

Study Plan

1 st Year	SEMESTER I			
	Course code	Title	Pre-Requisites/ Co-Requisites	Credit Hours
	SMS 1101	Analytic Geometry		3
	SMS 1102	Calculus I		3
	SMS 1103	Number Theory		3
	KOS 1110K	Computer in Science		3
	MGT 2010K	Principles & Practice of Management		3
	UNGS 2090K (UNGS 2030 + UNGS 2040)	Islamic Worldview, Knowledge & Civilization		2
	TQ 1001K	Tilawah Al-Quran I		0.5
				17.5
SEMESTER II				
	Course code	Title	Pre-Requisites/ Co-Requisites	Credit Hours
	SMS 1204	Calculus II	SMS 1102	3
	SMS 1205	Linear Algebra	SMS 1101	3
	SMS 1206	Algebra	SMS 1103	3
	KOS 1000	Islam & Science		3
	MPU 3112K	Hubungan Etnik <i>*for Malaysian students*</i>		2
	LM 1030K/ LM1040K	Bahasa Melayu I untuk Pelajar Antarabangsa/ Bahasa Melayu I untuk Pelajar Antarabangsa (<i>Nusantara</i>) <i>*for non malaysian students*</i>		1
	UNGS 2060K	Malay Virtues, Heritage and Malaysian Society <i>*for non malaysian students*</i>		2
	UNGS 2080K (UNGS 2050 + UNGS 2070)	Ethics and <i>Fiqh</i> of Contemporary Issues		2
	TQ 2001K	Tilawah Al-Quran II		0.5
	CCHB/HS 1011K	Usrah 1 (BUDI)		0.5
				17 (Msian)/18(no

				n- Msian)
2 nd Year	SEMESTER I			
	Course code	Title	Pre- Requisites/ Co-Requisites	Credit Hours
	SMS 2307	Advanced Calculus	SMS 1204	3
	SMS 2308	Mathematical Methods	SMS 1205	3
	SMS 2309	Introduction to Statistics	SMS 1102, SMS 1204	3
		Minor		6
	UNGS 2011K	Creative Thinking and Problem Solving		2
	LE 4000K	English Academic Writing		3
	CCLM 2051K	Leadership and Management		0.5
	LQ 1008K	Quranic Language I		0.5
				21
	SEMESTER II			
	Course code	Title	Pre- Requisites/ Co-Requisites	Credit Hours
	SMS 2410	Mathematical Analysis	SMS 2307	3
	SMS 2411	Advanced Mathematical Methods	SMS 2308	3
	SMS 2412	Theory of Probability		3
		Minor		6
	MPU 3122K	Tamadun Islam dan Tamadun Asia (TITAS) <i>*for Malaysian students*</i>		2
CCFM 2052K	Family Management and Parenting		0.5	
LQ 2008K	Quranic Language II		0.5	
CCHB/HS 1012K	Usrah 2 (BUDI)		0.5	
LM1031K/ LM 1041K	Bahasa Melayu II untuk Pelajar Antarabangsa/ Bahasa Melayu II untuk Pelajar Antarabangsa (Nusantara) <i>*for non malaysian students*</i>		1	
			18.5 (Msian)/ 17.5 (non- Msian)	

3rd Year	SEMESTER I				
	Course code	Title	Pre-requisite(s)	Credit Hours	
	SMS 3513	Vector Analysis	SMS 2410	3	
	SMS 3514	Computational Mathematics	SMS 2308	3	
	SMS 3515	Scientific Computing	SMS 2307	3	
	SMS XXXX	Elective Courses		3	
		Minor		6	
	SKILL	Skills Package 1		0.5	
					18.5
	3rd Year	SEMESTER II			
Course code		Title	Pre-requisite(s)	Credit Hours	
SMS 3616		Advanced Analysis	SMS 2410	3	
SMS 44XX		Concentration course I		3	
SMS XXXX		Elective Courses		3	
		Minor		6	
SKILL		Skills Package 2		0.5	
CCCD 1621K		Usrah 3 (BUDI)		1	
					16.5
3rd Year		SEMESTER III			
	SMS 4011	Industrial Training		6	
					6
	4th Year	SEMESTER I			
Course code		Title	Pre-requisite(s)	Credit Hours	
SMS 44XX		Concentration course II & III	SMS 44XX	6	
		Minor		6	
CCCD 1622K		Usrah 4 (BUDI)		1	
SMS 4200		Final Year Project*		6	
					13/19
4th Year		SEMESTER II			
	Course code	Title	Pre-requisite(s)	Credit Hours	
	EDC 4902K	Minor (Teaching Practicum for Minor in Education Studies only)		6	

