

2026A Bachelor of Science (Hons) in Software Engineering			
Unit code	Unit name	Credits	Core/Elective
Year 1 - Semester 1			
ICO1301 (CCS1300)	Programming Fundamentals with Python	3	Core
CSD0001	Foundation in English Language Skills	1	Core
SMA0301	Pre-Calculus	3	Core
SPH0201	Introductory Physics	0	NGPA
CCS1301	Computer Systems	3	Core
CCS1302	Internet Technologies	3	Core

Total credits 13

Year 1 - Semester 2			
SMA0302	Introductory Calculus	3	Core
PCCO2201	(CCS1303) Object Oriented Programming	3	Core
PCCO2202	(CCS1304) Data Technologies	3	Core
PCCO2203	(CCS1305) Communication Models and Protocols	3	Core
PCCO2204	(CCS1306) Information Security	3	Core
CSD1001	Introduction to Academic Composition & Communication	1	Core

Total credits 16

Year 2 - Semester 1			
IMA1401	Introductory Mathematical Analysis	0	NGPA
SCH0201	Introductory Chemistry	0	NGPA
SEC0301	Introduction to Principles of Economics	3	Core
PCCO2300	Data Structures and Algorithms	3	Core
PCCO2301	Business Analysis and Software Design	3	Core
PCCO2302	Cloud Computing Fundamentals	3	Core
<i>Notes: IMA1401, SCH0201 has been given IC/SC options to drop, keep or to be recorded as audited</i>			
Total credits		12	

Year 2 - Semester 2			
CCS2303	Operating Systems and Platforms	3	Core
CCS2311	Human Factors in Computer Systems	3	Core
SMA2306	Probability & Statistics	3	Core
CCS2360	Technology Challenge Competition 1	3	Core
SMA2301	Linear Algebra	3	Core
CCS2313	Project Management	3	Core

Total credits 18

Year 3 — Semester 1 (5 Core units + at least one Elective)			
SMA2307	Discrete Mathematics	3	Core
CCS3310	Software Engineering Methods	3	Core
CCS3311	Software Quality Assurance	3	Core
CCS3300	Software Architecture	3	Core
CCS3360	Technology Challenge Competition 2	3	Core
CCS3307	Data Warehousing	3	Elective
CCS3356	Natural Language Processing	3	Elective
CCS3308	Virtualization and Containers	3	Elective
CCS4322	Cloud Security and Privacy	3	Elective
CCS3304	Cyber Security Domains and Tools	3	Elective
CCS3305	Cyber Law, Regulations and Policies	3	Elective
CCS4330	Network Security	3	Elective
CCS3340	Professional Practice	3	Elective
CCS3343	Mathematics for Computing (with Programming)	4	Elective
CCS1307	Entrepreneurship & Start-up Culture	3	Elective
CCS2310	Programming with Vectors and Matrices	3	Elective
Total credits		18	

Year 3 — Semester 2			
CCS3302	Introduction to Research Methods	3	Core
CCS3440	Artificial Intelligence	4	Core
CCS3313	Advanced Software Design	3	Core
CCS3351	Mobile Application Development	3	Core
CCS3301	Capstone Project-Part 1	3	Core
CCS3309	Big Data	3	Elective
CCS3342	Business Intelligence (Business Analytics)	3	Elective
CCS3312	Cloud Application Development	3	Elective
CCS3316	Cloud Infrastructure Design	3	Elective

2026A Bachelor of Science (Hons) in Cloud Computing			
Unit code	Unit name	Credits	Core/Elective
Year 1 - Semester 1			
ICO1301	Programming Fundamentals with Python	3	Core
CSD0001	Foundation in English Language Skills	1	Core
SMA0301	Pre-Calculus	3	Core
SPH0201	Introductory Physics	0	NGPA
CCS1301	Computer Systems	3	Core
CCS1302	Internet Technologies	3	Core

Total credits 13

Year 1 - Semester 2			
SMA0302	Introductory Calculus	3	Core
PCCO2201	(CCS1303) Object Oriented Programming	3	Core
PCCO2202	(CCS1304) Data Technologies	3	Core
PCCO2203	(CCS1305) Communication Models and Protocols	3	Core
PCCO2204	(CCS1306) Information Security	3	Core
CSD1001	Introduction to Academic Composition & Comm	1	Core

Total credits 16

Year 2 - Semester 1			
IMA1401	Introductory Mathematical Analysis	0	NGPA
SCH0201	Introductory Chemistry	0	NGPA
SEC0301	Introduction to Principles of Economics	3	Core
PCCO2300	Data Structures and Algorithms	3	Core
PCCO2301	Business Analysis and Software Design	3	Core
PCCO2302	Cloud Computing Fundamentals	3	Core
<i>Notes: IMA1401, SCH0201 has been given IC/SC options to drop, keep or to be recorded as audited</i>			
Total credits		12	

