

Faculty of Science

Augmented Remote Teaching, Learning, and Assessment (ARTLA)

Second Semester 2021

For the academic offering in the 2nd semester of 2021, Stellenbosch University has planned for three scenarios, depending on the national and DHET lockdown level restrictions regarding the allowed number of students on campus and the allowed number of people in on-campus venues. In all three scenarios we will be offering **Augmented Remote Teaching, Learning, and Assessment (ARTLA)**.

In the Faculty of Science this means that a significant component of teaching and learning will continue **asynchronously** and all students on a **rotational basis** will have the benefit of **compulsory synchronous** teaching and learning **activities**. There is flexibility and differentiation in synchronous teaching and learning approaches. This is to accommodate the disciplinary differences, concerns about health and safety of staff and students, and the availability of COVID-compliant venues and labs with suitable access and technology. Together we will strive for an enriching teaching and learning experience while promoting our health and safety.

In practice, the **default approach** to ARTLA in the Faculty of Science will be:

All **lectures will be offered asynchronously**, that is, the lecturer material and videos will be uploaded on the SUNLearn site for the module and students will be required to read/watch these in preparation for compulsory synchronous teaching and learning activities.

For the **compulsory synchronous teaching and learning activities** students will need to participate at a scheduled timetable slot in a

- f2f session (eg. practical, field work)
- or
- live session via Teams.

There is no expectation that both modes are available for a teaching and learning during a scheduled timetable slot.

Further approaches include:

- **Face-to-face (f2f):** The teaching and learning activity is offered in a physical classroom or facility with lecturers/facilitators and students present in person. F2F learning allows for different teaching and learning methodologies to be used and can contain a blend of traditional classroom methods and online interaction.
- **Augmented**
 - **Type 1:** Synchronous (real-time) streaming and recording of f2f learning opportunities with limited number of students in venue.

- **Type 2:** Asynchronous provision of material and f2f learning opportunities (with limited number of students in venue) are used to explain pre-recorded material.
- **Type 3:** Asynchronous provision of material and f2f learning opportunities (with limited number of students in venue) are used for question and answer sessions.
- For some modules, a compulsory synchronous teaching and learning activity for the week may be offered as a f2f session during some timetable slots and as a live session via Team during some other timetable slots.

The tables hereafter indicate the teaching and learning approach that will be used for second semester modules. Further details will be available in the module frameworks on SUNLearn from 10 August 2021. Additional information on the academic offering for the 2nd semester will be shared from time to time and therefore we encourage you to keep an eye on the [Faculty of Science Undergraduate Students](#) website and the [COVID-19 Latest Updates](#) website. You can also send specific queries to scienceadmin@sun.ac.za.