Minor in Business Administration

No		Required Courses			(Specified) Elective Courses		
	Code	Title	Pre - Requisite	Code	Title	Pre - Requisite	
1	ECON 1140K	Statistical Methods	Exempted	MGT 4320K	Human Resource Management	MGT 1050K	
2	ECON 1500K	Introduction to Economics	None	MGT 4650K	Entrepreneurship	MGT 1050K	
3	ACC 1101K	Financial Accounting and Reporting	None	MGT 3050K	Decision Science	ECON 1140K	
4	MGT 4110K	Organizational Behavior	MGT 2010K				
5	MGT 4760K	Strategic Management	MKTG 3010K, MGT1050K, , FIN 3010				
6	MGT 4810K	International Business	MGT 1050K				
7	MKT G 3010K	Marketing Principles	MGT 1050K, ECON 1500K				
8	FIN 3010K	Financial Management 1	ECON 1140K, ECON 1500K				
\					TOTAL	30	

Year	Semester I	Semester II	Semester III
2	ECON 1500K Introduction to Economics ACC 1101K Financial Accounting and Reporting	MGT 4110K Organizational Behavior MKTG 3010K Marketing Principles	
3	FIN 3010K Financial Management 1 MGT 4810K International Business	MGT 4760K Strategic Management MGT 4320K Human Resource Management	
4	MGT 4650K Entrepreneurship MGT 3050K		

	Decision Science		
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Minor in Education

Code	Title	CH	Pre-requisites
EDF 1001K	Historical and Philosophical Foundations of Malaysian Education	3	-
EDP 1101K	Educational Perspectives of Human Development	3	-
EDF 2202K	Sociological Foundation of Education	3	-
EDC 4001K	Curriculum Development	3	-
EDP 3501K	Testing and Assessment	3	-
EDT 1303K	Instructional Technology	2	-
EDC 3408K	The Methodology of Teaching Mathematics in Secondary Schools.	3	-
EDC 4390K	General Pedagogy / General Teaching Methods*	3	-
EDC 1701K	The Organization of School Co-Curriculum	2	-
EDC 3393K	Micro Teaching	2	-
EDC 4902K	Teaching Practicum	6	-
TOTAL		33	

Year	Semester I	Semester II	Semester III
2	a) EDF 1001K (3ch) Historical, Philosophical Foundations of Malaysian Education b) EDP 1101K (3ch) Educational Perspectives of Human Development	a) EDF 2202K (3ch) Sociological Foundations of Education b) EDC 4001K (3ch) Curriculum Development	-none-
3	a) EDP 3501K (3ch) Testing and Assessment in Human Development b) EDT 1303K (2ch) Instructional Technology	a) EDC 3408K (3ch) Methodology of Teaching Mathematics in Secondary Schools b) EDC 3393K (2ch) Micro Teaching	-none-
4	a) EDC 1701K (2ch) Organization of School Co-curriculum b) EDC 4390K (3ch) General Pedagogy	a) EDC 4902K (6ch) Teaching Practicum in Secondary Schools (12 weeks)	-none-

TOTAL	33 CH
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Minor in Information & Communication Technology

Code	Title	CH	Pre-requisites
ITCM 1301K	Internet Application	3	-
INFO 1102K	Database I	3	-
INFO 2402K	Information Retrieval Technologies	3	ITCM 1301K
CSC 1100K	Elements of Programming	3	-
CSC 1700K	Discrete Mathematics	3	-
CSC 1401K	Introduction to Computer Organization	3	CSC 1700K
INFO 2501K	Management Information System	3	MGT 1050K
CSC 2101K	Data Structure & Algorithm	3	CSC 1100K & CSC 1401K
CSC 3401K	Operating System	3	CSC 1401K
ITCM 1801K	Introduction to Computer Networking (Non-ICT)	3	-
TOTAL		30	

