

United International University
Department of Computer Science and Engineering
Course Offerings, Summer 2024 (BSCSE/BSDS)

Course Code	Title	Cr	Prerequisite	Remarks
Language				
ENG 1011/ ENG 101	English I	3.00	-----	4 digit from 211 batch
ENG 1013/ ENG 103	English II	3.00	ENG 1011 ENG 101	4 digit from 211 batch
General Education Compulsory				
SOC 2101/ SOC 101	Society, Technology and Engineering Ethics/ Society, Environment and Engineering Ethics	3.00	-----	4 digit from 183 batch
PMG 4101	Project Management	3.00	CSE 3411	From 183 batch
BDS 1201	History of the Emergence of Bangladesh	2.00	-----	From 211 batch
General Education Optional				
ECO 213/ ECO 4101	Economics	3.00	-----	4 digit from 183 batch
ACT 111/ ACT 2111	Financial and Managerial Accounting	3.00	-----	4 digit from 183 batch
IPE 401/ IPE 3401	Industrial Management/ Industrial and Operational Management	3.00	-----	4 digit from 183 batch
TEC 2499	Technology Entrepreneurship	3.00		
PSY 2101/ PSY 101	Psychology	3.00	-----	4 digit from 183 batch
Basic Sciences				
PHY 2105/ PHY 105	Physics	3.00	-----	4 digit from 183 batch
PHY 2106 /PHY 106	Physics Lab	1.00	-----	4 digit from 183 batch
BIO 3105	Biology for Engineers	3.0	-----	From 183 batch
Mathematics				
MATH 1151/ MATH 151	Fundamental Calculus/ Differential and Integral Calculus	3.00	----- MATH 003	4 digit from 183 batch
MATH 2183/ MATH 183	Calculus and Linear Algebra/ Linear Algebra, Ordinary & Partial Differential Equations	3.00	MATH 1151 MATH 003, MATH 151	4 digit from 183 batch
MATH 201/ MATH 2201	Coordinate Geometry and Vector Analysis	3.00	MATH 151 MATH 1151	4 digit from 183 batch
MATH 2205/ STAT 205	Probability and Statistics	3.00	MATH 1151 -----	4 digit from 183 batch
Other Engineering				
EEE 2113/ CSE 113	Electrical Circuits	3.00	-----	4 digit from 183 batch
EEE 2123/ CSE 123	Electronics	3.00	CSE 113/ EEE 2113	4 digit from 183 batch
EEE 2124/ CSE 124	Electronics Lab	1.00	CSE 113/ EEE 2113	4 digit from 183 batch
EEE 4261	Green Computing	3.00	-----	4 digit from 183 batch
Core Courses				
Programming Compulsory				
CSE 1110	Introduction to Computer Systems	1.00	-----	From 183 batch
CSE 1111/ CSI 121	Structured Programming Language	3.0	CSE 1110 -----	4 digit from 183 batch
CSE 1112/ CSI 122	Structured Programming Language Laboratory	1.00	CSE 1110 -----	4 digit from 183 batch
CSE 1115/ CSI 211	Object Oriented Programming	3.00	CSE 1111 CSI 217 & CSI 218	4 digit from 183 batch
CSE 1116/ CSI 212	Object Oriented Programming Lab	1.00	CSE 1112 CSI 217 & CSI 218	4 digit from 183 batch
CSE 2118/ CSI 124	Advanced Object Oriented Programming Lab / Advanced Programming Lab	1.00	CSE 1116 CSI 121 & CSI 122	4 digit from 183 batch

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Programming Optional				
CSE 4165	Web Programming	3.00	CSE 2118, CSE 3521	4 digit from 183 batch
CSE 4181	Mobile Application Development	3.00	CSE 1115, CSE 2118	4 digit from 183 batch
Hardware				
CSE 1325/ CSE 225	Digital Logic Design	3.00	-----	4 digit from 183 batch
CSE 1326/ CSE 226	Digital Logic Design Lab	1.00	-----	4 digit from 183 batch
CSE 313/ CSE 3313	Computer Architecture	3.00	CSE 225/CSE 226 CSE 1325/CSE 1326	4 digit from 183 batch
CSE 425 / CSE 4325	Microprocessor, Microcontroller and Interfacing/ Microprocessors and Microcontrollers	3.00	CSE 236 CSE 3313	4 digit from 183 batch
CSE 426/ CSE 4326	Microprocessor, Microcontroller and Interfacing Lab/ Microprocessors and Microcontrollers Lab.	1.00	CSE 236 EEE 2124	4 digit from 183 batch
Logics and Algorithms				
CSE 2213/ CSI 219	Discrete Mathematics	3.00	-----	4 digit from 183 batch
CSE 2215/ CSI 217	Data Structure and Algorithms I/ Data Structure	3.00	CSE 1111, CSE 1115 CSI 121, CSI 124	4 digit from 183 batch
CSE 2216/ CSI 218	Data Structure and Algorithms I Laboratory/ Data Structure Lab	1.00	CSE 1112, CSE 1116 CSI 122, CSI 124	4 digit from 183 batch
CSI 227 / CSE 2217	Algorithms/ Data Structure and Algorithms II	3.00	CSI 217 CSE 2215	4 digit from 183 batch
CSI 228 / CSE 2218	Algorithms Lab./ Data Structure and Algorithms II Laboratory	1.00	CSI 218 CSE 2216	4 digit from 183 batch
CSE 2233/ CSI 233	Theory of Computation/ Theory of Computing	3.00	-----	4 digit from 183 batch
Software Engineering				
CSI 311 / CSE 3411	System Analysis and Design	3.00	CSI 221/ CSE 3521	4 digit from 183 batch
CSI 312 / CSE 3412	System Analysis and Design Lab	1.00	CSI 222/ CSE 3522	4 digit from 183 batch
CSI 321/ CSE 3421	Software Engineering	3.00	CSI 311 CSE 3411	4 digit from 183 batch
CSI 322/ CSE 3422	Software Engineering Lab	1.00	CSI 312 CSE 3412	4 digit from 183 batch
Systems				
CSE 4531	Computer Security	3.00	CSE 3711/CSE 323	4 digit from 183 batch
CSI 221/ CSE 3521	Database Management Systems	3.00	-----	4 digit from 183 batch
CSI 222/ CSE 3522	Database Management Systems Lab	1.00	-----	4 digit from 183 batch
CSI 309/ CSE 4509	Operating Systems Concept	3.00	-----	4 digit from 183 batch
CSI 310/ CSE 4510	Operating Systems Concept Lab	1.00	-----	4 digit from 183 batch
CSE 323/ CSE 3711	Computer Networks	3.00	-----	4 digit from 183 batch
CSE 324 /	Computer Networks Lab	1.00	-----	4 digit from 183

