SC.2   ALPHABETICAL LIST OF MODULES WITH PREREQUISITES

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
ANALYTICAL TECHNIQUES			
Statistics	ATE1A10 / ATE01A1	Descriptive statistics	Refer to Regulation SC 1.2
Statistics	ATE1B10 / ATE01B1	Statistical inference	ATE1A10/ATE01A1
APPLIED MATHEMATICS			
Applied Maths	APM1A1E	Applied Mathematics 1E	Refer to Regulation SC 1.2
Applied Maths	APM1A2E	Applied Mathematics 2E	APM1A1E
Applied Maths	APM1A10	Introduction to Statics	Refer to Regulation SC 1.2
Applied Maths	APM1B10	Introduction to Dynamics	APM1A10 **or** APM1A2E **and** MAT1A01 **or** ASMA1A1 **or** MAT1A3E
Applied Maths	APM2A10	Introduction to Differential equations	MAT1A01 **or** ASMA1A1 **or** MAT1A3E **and** MAT1B01 **or** ASMA1B1
Applied Maths	APM2B10	Introduction to Numerical Analysis	MAT1A01 **or** ASMA1A1 **or** MAT1A3E **and** MAT1B01 **or** ASMA1B1
Applied Maths	APM3A10	Variational Calculus and Optimisation Techniques	APM1B10, APM2A10, APM2B10; MAT2A10 **or** ASMA2A1 **and** MAT2A20 **or** ASMA2A2 **and** MAT2B10 **or** ASMA2B1 **and** MAT2B20 **or** ASMA2B2
Applied	APM3B1	Quantum Computing	APM1B10, APM2A10 **and** APM2B10;

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Maths	0		MAT2A10 **or** ASMA2A1 **and** MAT2A20 **or** ASMA2A2 **and** MAT2B10 **or** ASMA2B1 **and** MAT2B20 **or** ASMA2B2
BIOCHEMISTRY			
Biochemistry		CEM1A10 **or** CEM1C10 (60%) **and** CEM1B01 are compulsory modules for Biochemistry as major.	
Biochemistry	BIO1A1E	Biology 1E	Refer to Regulation SC 1.2
Biochemistry	BIO1A2E	Biology 2E	BIO1A1E
Biochemistry	BIO1A10	Biology	Refer to Regulation SC 1.2
Biochemistry	BIC1B01	Principles of Biochemistry	BIO1A10 **or** BIO1A2E
Biochemistry	BIC2A01	Biochemical Techniques and Enzymology	BIO1A10 **or** BIO1A2E **and** BIC1B01, CEM1A10 **or** CEM1A3E **or** CEM1C10 (60%) **and** CEM1B01
Biochemistry	BIC2B01	Integrated Metabolism and Control	BIC2A01
Biochemistry	BIC3A10	Molecular Biology	BIC2A01, BIC2B01
Biochemistry	BIC3B01	Molecular Physiology	BIC2A01, BIC2B01
BOTANY			

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Botany	CEM1A10 **or** CEM1C10 **and** CEM1B01 **or** CEM1D10 are compulsory modules for Botany as a major.		
Botany	BOT1B10	Plant Diversity	BIO1A10 **or** BIO1A2E
Botany	BOT2A10	Plant Anatomy and Cytology	BIO1A10 **or** BIO1A2E, BOT1B10, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10
Botany	BOT2B10	Plant Physiology	BIO1A10 **or** BIO1A2E, BOT1B10, BOT2A10, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10
Botany	BOT3A10	Biotechnology	BIO1A10 **or** BIO1A2E, BOT1B10, BOT2A10, BOT2B10, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10
Botany	BOT3B10	Plant Taxonomy	BIO1A10 **or** BIO1A2E, BOT1B10, BOT2A10, BOT2B10, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
CHEMISTRY			
Chemistry	CEM1A1E	Chemistry 1E	Refer to Regulation SC 1.2
Chemistry	CEM1A2E	Chemistry 2E	CEM1A1E