Year	Semester I	Semester II	Semester III
2		CSC 1700K* - Discrete Mathematics * Teach by CTS staff INFO 1102K – Database I	
3	ITCM 1301K - Internet Application (IS) CSC 1100K - Elements of Programming (CS)	INFO 2402K - Information Retrieval Technologies CSC 1401K - Introduction to Computer Organization	
4	INFO 2501K - Management Information System CSC 2101K - Data Structure & Algorithm	CSC 3401K - Operating System ITCM 1801K - Introduction to Computer Networking (Non-ICT)	

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Concentration Courses (15 CH)

(Subject to terms & conditions set by the department)

Computational Mathematics Concentration		Pre-requisite(s)
SMS 4410	Numerical Analysis (3 CH)	SMS 3514
SMS 4411	Advanced Numerical Analysis (3 CH)	SMS 4410
SMS 4412	Parallel Computing (3 CH)	SMS 4411
SMS 4000	Computational Mathematics Project (6 CH)	SMS 4411
	OR	
SMS 4011	Industrial Training (3 CH) + Computational Mathematics Project (3 CH)	SMS 4411
Financial Mathematics Concentration		
SMS 4430	Financial Mathematics I (3 CH)	SMS 4653
SMS 4431	Financial Mathematics II (3 CH)	SMS 4430
SMS 4432	Financial Mathematics III (3 CH)	SMS 4431
SMS 4000	Financial Mathematics Project (6 CH)	SMS 4431
	OR	
SMS 4011	Industrial Training (3 CH) + Financial Mathematics Project (3 CH)	SMS 4431
Operational Research Concentration		
SMS 4440	Optimisation (3 CH)	SMS 4674
SMS 4441	Linear Programming (3 CH)	SMS 4440
SMS 4442	Dynamic Programming (3 CH)	SMS 4441
SMS 4000	Operational Research Project (6 CH)	SMS 4441
	OR	
SMS 4011	Industrial Training (3 CH) + Operational Research Project (3 CH)	SMS 4441
Optics Concentration		
SMS 4420	Matter and Waves (3 CH)	SMS 2308,SMS 2410
SMS 4421	Optics 1 (3 CH)	SMS 4420
SMS 4422	Optics 2 (3 CH)	SMS 4421
SMS 4000	Optics Project (6 CH)	SMS 4420
	OR	
SMS 4011	Industrial Training (3 CH) + Optics Project (3 CH)	SMS 4420
Pure Mathematics Concentration		
SMS 4460	Ergodic Theory I (3 CH)	SMS 2411
SMS 4461	Ergodic Theory II (3 CH)	SMS 4460
SMS 4462	Ergodic Theory III (3 CH)	SMS 4461
SMS 4000	Pure Mathematics Project (6 CH)	SMS 4461

SMS 4011	Industrial Training (3 CH) + Pure Mathematics Project (3 CH)	SMS 4461
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Statistics Concentration

SMS 4450	Probability and Statistical Inference I (3 CH)	SMS 4651
SMS 4451	Probability and Statistical Inference II (3 CH)	SMS 4450
SMS 4452	Stochastic Processes (3 CH)	SMS 4451
SMS 4000	Statistics Project (6 CH)	SMS 4451
SMS 4011	Industrial Training (3 CH) + Statistics Project (3 CH)	SMS 4451

Quantum Cryptography

SMS 4470	Introduction to Quantum Mechanics	SMS 1203, SMS 1206
SMS 4471	Quantum Information Theory	SMS 4470
SMS 4472	Quantum Computation and Quantum Cryptography	SMS 4471
SMS 4000	Quantum Cryptography Project (6CH)	
OR		
SMS 4011	Industrial Training (3 CH) + Quantum Cryptography Project (3 CH)	SMS 4471

Amendment

December 2013 – Pure concentration student cannot choose industrial training, only final year project allowed, effective on batch 141.

Pure Mathematics Concentration

SMS 4460	Ergodic Theory I (3 CH)	SMS 2411
SMS 4461	Ergodic Theory II (3 CH)	SMS 4460
SMS 4462	Ergodic Theory III (3 CH)	SMS 4461
SMS 4000	Pure Mathematics Project (6 CH)	SMS 4461
SMS 4011	Industrial Training (3 CH) + Pure Mathematics Project (3 CH)	SMS 4461