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CSE 3712				batch
CSI 341/ CSE 3811	Artificial Intelligence	3.00	CSI 227 -----	4 digit from 183 batch
CSI 342/ CSE 3812	Artificial Intelligence Lab	1.00	CSI 228 -----	4 digit from 183 batch
Elective courses				
Computational Theory				
CSE 4633	Basic Graph Theory	3.00	-----	4 digit from 183 batch
CSE 4611	Compiler Design	3.00	CSE 2233	4 digit from 183 batch
CSE 4621	Computer Graphics	3.00	MATH 2201 CSE 2217	4 digit from 183 batch
Network and communications				
CSE 3715 Systems	Data Communication	3.00	-----	4 digit from 183 batch
CSE 4523	Simulation and Modeling	3.00	MATH 2205	4 digit from 183 batch
CSE 4521	Computer Graphics	3.00	MATH 2183, MATH 2201	4 digit from 183 batch
CSE 4587	Cloud Computing	3.00		4 digit from 183 batch
Data Science				
CSE 4889	Machine Learning	3.00	CSE 3811	4 digit from 183 batch
CSE 4891	Data Mining	3.00	CSE 3811	4 digit from 183 batch
CSE 4893	Introduction to Bioinformatics	3.00	-----	4 digit from 183 batch
CSE 4883	Digital Image Processing	3.00	MATH 2183	4 digit from 183 batch
Software Engineering				
CSE 4451	Human Computer Interaction	3.00	-----	4 digit from 183 batch
CSE 4435	Software Architecture	3.00	-----	4 digit from 183 batch
CSE 4165	Web Programming	3.00	CSE 2118, CSE 3521	4 digit from 183 batch
CSE 4181	Mobile Application Development	3.00	CSE 1115, CSE 2118	4 digit from 183 batch
CSE 4495	Software Testing and Quality Assurance	3.00	-----	4 digit from 183 batch
Hardware				
CSE 4329	Digital System Design	3.00	CSE 3313	4 digit from 183 batch

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Information and Communication Technology				
CSE 4165	Web Programming	3.00	CSE 2118, CSE 3521	4 digit from 183 batch
CSE 4181	Mobile Application Development	3.00	CSE 1115, CSE 2118	4 digit from 183 batch
CSE 4587	Cloud Computing	3.00	-----	4 digit from 183 batch
CSE 4495	Software Testing and Quality Assurance	3.00	CSE 3421	4 digit from 183 batch
CSE 4945	UI: Concepts and Design	3.00	-----	4 digit from 183 batch
Final Year Design Project				
CSE 4000 A	Final Year Design Project - I	2.00	-----	4 digit from 183 batch
CSE 4000 B	Final Year Design Project - II	2.00	CSE 4000 A	4 digit from 183 batch

B.Sc. in Data Science (BSDS)

Course Code	Title	Credits	Prerequisite	Remarks
DS 1501	Programming for Data Science	3.00	-----	1 st Trimester
DS 1502	Programming for Data Science Laboratory	1.00	-----	1 st Trimester
ENG 1011	English I	3.00	-----	1 st Trimester
BDS 1201	History of the Emergence of Bangladesh	2.00	-----	1 st Trimester
ENG 1013	English - II	3.00	ENG 1011	2 nd Trimester
MATH 1151	Fundamental Calculus/Differential and Integral Calculus	3.00	-----	2 nd Trimester
DS 1115	Object Oriented Programming for Data Science	3.00	DS 1501	2 nd Trimester
DS 1116	Object Oriented Programming for Data Science Laboratory	1.00	DS 1501 & DS 1502	2 nd Trimester
DS 1101	Fundamentals of Data Science	3.00	-----	3rd Trimester
BIO 3107	Biology	3.00	-----	3rd Trimester
MATH 2107	Linear Algebra	3.00	-----	3rd Trimester
PHY 2105	Physics	3.00	-----	3rd Trimester
PHY 2106	Physics Lab	1.00	-----	3rd Trimester

Prerequisites of the courses may be changed where necessary.

Before taking any course (where needed), you will have to complete prerequisite course(s).

Deputy Registrar, CSE