Year 2 - Semester 2			
CCS2303	Operating Systems and Platforms	3	Core
CCS2311	Human Factors in Computer Systems	3	Core
SMA2306	Probability & Statistics	3	Core
CCS2360	Technology Challenge Competition 1	3	Core
SMA2301	Linear Algebra	3	Core
CCS2313	Project Management	3	Core

Total credits 18

Year 3 — Semester 1 (5 Core units + at least one Elective)			
SMA2307	Discrete Mathematics	3	Core
CCS3307	Data Warehousing	3	Core
CCS4322	Cloud Security and Privacy	3	Core
CCS3308	Virtualization and Containers	3	Core
CCS3360	Technology Challenge Competition 2	3	Core
CCS3356	Natural Language Processing	3	Elective
CCS3310	Software Engineering Methods	3	Elective
CCS3311	Software Quality Assurance	3	Elective
CCS3300	Software Architecture	3	Elective
CCS3304	Cyber Security Domains and Tools	3	Elective
CCS3305	Cyber Law, Regulations and Policies	3	Elective
CCS4330	Network Security	3	Elective
CCS3340	Professional Practice	3	Elective
CCS3343	Mathematics for Computing (with Programming)	4	Elective
CCS1307	Entrepreneurship & Start-up Culture	3	Elective
CCS2310	Programming with Vectors and Matrices	3	Elective
Total credits		18	

Year 3 — Semester 2			
CCS3302	Introduction to Research Methods	3	Core
CCS3440	Artificial Intelligence	4	Core
CCS3317	Cloud Application Development	3	Core
CCS3316	Cloud Infrastructure Design	3	Core
CCS3301	Capstone Project-Part 1	3	Core
CCS3309	Big Data	3	Elective
CCS3342	Business Intelligence (Business Analytics)	3	Elective
CCS3313	Advanced Software Design	3	Elective
CCS3351	Mobile Application Development	3	Elective

2026A Bachelor of Science (Hons) in Cyber Security			
Unit code	Unit name	Credits	Core/Elective
Year 1 - Semester 1			
ICO1301	Programming Fundamentals with Python	3	Core
CSD0001	Foundation in English Language Skills	1	Core
SMA0301	Pre-Calculus	3	Core
SPH0201	Introductory Physics	0	NGPA
CCS1301	Computer Systems	3	Core
CCS1302	Internet Technologies	3	Core

Total credits 13

Year 1 - Semester 2			
SMA0302	Introductory Calculus	3	Core
PCCO2201	(CCS1303) Object Oriented Programming	3	Core
PCCO2202	(CCS1304) Data Technologies	3	Core
PCCO2203	(CCS1305) Communication Models and Protocols	3	Core
PCCO2204	(CCS1306) Information Security	3	Core
CSD1001	Introduction to Academic Composition & Comm	1	Core

Total credits 16

Year 2 - Semester 1			
IMA1401	Introductory Mathematical Analysis	0	NGPA
SCH0201	Introductory Chemistry	0	NGPA
SEC0301	Introduction to Principles of Economics	3	Core
PCCO2300	Data Structures and Algorithms	3	Core
PCCO2301	Business Analysis and Software Design	3	Core
PCCO2302	Cloud Computing Fundamentals	3	Core
<i>Notes: IMA1401, SCH0201 has been given IC/SC options to drop, keep or to be recorded as audited</i>			
Total credits		12	

Year 2 - Semester 2			
CCS2303	Operating Systems and Platforms	3	Core
CCS2311	Human Factors in Computer Systems	3	Core
SMA2306	Probability & Statistics	3	Core
CCS2360	Technology Challenge Competition 1	3	Core
SMA2301	Linear Algebra	3	Core
CCS2313	Project Management	3	Core

Total credits 18

Year 3 — Semester 1 (5 Core units + at least one Elective)			
SMA2307	Discrete Mathematics	3	Core
CCS3304	Cyber Security Domains and Tools	3	Core
CCS3305	Cyber Law, Regulations and Policies	3	Core
CCS4330	Network Security	3	Core
CCS3360	Technology Challenge Competition 2	3	Core
CCS3307	Data Warehousing	3	Elective
CCS3356	Natural Language Processing	3	Elective
CCS3310	Software Engineering Methods	3	Elective
CCS3308	Virtualization and Containers	3	Elective
CCS3310	Software Engineering Methods	3	Elective
CCS3311	Software Quality Assurance	3	Elective
CCS3300	Software Architecture	3	Elective
CCS4322	Cloud Security and Privacy	3	Elective
CCS3340	Professional Practice	3	Elective
CCS3343	Mathematics for Computing (with Programming)	4	Elective
CCS1307	Entrepreneurship & Start-up Culture	3	Elective
CCS2310	Programming with Vectors and Matrices	3	Elective
Total credits		18	