27 July 2021

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
First-year modules					
Science in Context I78	Augmented Type 2	Augmented Type 2	n/a	Invigilated on-campus	online
Applied Mathematics I44	Augmented Type 2/3	Augmented Type 2/3		Invigilated on-campus	online
Biology I44	Augmented Type 3	n/a	f2f and Augmented Type 1 and 2	Some online/ some invigilated on campus	Weekly quizzes
Biology I54	Augmented Type 3	n/a	f2f and Augmented Type 2	Some online/ some invigilated on campus	Weekly quizzes
Chemistry I44	Augmented Type 2/3	f2f	f2f and online	Invigilated on campus	Concept Quizzes, Prac Reports, etc online
Computer Science I44	Augmented Type 2/3	Augmented Type 3	Augmented Type 3	Invigilated on-campus	online
Computer Skills I71	Augmented Type 2/3	n/a	n/a	online	online
Mathematics I44	Augmented Type 1	Augmented Type 3		Invigilated on-campus	online
Mathematics I54	Augmented Type 2	Augmented Type 3		Invigilated on-campus	online
Physics I44	Asynchronous online	Synchronous: f2f attendance is advised, but synchronous online attendance will also be accommodated.	Synchronous: f2f attendance is advised, but synchronous online attendance will also be accommodated.	Invigilated on-campus	online
Physics (bio) I54	Asynchronous online	Augmented Type 2	Augmented Type 2 (Mostly do-at-home pracs with f2f in labs as possible)	online	online
Physiology I44	Augmented Type 3	Augmented Type 3	n/a	Invigilated On-campus	online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Second-year modules					
Applied Mathematics 244	Augmented Type 2/3	Augmented Type 2/3		Invigilated on-campus	online
Biochemistry 244	Online	Online	Augmented Type 2 & 3 Practicals 1-3: Fully online Practical 4: Online learning opportunities and compulsory f2f experiments in the laboratory (with limited number of students in venue)	Online Invigilated	online
Biodiversity and ecology 244	Augmented Type 2 with as much f2f as possible (at least 2 lectures per week will be synchronous FTF)	No Tutorials	Most practicals will be f2f – some practical component is online naturally (assignments)	Invigilated on-campus if possible	Invigilated on-campus if possible
Biodiversity and ecology 254	Augmented: Type 2 and 3	N/A	Online + Augmented Type 2/3	Online + Tutorial Tests, Quizzes, Online	Tutorial Tests, Quizzes, Online
Biodiversity and ecology 264	Augmented Type 2 and 3	n/a	Some practicals will be f2f + synchronous online and asynchronous online	Online and invigilated on campus	Online quizzes and assignments
Chemistry 254	f2f if possible If not, augmented 1/2/3	f2f if possible If not, augmented 1/2/3	Combination of f2f and online	Invigilated on campus	f2f if possible If not augmented 1/2/3
Chemistry 264	Augmented Type 2/3	f2f if possible or online	Combination of f2f and online	Invigilated on-campus	mixed
Computer Science 244	Augmented Type 1	Augmented Type 3	Augmented Type 3	Invigilated on-campus	online
Computer Skills 272	Augmented Type 2	Augmented Type 2	Augmented Type 3	invigilated on-campus	online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Earth science field skills 272	Augmented Type 3	Augmented Type 3	Augmented Type 3	online	online
Environmental Field Skills 271	Augmented Type 3	Augmented Type 3	Augmented Type 3	online	Online
Geology 244	Augmented Type 1	Augmented Type 1	Augmented Type 1	online	online
Geology 254	Augmented Type 2/3	Augmented Type 2/3	Augmented Type 2/3	Invigilated on-campus	online
Mathematics 244	Augmented Type 1	Augmented Type 3		Invigilated on-campus	online
Mathematics 278	Online with synchronous live Teams sessions	Online with synchronous live Teams sessions	n/a	online	online
Microbiology 244	Asynchronous Online, with synchronous live Teams sessions for questions and answers	Asynchronous Online, with synchronous live Teams sessions for questions and answers	f2f	Invigilated on-campus With the option to go online	Online
Numerical methods 262	Augmented Type 2/3	Augmented Type 2/3		Invigilated on-campus	online
Physics 254	f2f	f2f		Invigilated on-campus	Mixed
Physiology 244	Augmented Type 3	Augmented Type 3	Augmented Some online; some f2f	Invigilated on-campus	online
Scientific computing 272	Augmented Type 2	Augmented Type 2	Augmented Type 2	Invigilated on-campus	online
Third-year modules					
Applied mathematics 354	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online
Applied mathematics 364	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Applied chemistry 344	f2f	f2f	f2f	Invigilated on campus	f2f and online
Biodiversity and ecology 344	Augmented Type 2/3	na	f2f and some synchronous, seminars online	online	Tutorial Tests, Quizzes, etc online
Biodiversity and ecology 345	Augmented Type 2/3	n.a.	f2f	Invigilated on-campus	Online
Biodiversity and ecology 354	f2f combined with online lectures (depending on what is allowed and preferred by lecturer)	n/a	f2f	module tests invigilated on-campus	Tests, Quizzes and essays Some online, some invigilated on-campus
Biodiversity and ecology 364	f2f	n.a.	f2f	Invigilated on-campus	Online
Biochemistry 345	Augmented Type 3	Online	n/a	invigilated on-campus	Tutorial Tests - online
Biochemistry 365	Section A Asynchronous lectures Section B: Asynchronous lectures	n/a	Section B: Online synchronous virtual practical (8 sessions) f2f practical (2 sessions) Section B: f2f practicals	Section A: Data analysis Practical report Online test Section B: Practical report Online test	Section A: Online tasks Section B: Online tasks
Biomathematics 374	f2f	f2f	f2f	invigilated on-campus	online
Chemistry 344	f2f and online	f2f	f2f	Invigilated on campus	Blend of f2f and online
Chemistry 364	f2f	f2f	f2f	Invigilated on campus	f2f and online
Computer Skills 372	Augmented Type 2/3	n/a	n/a	invigilated on-campus	Tutorial Tests, Quizzes, etc online
Computer Science 344	Augmented Type 2/3	Augmented Type 3	Augmented Type 3	invigilated on-campus	online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Computer Science 345	Augmented Type 2/3	Augmented Type 3	Augmented Type 3	invigilated on-campus	online
Computer Science 354	Augmented Type 2/3	Augmented Type 3	Augmented Type 3	invigilated on-campus	online
Earth science field skills 374			Augmented Type 2	Online	Online
Environmental Field Skills 372			Augmented Type 2	Online	Online
Geology 344	Augmented Type 2	Augmented Type 2	Augmented Type 2	online	online
Geology 354	Augmented Type 2	Augmented Type 2	Augmented Type 2	online	online
Geology 364	Augmented Type 2	Augmented Type 2	Augmented Type 2	online	online
Materials Technology 345	Augmented Type 2/3	f2f	f2f	Invigilated on-campus	Online, including projects online
Mathematics 344	f2f	f2f		invigilated on-campus	
Mathematics 345	f2f	f2f		invigilated on-campus	
Mathematics 365	f2f	f2f		invigilated on-campus	
Mathematics 378	Online with synchronous live Teams sessions	Online with synchronous live Teams sessions	n/a	online	online
Microbiology 354	Online lectures and online discussions of assignments	Online, with live Teams discussions	Online and f2f with limited number of	Invigilated on-campus	Online tutorial tests and quizzes