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Chemistry	CEM1A3E	Chemistry 3E	CEM1A2E
Chemistry	CEM1A10	Introduction to General Chemistry	Refer to Regulation SC 1.2
Chemistry	CEM1B01	Introduction to Physical and Organic Chemistry	Refer to Regulation SC 1.2 **or** a final mark of at least 60% in CEM1C10
Chemistry	CEM1C10	Introduction to General Chemistry for Biological and Earth Sciences	Refer to Regulation SC 1.2
Chemistry	CEM1D10	Environmental Chemistry: Atmosphere, Hydrosphere and Soil	CEM1C10
Chemistry	CEM2A10	Structural Inorganic Chemistry	CEM1A10 **or** CEM1A3E **or** at least 60% in CEM1C10 **and** CEM1B01, MAT1A01 **or** ASMA1A1 **or** MAT1A3E, MAT1B01 **or** ASMA1B1
Chemistry	CEM2A20	Intermediate Physical Chemistry	CEM1A10 **or** CEM1A3E **or** at least 60% in CEM1C10 **and** CEM1B01, MAT1A01 **or** ASMA1A1 **or** MAT1A3E **and** MAT1B01 **or** ASMA1B1
Chemistry	CEM2B10	Intermediate Organic Chemistry	CEM1A10 **or** CEM1A3E **or** at least 60% in CEM1C10 **and** CEM1B01, MAT1A01 **or** ASMA1A1 **or** MAT1A3E **and** MAT1B01 **or** ASMA1B1

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Chemistry	CEM2B20	Principles of Analytical Chemistry	CEM1A10 **or** CEM1A3E **or** at least 60% in CEM1C10 **and** CEM1B01, MAT1A01 **or** ASMA1A1 **or** MAT1A3E and MAT1B01 **or** ASMA1B1
Chemistry	CEM3A10	Advanced Physical Chemistry	CEM2A10, CEM2A20, CEM2B10, CEM2B20
Chemistry	CEM3A20	Co-Ordination Chemistry	CEM2A10, CEM2A20, CEM2B10, CEM2B20
Chemistry	CEM3B10	Instrumental Chemical Analysis	CEM2A10, CEM2A20, CEM2B10, CEM2B20
Chemistry	CEM3B20	Advanced Organic Chemistry	CEM2A10, CEM2A20, CEM2B10, CEM2B20
COMPUTER SCIENCE			
ACSSE	CSC1A10	Introduction to algorithm development (C++)	Refer to Regulation SC 1.2
ACSSE	CSC1B10	Introduction to data structures (C++)	CSC1A10
ACSSE	CSC2A10	Object oriented programming	CSC1A10, CSC1B10
ACSSE	CSC2B10	Data communications	CSC2A10
ACSSE	CSC3A10	Advanced data structures and algorithms	CSC2A10, CSC2B10
ACSSE	CSC3B10	Computer system architectures	CSC2A10, CSC2B10
ENVIRONMENTAL MANAGEMENT			
Geography	ENM2A10	Environmental problems and sustainable development	GGR1A01 **or** GGR1A2E, GGR1B01
Geography	ENM3A10	Environmental ethics, economics and administration	ENM2A10 **and** GGR2A10 **or** GGR2B10

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Geography	ENM3B10	Environmental assessment, monitoring and mitigation	ENM2A10, ENM3A10
FINANCIAL MATHEMATICS			
Statistics	FMT2B10	Portfolio Theory	STA2A10
Statistics	FMT3B10	Derivative Instruments	STA3A10
GEOGRAPHY			
Geography	GGR1A1E	Geography 1E	Refer to Regulation SC 1.2
Geography	GGR1A2E	Geography 2E	GGR1A1E
Geography	GGR1A01/ GGR01A1	Introduction to Human Geography	Refer to Regulation SC 1.2
Geography	GGR1B01/ GGR01B1	Climatology and Geomorphology	Refer to Regulation SC 1.2
Geography	GGR2A10/ GGR02A2	Pedography and Biogeography	GGR1B01
Geography	GGR2B10/ GGR02B2	Economic and Population Geography	GGR1A01 **or** GGR1A2E
Geography	GGR3A10/ GGR03A3	Geo-Informatics	GGR2A10 **and** GGR2B10

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Geography	GGR3B10/ GGR03B3	Urban Geography and the SA City	GGR2A10 **and** GGR2B10

GEOLOGY

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Geology	GLG1A10	Minerals, rocks and earth dynamics	Refer to Regulation SC 1.2
Geology	GLG1A20	Introduction to geological field methods	GLG1A10
Geology	GLG1B10	Optical and Analytical Mineralogy	GLG1A10
Geology	GLG2A01	Igneous Rocks	GLG1A10 **and** GLG1B10
Geology	GLG2A02	Metamorphic Rocks	GLG1A10 **and** GLG1B10
Geology	GLG2A20	Geological field mapping methods	GLG1B10
Geology	GLG2B10	Structural geology and plate tectonics	GLG2A01 **and** GLG2A02
Geology	GLG3A10	Sedimentology and Stratigraphy	GLG2B10
Geology	GLG3A20	Geological field mapping	GLG2B10
Geology	GLG3B10	Historical Geology	GLG3A10
Geology	APG2A01	Applied Geological Maps and Geospatial Techniques	GLG1A10 recommended
Geology	APG2B01	Applied Engineering and Environmental Geology	GLG1A10, GLG1B10
Geology	APG3A10	Mineral Resource Management and Mineral Exploitation	GLG2A01, GLG2A02 **and** GLG2B10
Geology	APG3B10	Economic Geology	GLG2B10, GLG3A10

