ECON1D0	ISTN100 R2	ACCT102	ECON106 repeat only	ECON102 R2
	MGNT102	ISTN102	LAWS2LC R1	ISTN103 R1	EDUN103	ISTN103 R2
		LAWS1FL	MGNT1SL (BCom4)		LAWS2LC R2	LS: LAWS1AS
					ECON102	
LEVEL TWO SEMESTER TWO						
COLLEGE	A	B	C	D	E	F
Agriculture, Engineering & Science	BIOC212	ANSI209	AGEC240	AGPS200	AGEN225	ANSI201
	BIOL222	CHEM230	AGEC270	AMET211	COMP203	CPHY212
	HYDR220	COMP201	BIOL205	AMET212	HPHY200	ENVS211
	MATH251	GEOG220	NUTR260	BIOL211	PHYS212	MATH246
		PPTH214	RDNA202	CTEC233	SSCI230	MICR214 F1
		SSCI260	STAT240	DIET237	STAT222	MICR220 F2
			MATH243			
Humanities	DRAM204	DRAM203	ANTH202	BIST220	MECS212	BILA240
	ENGL202	DRAM270	DIGA210	CFSD202	POLS201 R2	ETHS201
	FIAR201	GEST202	EDDE220	FREN202	PRTH220	POLS207
	POLS206	PSYC222	PHIL205	PSYC209	PSYC204	ZULN202
	PRTH290	ZULM202	SYTH222	SOCY202	ZULM203 R2	
				FIAR203	HIST206	
Law & Mng	ISTN212	ACCT221	ACCT231	ACCT212	ECON202	ENTR2IE
	LS: LAWS2LW A1		SCMA20M R2		ECON204	
	LS: LAWS2HR A2					
	FINA202					
LEVEL THREE SEMESTER TWO						
COLLEGE	A	B	C	D	E	F
Agriculture, Engineering & Science	ANSI370	AGPS320	AGEC370	ANSI311	AGPS308	AMAN300
	BIOL315	BIOC300	AGPS306	MATH301	BIOL325	CHEM320
	COMP304	BIOL304	BIOC316	ENAG35A	CHEM310	ENAG3FE
	CTEC313	ENVS322	BIOL300	FDSC360	COMP314	ENVS390
	MATH323	MATH327	CTEC343	HYDR322 D1	ENAG4SW	GENE350
	MICR304		GEOG330	HYDR330 D2	GENE330	MATH331
	SSCI320		MATH342	MICR360	HYDR324	PPTH360
			PHYS368	PHYS367	MATH340	STAT350
			SSCI373	GEOG320	PPTH370	
			STAT305			
DIET351 / DIET360 / FSMT333 / NUTR342 / NUTR350 - no specific block						
Humanities	DIGA302	AHIS330 B1	ENGL301 C2	ANTH302	AHIS340	CFSD304
	DRAM305	BIST310	ENGL306 C1	CFSD303	BIST340 E1	DIGA311
	FREN302	DRAM303	ETHS302 C1	DRAM309	BIST341 E2	DRAM311
	PSYC301	DRAM370	ETHS304 C2	MECS312	DRAM310	EDDE303 F1
	SYTH370	HIST302 B1	FIAR302	POLS303	POLS304 E1	EDDE304 F2
	ZULM307	MECS302 B2	MECS311	RELG306	POLS310 E2	HICH311
		MECS322 B1	PRTH330	SOCY306	PSYC306 E2	PHIL305 F1
			PSYC304		ZULN302	PHIL307 F2
					SOCY303	
					ZULM303	
Law & Mng	ECON309	FINA321	ISTN3ND	ECON370 D2	MGNT310 E1	ISTN3SI
	SCMA306 A1	HRMG3CE B1	LAWS3JP	ECON314 D1	MGNT315 E2	MARK302 F1
	SCMA311 A2	HRMG30D B2		LS: LAWS3CS D1		MARK305 F2
				LS: LAWS3DL D2		
ACCT312 / ACCT322 / ACCT332 / ACCT342 no specific block						