Year 3 — Semester 2			
CCS3302	Introduction to Research Methods	3	Core
CCS3440	Artificial Intelligence	4	Core
CCS3317	Advanced Cryptography	3	Core
CCS3318	Digital Forensics	3	Core
CCS3301	Capstone Project-Part 1	3	Core
CCS3309	Big Data	3	Elective
CCS3342	Business Intelligence (Business Analytics)	3	Elective
CCS3313	Advanced Software Design	3	Elective
CCS3351	Mobile Application Development	3	Elective

2026A Bachelor of Science (Hons) in Data Science			
Unit code	Unit name	Credits	Core/Elective
Year 1 - Semester 1			
ICO1301	Programming Fundamentals with Python	3	Core
CSD0001	Foundation in English Language Skills	1	Core
SMA0301	Pre-Calculus	3	Core
SPH0201	Introductory Physics	0	NGPA
CCS1301	Computer Systems	3	Core
CCS1302	Internet Technologies	3	Core

Total credits 13

Year 1 - Semester 2			
SMA0302	Introductory Calculus	3	Core
PCCO2201	(CCS1303) Object Oriented Programming	3	Core
PCCO2202	(CCS1304) Data Technologies	3	Core
PCCO2203	(CCS1305) Communication Models and Protocols	3	Core
PCCO2204	(CCS1306) Information Security	3	Core
CSD1001	Introduction to Academic Composition & Comm	1	Core

Total credits 16

Year 2 - Semester 1			
IMA1401	Introductory Mathematical Analysis	0	NGPA
SCH0201	Introductory Chemistry	0	NGPA
SEC0301	Introduction to Principles of Economics	3	Core
PCCO2300	Data Structures and Algorithms	3	Core
PCCO2301	Business Analysis and Software Design	3	Core
PCCO2302	Cloud Computing Fundamentals	3	Core
<i>Notes: IMA1401, SCH0201 has been given IC/SC options to drop, keep or to be recorded as audited</i>			
Total credits		12	

Year 2 - Semester 2			
CCS2303	Operating Systems and Platforms	3	Core
CCS2311	Human Factors in Computer Systems	3	Core
SMA2306	Probability & Statistics	3	Core
CCS2360	Technology Challenge Competition 1	3	Core
SMA2301	Linear Algebra	3	Core
CCS2313	Project Management	3	Core

Total credits 18

Year 3 — Semester 1 (5 Core units + at least one Elective)			
SMA2307	Discrete Mathematics	3	Core
CCS3307	Data Warehousing	3	Core
CCS3356	Natural Language Processing	3	Core
CCS3308	Virtualization and Containers	3	Core
CCS3360	Technology Challenge Competition 2	3	Core
CCS3310	Software Engineering Methods	3	Elective
CCS3311	Software Quality Assurance	3	Elective
CCS3300	Software Architecture	3	Elective
CCS4322	Cloud Security and Privacy	3	Elective
CCS3304	Cyber Security Domains and Tools	3	Elective
CCS3305	Cyber Law, Regulations and Policies	3	Elective
CCS4330	Network Security	3	Elective
CCS3340	Professional Practice	3	Elective
CCS3343	Mathematics for Computing (with Programming)	4	Elective
CCS1307	Entrepreneurship & Start-up Culture	3	Elective
CCS2310	Programming with Vectors and Matrices	3	Elective
Total credits		18	

Year 3 — Semester 2			
CCS3302	Introduction to Research Methods	3	Core
CCS3440	Artificial Intelligence	4	Core
CCS3309	Big Data	3	Core
CCS3342	Business Intelligence (Business Analytics)	3	Core
CCS3301	Capstone Project-Part 1	3	Core
CCS3313	Advanced Software Design	3	Elective
CCS3351	Mobile Application Development	3	Elective
CCS3312	Cloud Application Development	3	Elective
CCS3316	Cloud Infrastructure Design	3	Elective

CCS3317	Advanced Cryptography	3 Elective
CCS3318	Digital Forensics	3 Elective
Total credits		19

Year 4 — Semester 1 (4 Core units + at least 2 Electives)