HUMAN PHYSIOLOGY

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Zoology	HPH3A10	Nervous system mechanisms *(pipeline)*	HPH2A10, 2A20, 2B10, 2B20
Zoology	HPH3A20	Effects of drugs *(pipeline)*	HPH2A10, 2A20, 2B10, 2B20
Zoology	HPH3B10	Homeostasis; circulation; respiration *(pipeline)*	HPH2A10, 2A20, 2B10, 2B20
Zoology	HPH3B20	Environmental interaction *(pipeline)*	HPH2A10, 2A20, 2B10, 2B20
INFORMATICS			
ACSSE	IFM100	Informatics 100	Refer to Regulation SC 5
ACSSE	IFM1A10 / IFM01A1	Introduction to algorithm development (VB)	Refer to Regulation SC 1.2
ACSSE	IFM1B10/ IFM01B1	Introduction to data structures (VB)	IFM1A10
ACSSE	IFM2A10 / IFM02A2	Database design	IFM1A10, 1B10 (Information Technology - Electrical Engineering - CSC1A10,1B10)
ACSSE	IFM2B10/ IFM02B2	Internet electronic commerce	IFM2A10
ACSSE	IFM3A10 / IFM03A3	Introduction to software engineering	IFM2A10, IFM2B10
ACSSE	IFM3B10/ IFM03B3	Advanced software engineering	IFM3A10
MATHEMATICS			
Mathematics	MAA00A1	Introductory Mathematical Analysis A	Refer to Regulation SC 5
Mathematics	MAA00B1	Mathematical Analysis B	MAA00A1

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Mathematics	MAT1A1E	Mathematics 1E	Refer to Regulations SC 1.2
Mathematics	MAT1A2E	Mathematics 2E	MAT1A1E
Mathematics	MAT1A3E	Mathematics 3E	MAT1A2E
Mathematics	MAT1A01/ MAT01A1	Calculus on One-variable functions	Mathematics Grade 12 - APS 5
Mathematics	MAT1B01/ MAT01B1	Applications of Calculus	MAT1A01 **or** MAT1A3E **or** ASMA1A1
Mathematics	MAT1C01*	Bio and Enviro Math & Stats	Mathematics Grade 12 - APS 4
Mathematics	MAT1D01*	Advanced Bio & Enviro Math Stats	MAT1C01 **or** ASMA1C1
Mathematics	MAT2A10/ MAT01A2	Sequences, series and vector calculus	MAT1A01 **or** MAT1A3E **or** ASMA1A1 **and** MAT1B01 **or** ASMA1B1
Mathematics	MAT2A20/ MAT02A2	Linear Algebra A	MAT1A01 **or** MAT1A3E **or** ASMA1A1 **and** MAT1B01 **or** ASMA1B1
Mathematics	MAT2A40	Discrete Mathematics – IT	MAT1A01 **or** MAT1A3E ASMA1A1 **and** MAT1B01 **or** ASMA1B1
Mathematics	MAT2B10/ MAT01B	Calculus of several variable functions	MAT1A01 **or** MAT1A3E **or** ASMA1A1 **and** MAT1B01 **or** ASMA1B1 **and** MAT2A10 **or**

