APPENDIX I : SCHEDULE FOR COURSE MODULES

Postgraduate course modules offered by the Department of Civil Engineering, University of Stellenbosch

- The table below indicates when modules are scheduled to be presented over the 3 year period from January 2019 through December 2021. **Provisional dates** are indicated where available. These are updated regularly in the electronic version of this Brochure on the Civil Engineering website (p.1), under Programmes/Postgraduate and must be confirmed with the Secretary of the hosting division.
- In the table below course modules are listed alphabetically, firstly according to field and secondly to course module title. Notes regarding the content of course modules are provided in Appendix II in the same order. (Please note that a list of 'Forthcoming M Eng (R) Block Courses' arranged according to date, is also available on the website.)
- **Compulsory and recommended combinations for the respective fields of specialisation are indicated in Section 6 of the Brochure.**
- **MEng candidates will be registered on an 8 level code and PDE students will be registered on a 7 level code.**
- Unless indicated otherwise (refer to numbered footnotes) all the courses below are presented on the Campus of Stellenbosch University at the Faculty of Engineering.
- Enquiries and registration regarding the courses below can generally be made by e-mail to the reference provided with each field or by default to the Secretary of every division indicated in the Table below.
- Full time students must complete four semesters of Mentorships or Assistantships during the period of Postgraduate Studies.
- **Candidates may be required to pay for course notes, lunches, handbooks or other study material with regard to block courses or studies in general. These fees are paid directly to the Secretary of the relevant division and do not form part of your Tuition Fees.**

This schedule was last updated on 1/02/2019

Enquiries: Ms Janine Myburgh and Ms Tsholo Seroalo
E-mail: civilcourses@sun.ac.za (Short course registration).

Submodule registration: Ms Natalie Scheepers: civilacademic@sun.ac.za (Course registration)

Course Module Title and Number	Previous Code	SAQA Credits	Format	Availability per Semester					
				2019		2020		2021	
Civil Engineering Informatics				**1**	**2**	**1**	**2**	**1**	**2**
Software techniques for graphs and networks 811	MT09	15	Semester	As required / On demand					
Construction Engineering and Management				**1**	**2**	**1**	**2**	**1**	**2**
[1] Construction Management Programme (874 13861)		30	Block	**16 Jun – 12 Jul**		**X**		**X**	
Construction Project Management (10821-812)		15	Block		**21-23 Aug 31 Oct & 1 Nov**				**X**
Engineering and Construction I (Law) (10824-842)		15	Block			**X**			
Project Risk Management (10851-812)		15	Block	**18-19 March 8-10 May**				**X**	
Infrastructure Management (13002-811)*		15	Block	***Modules currently not offered***					
Infrastructure Procurement (13003-811)*		15	Block						
Project Economics and Finance (58157-812)*		15	Block						
Leadership and Environment (13686-874)*		15	Block						
Project Management * (Engineering Management (51373-812))		15	Block						

[1] *The CMP is an extremely intensive high level management course of 4 weeks, offered annually. A substantial course fee applies also to registered postgraduate students. Admittance for Degree purposes subject to special selection criteria.*

* *Modules currently not offered*

Course Module Title and Number	Previous Code	SAQA Credits	Format	Availability per Semester					
				2019		2020		2021	
Geotechnical Engineering				1	2	1	2	1	2
Applied Geo mechanics (10814-812)	G03	15	Block		**1-5July**				
Advanced Geotechnics (10809-812)	G04	15	Block		**15-19 July**				
Foundation Design (10829-812)	G01	15	Block	**1-5 April**					
Soil Behaviour (10861-842)	G02	15	Block	**15-19 April**					
Pavement Engineering				1	2	1	2	1	2
Advanced Bitumen Technology (10785-812)	P08	15	Block			**X**			
Flexible Pavement Design (10826-842)	P02	15	Block			**X**			
Pavement Construction (10841-842)	P03	15	Block					**X**	
Pavement Evaluation & Rehabilitation (11206-812)	P06	15	Block					**X**	
Pavement Management Systems (10844-842)	P05	15	Block			**X**			
Pavement Materials I (Granular & Cemented) [10845-812]	P01	15	Block	**28 Jan - 1 Feb**					
Pavement Materials II (Asphalt) [10846-812]	P04	15	Block		**26 – 30 Aug**				
Pavement Materials III (BSM-foam/emulsion) [10848-842]	P09	15	Block	**13 - 17 May**					
Rigid Pavement Design (10857-812)	P07	15	Block						
Structural Engineering						1	2	1	2
Probability and Risk Analysis in Civil Engineering (10850-812)	MT02	15	Block					As required / On demand	
Continuum mechanics and finite element methods (10822-842)	MT04	15	Semester						
Structural Dynamics (10866-812)	MT11	15	Semester						
Advanced Structural Steel Design (10811-812)	MT12	15	Semester			**X**			
Advanced Structural Concrete Design (10810-812)	MT13	15	Block	**4-5 March** **29-31 May**					
Structural Fire Engineering		15	Block & Online	**13-14 June**					