CCS4340	Machine Learning	3 Core
IHM1301	Human Behavior and Ethics	3 Core
CCS4301	Capstone Project-Part 2	3 Core
SMA2305	Numerical Analysis	3 Core
CCS3341	SOA and Microservices	3 Elective
CCS4310	Deep Learning	3 Elective
CCS4350	Ethical Hacking	3 Elective
CCS4351	Functional Programming	3 Elective
CCS4352	Application Security	3 Elective
CCS4353	Internet of Things	3 Elective
CCS4354	Tensors and Graphs (with programming)	3 Elective
CCS4355	Cyber Terrorism and Information Warfare	3 Elective
CCS4356	Intelligent Threat Management	3 Elective
CCS4357	Block chain and Applications	3 Elective
CCS4360	Techniques in Social Media	3 Elective
CCS4361	Immersive Technology Development	3 Elective
CCS4362	Service Integration and Management	3 Elective
CCS4363	Supercomputing and Quantum Computing	3 Elective
Total credits		18

Year 4 - Semester 2

CCS4601	Industrial Training	6 Core
Total credits		6

Duration: 4 years, Total Credits: 120
GPA credits 114

CCS3317	Advanced Cryptography	3 Elective
CCS3318	Digital Forensics	3 Elective
Total credits		19

Year 4 — Semester 1 (4 Core units + at least 2 Electives)

CCS4340	Machine Learning	3 Core
IHM1301	Human Behavior and Ethics	3 Core
CCS4301	Capstone Project-Part 2	3 Core
SMA2305	Numerical Analysis	3 Core
CCS3341	SOA and Microservices	3 Elective
CCS4310	Deep Learning	3 Elective
CCS4350	Ethical Hacking	3 Elective
CCS4351	Functional Programming	3 Elective
CCS4352	Application Security	3 Elective
CCS4353	Internet of Things	3 Elective
CCS4354	Tensors and Graphs (with programming)	3 Elective
CCS4355	Cyber Terrorism and Information Warfare	3 Elective
CCS4356	Intelligent Threat Management	3 Elective
CCS4357	Block chain and Applications	3 Elective
CCS4360	Techniques in Social Media	3 Elective
CCS4361	Immersive Technology Development	3 Elective
CCS4362	Service Integration and Management	3 Elective
CCS4363	Supercomputing and Quantum Computing	3 Elective
Total credits		18

Year 4 - Semester 2

CCS4601	Industrial Training	6 Core
Total credits		6

Duration: 4 years, Total Credits: 120
GPA credits 114

CCS3312	Cloud Application Development	3 Elective
CCS3316	Cloud Infrastructure Design	3 Elective
Total credits		19

Year 4 — Semester 1 (4 Core units + at least 2 Electives)

CCS4340	Machine Learning	3 Core
IHM1301	Human Behavior and Ethics	3 Core
CCS4301	Capstone Project-Part 2	3 Core
SMA2305	Numerical Analysis	3 Core
CCS3341	SOA and Microservices	3 Elective
CCS4310	Deep Learning	3 Elective
CCS4350	Ethical Hacking	3 Elective
CCS4351	Functional Programming	3 Elective
CCS4352	Application Security	3 Elective
CCS4353	Internet of Things	3 Elective
CCS4354	Tensors and Graphs (with programming)	3 Elective
CCS4355	Cyber Terrorism and Information Warfare	3 Elective
CCS4356	Intelligent Threat Management	3 Elective
CCS4357	Block chain and Applications	3 Elective
CCS4360	Techniques in Social Media	3 Elective
CCS4361	Immersive Technology Development	3 Elective
CCS4362	Service Integration and Management	3 Elective
CCS4363	Supercomputing and Quantum Computing	3 Elective
Total credits		18

Year 4 - Semester 2

CCS4601	Industrial Training	6 Core
Total credits		6

Duration: 4 years, Total Credits: 120
GPA credits 114

CCS3317	Advanced Cryptography	3 Elective
CCS3318	Digital Forensics	3 Elective
Total credits		19

Year 4 — Semester 1 (4 Core units + at least 2 Electives)

CCS4340	Machine Learning	3 Core
IHM1301	Human Behavior and Ethics	3 Core
CCS4301	Capstone Project-Part 2	3 Core
SMA2305	Numerical Analysis	3 Core
CCS3341	SOA and Microservices	3 Elective
CCS4310	Deep Learning	3 Elective
CCS4350	Ethical Hacking	3 Elective
CCS4351	Functional Programming	3 Elective
CCS4352	Application Security	3 Elective
CCS4353	Internet of Things	3 Elective
CCS4354	Tensors and Graphs (with programming)	3 Elective
CCS4355	Cyber Terrorism and Information Warfare	3 Elective
CCS4356	Intelligent Threat Management	3 Elective
CCS4357	Block chain and Applications	3 Elective
CCS4360	Techniques in Social Media	3 Elective
CCS4361	Immersive Technology Development	3 Elective
CCS4362	Service Integration and Management	3 Elective
CCS4363	Supercomputing and Quantum Computing	3 Elective
Total credits		18

Year 4 - Semester 2

CCS4601	Industrial Training	6 Core
Total credits		6

Duration: 4 years, Total Credits: 120
GPA credits 114