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
	2		ASMA2A1
Mathematics	MAT2B20/ MAT02B2	Linear Algebra B	MAT1A01 **or** MAT1A3E **or** ASMA1A1 **and** MAT1B01 **or** ASMA1B1 **and** MAT2A20 **or** ASMA2A2
Mathematics	MAT2B40	Introductory abstract algebra - IT	MAT1A01 **or** MAT1A3E **or** ASMA1A1 **and** MAT1B01 **or** ASMA1B1 **and** MAT2A20 **or** ASMA2A2 **and** MAT2A40 **or** ASMA2A4
Mathematics	MAT3A01	Real analysis	MAT2A10 **or** ASMA2A1
Mathematics	MAT3A20	Discrete mathematics	MAT1B01 **or** ASMA1B1
Mathematics	MAT3B01	Complex analysis	MAT2B10 **or** ASMA2B1
Mathematics	MAT3B20	Introductory abstract algebra	MAT2A20 **or** ASMA2A2
Mathematics	ADIA004	Mathematics (Accounting)	-
Mathematics	MAT100	Business Mathematics 100	Mathematics Grade 12 – APS 5
Mathematics	MFD001	Mathematics for Diploma students	-
MATHEMATICAL STATISTICS			
Statistics	STA1A1E		Refer to Regulation SC 1.2
Statistics	STA1A2E		STA1A1E
Statistics	STA1A10	Distribution Theory	Refer to Regulation SC 1.2
Statistics	STA1B10	Statistical Inference	STA1A10 **or** STA1A2E
Statistics	STA2A10	Probability Theory	STA1B10 **and** MAT1B01 **or** ASMA1B1
Statistics	STA2B10	Statistical inference and Distribution Theory	STA2A10

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Statistics	STA3A10	Linear Models	STA2B10 **and** MAT2A10 **or** ASMA2A1 **and** MAT2B20 **or** ASMA2B2
Statistics	STA3B10	Stochastic Processes	STA2B10 **and** MAT2A10 **or** ASMA2A1
Statistics	STE3A01	Statistics for Engineers	MAT1B01 **or** ASMA1B1
MICROBIOLOGY			
Botany	MCB2A01	Bacteriology and Virology	BIOA10 **or** BIO1A2E, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10
Botany	MCB2B01	Microbial diversity and Plant pathology	BIOA10 **or** BIO1A2E, CEM1A10 **or** CEM1A3E **or** CEM1C10 **and** CEM1B01 **or** CEM1D10
PHYSICS			
Physics	PHY1A1E	Physics 1E	Refer to Regulation SC 1.2
Physics	PHY1A2E	Physics 2E	PHY1A1E
Physics	PHY1A3E	Physics 3E	PHY1A2E
Physics	PHY1A01	Introductory Physics A	Refer to Regulation SC 1.2
Physics	PHY1B01	Introductory Physics B	PHY1A01 **or** PHY1A3E
Physics	PHYG01A	General Physics for Earth Sciences	Refer to Regulation SC 1.2
Physics	PHYG01B	Physics of the Earth and its Natural Environment	PHYG01A
Physics	PHYL01A	Physics for Life Sciences	Refer to Regulation SC 1.2
Physics	PHY002A	Classical Mechanics and Special Relativity	PHY1A01, PHY1B01 **and** MAT1B01 **or** ASMA1B1
Physics	PHY002B	Static and Dynamic Electromagnetism	PHY1A01, PHY1B01 **and** (MAT2A10

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
			and MAT2A20 **or** APM2A10)
Physics	PHY002Y	Thermal Physics, Optics and Waves	PHY1A01, PHY1B01 **and** MAT1B01
Physics	PHY003A	Quantum Mechanics and Modern Physics	PHY002A, PHY002B **and** (MAT2B10 and MAT2B20 **or** APM2B10)
Physics	PHY003B	Mathematical, Statistical and Solid State Physics	PHY003A

PHYSIOLOGY

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Zoology	PHS2A01	Basic Physiological concepts and Movement	-
Zoology	PHS2B01	Control Systems	PHS2A01
Zoology	PHS3A01	Visceral Organ Systems	PHS2B01
Zoology	PHS3B01	Advanced Integration	PHS3B01

STATISTICAL METHODS

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Statistics	SMT1A10	Statistical Methods 1A	Refer to Regulation SC 1.2

ZOOLOGY

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Zoology	ZOO1B10	Animal diversity	BIO1A10 **or** BIO1A1E, BIO1A2E
Zoology	ZOO2A10	General parasitology	ZOO1B10
Zoology	ZOO2B20	Vertebrate anatomy, function and evolution	ZOO1B10
Zoology	ZOO3A01	Ecology	-
Zoology	ZOO3B01	Comparative Animal Physiology	BIO1A10 **or** BIO1A1E, BIO1A2E **and** CEM1A10 and CEM1B01 **or** CEM1C and CEM1D10

CIVICS FOR SCIENCE

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Science	SCIT01	Adapting to Science in Higher Education	-

DEPT	CODE	NAMES OF MODULES	PREREQUISITES
Science	SCIT02	Plagiarism and Copyright	-
Science	SCIT03	Rights and responsibilities of Citizens	-
Science	SCIT04	Science in Society	-

DEPT	CODE	NAMES OF MODULES	PREREQUISITES