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
			students in prac lab allowed	But prefer online	
Microbiology 364	Augmented Type 3 : Asynchronous provision of material and f2f learning opportunities are used for question and answer sessions		f2f with limited number of students in the lab. Same mode as 2020	Assessments invigilated on campus. With the option to go online	Online quizzes mostly and f2f during weekly meetings
Physics 342	f2f	f2f		Invigilated on-campus	Mixed
Physics 344	f2f	f2f		Invigilated on-campus	Mixed
Physics 352	f2f	f2f		Invigilated on-campus	Mixed
Physics 384	f2f	n/a	f2f	Year module – tests invigilated on-campus	
Physiology 344	Augmented Type 3	Augmented Type 3	Augmented Some online; some f2f	invigilated on-campus	online
Physiology 364	Augmented Type 3	Augmented Type 3	Augmented Some online; some f2f	invigilated on-campus	online
Scientific Computing 372	Augmented Type 2	Augmented Type 2	Augmented Type 2	invigilated on-campus	online
Modules for the Faculty of Engineering and Faculty of Medicine and Health Sciences					
Special physics 142	Augmented Type 3	Augmented Type 3	N/A	invigilated on-campus	Online tut tests – does count towards Class mark.

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Chemistry C 152	n/a	n/a	Depends entirely on class size. If <68 all pracs will be f2f. If >68 (likely) each prac will consist of one f2f lab session and one experiment to be done at home. ERTLA option is to have at-home pracs only (as in 2020)	N/a (project-type assessment) (final test in practical and during semester)	Prac reports submitted online If needed quizzes online
Engineering Physics 152	Augmented Type 2	Augmented Type 2	Online (do at home pracs)	invigilated on-campus	online
Applied mathematics B 154	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online
Engineering mathematics 145	Augmented Type 1	Augmented Type 1		invigilated on-campus	online
Chemistry C 254	Augmented Type 3	f2f (half class at a time)	F2f (half class at a time)	Invigilated on campus	f2f and Online
Applied mathematics B 242	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online
Applied mathematics B 252	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online
Engineering mathematics 242	Augmented Type 2/3	Augmented Type 2/3		invigilated on-campus	online
EXTENDED DEGREE PROGRAMMES					
Mathematics 176	Augmented Type 2/3	Augmented Type 2/3	n/a	invigilated on-campus	Tutorial Tests, Quizzes, etc online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
Mathematics 186	<p>Augmented Type 2</p> <p>Students will be divided into 2 groups to accommodate the 50% restriction. Student groups will attend lectures in a computer venue on a rotational basis. A typical lecture day will have one group in the computer lab with the lecture while the other group will work online remotely on the same online content.</p>	<p>Augmented</p> <p>The (two) groups will attend 60 minute tutorials on a rotational basis. A typical tutorial session will have one group in a venue with the lecturer.</p> <p>Thus:</p> <p>The weekly 2-hour tutorial will be divided into 2 sessions:</p> <p>Group 1: 11:00 - 12:00</p> <p>Group 2: 12:00 - 13:00</p>	n/a	invigilated on-campus	online
Chemistry 176	f2f	f2f	<p>Augmented</p> <p>3x online pracs via learning Science UK resource centre. And if possible, 2 days of practicals during the second semester.</p>	invigilated on-campus	online
Physics 176	<p>Augmented Type 2</p>	<p>Augmented Type 3</p>	<p>f2f</p> <p>(1 practical spread over whole semester for small sections of the class at any time)</p>	invigilated on-campus	Online

	Lectures	Tutorials	Practicals	Assessment	
				Tests & Exams	Tutorial Tests, Quizzes, etc
University Practice 176	<p>Asynchronous online</p> <p>Five weeks of Achieving Academic Success by Mrs M Coetzee</p> <p>Six weeks of iFlourishWell4Life by Dr A du Plessis</p> <p>Two weeks of Science in Practice by Dr W Stone (possibly f2f but not confirmed yet)</p>	n/a	<p>Considering a f2f trip to the Stellenbosch Water Treatment Plant with Dr Stone (if practical due to COVID) as part of the Science in Practice section. This will also be in preparation for the Science in Practice project of the second semester.</p>	A series of online assessments and activities	
Computer Skills 176	Augmented Type 2/3	Augmented	Augmented	online	online
Scientific Communication Skills 116	<p>Augmented:</p> <p>6 timeslots/week 3 x f2f 3 x online</p> <p>1 theory lesson f2f</p>	<p>Augmented:</p> <p>1 timeslot/week: F2f writing in class 1 timeslot/week (not compulsory): Q & Answer session f2f Online: Reading lab Language activity</p>	n/a	<p>Summative (flexible assessment): A series of in class and online assessments and activities. Learning outcomes are ultimately tested by the completion of a written project.</p>	