Seismic Design of building structures (11652-813)	MT14	15	Block						
Advanced Mechanics of Materials and Modelling	MT05	15	Semester						
Structural Optimization		8	Block						
Cement-based Materials		15	Semester			X			

Course Module Title and Number	Previous Code	SAQA Credits	Format	Availability per Semester					
				2019		2020		2021	
Transportation Engineering				**1**	**2**	**1**	**2**	**1**	**2**
Geometric Road Design (10831-812)	T01	15	Block						
Public Transport (10853-842)	T02	15	Block		**4-8 Nov**				
Traffic Engineering (10874-812)	T03	15	Block	**27-31 May**					
Traffic Flow Theory (10875-812)	T05	15	Block						
Transport Economics (21008-812)	T07	15	Block						
Transportation Planning (10877-812)	T06	15	Block						
Transportation Safety (10878-812)	T04	15	Block						
Intelligent Transport Systems (13004-841)	T08	15	Block		**12-16 Aug**				
Human Factors in Traffic Collisions (11423-814)		15	Block		**2-6 Sept**				
Water Engineering				**1**	**2**	**1**	**2**	**1**	**2**
Hydraulic Structures (10834-812)	W01	-	Block*	**21-24 May**				**X**	
Storm Water and Drainage systems (10858-842)		-	Block			**X**			
Flood Hydrology (10827-812)	W05	-	Block*				**Aug/Sept**		
Water Resources Management (10879-842)	W06	-	Block*	**25-28 March**					**Aug/Sept**
Pipeline Hydraulics & Pump station design	W07	-	Block*		**Nov**				
Water Networks and Services Planning (13000-811)	-	-	Block*		**7-9 Oct**				
Water and Wastewater Treatment	W08	-	Block	**24-26 June**				**X**	
Special Hydraulics (10862-812)	-	-	Block*						
Special Hydrology (10864-842)	-	-	Block*						
Port Engineering short course	W04	--	Block		**19-23 Aug**				**X**
Coastal Engineering short course	W03	-	Block				**X**		
Numerical simulation of fluids		-	Semester			**X**			

Notes: *Modules do not count SAQA credits; 3 modules are compulsory for M[R] students as agreed by the Supervisor.

YEAR					2019				2020				2021			
TNPA PORT & COASTAL ENGINEERING POSTGRADUATE PROGRAMME					Quarter				Quarter				Quarter			
Module		**Code**	**SAQA Credit**	**Type**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**	**1**	**2**	**3**	**4**
Coastal Processes & Field Data Collection (65498-822)	C	W03-1	15	Quarter						W03-1						
Numerical and Physical Modelling (65501-823)	C	W03-2	15	Quarter						W03-2						
Coastal & Port Structures (65528-854)	C	W03-3	15	Quarter							W03-3					
Coasts & Ports and the Environment (65536-855)	C	W03-4	15	Quarter		W03-4								W03-4		
Port Planning and Design (65552-832)	C	W04-1	15	Quarter					W04-1							
Port Management (65560-833)	E	W04-2	15	Quarter		W04-2								W04-2		
Port Infrastructure and Equipment (65579-864)	E	W04-3	15	Quarter					W04-3							
Dredging and Port Maintenance (65587-865)	E	W04-4	15	Quarter	W04-4								W04-4			
Coastal Engineering Short Course *	B+C	*W03-0*	-	Block							W03-0					
Port Engineering Short Course *	B+C	*W04-0*	-	Block			W04-0								W04-0	
Numerical Simulation of Fluids	E	App.M.	15	Semester					App.M.							

LEGEND:

C = Compulsory Module, E = Elective Module, B = Block

* **Short course:** 1 week full time attendance within the semester; **Students do not attain credits with Short Courses** but Port & Coastal Eng. students must attend them.

Module: 3.5 weeks with one 4-hour lecture normally on Tuesday and Thursday mornings followed by assessment.

Modules from other Departments or Faculties

- Full timers and part timers have same module load (no compulsory extra courses for full timers)
- M Eng. (Research) need to pass 5 modules minimum (5 of which are compulsory) + attendance of both Short Courses as prerequisite for submitting a thesis.
- M Eng. (Structured) need to pass all 8 modules (4 coastal & 4 port modules) + attendance of both Short Courses as prerequisite for submitting a project report.

LEGEND:

C = Compulsory Module, E = Elective Module, B = Block