Department of Computer Science and Engineering
School of Engineering and Computer Science
Brac University

Program Structure

Bachelor of Science in Computer Science and Engineering (BS CSE)

(Effective for students intake in Summer 2018 and onward)

TOTAL CREDIT HOURS		**136**
Category	*Course Code and Name*	*Credit Hours*
UNIVERSITY CORE *(General Education)*		**39**
Writing		**6**
	ENG 101 English Fundamentals	3
	ENG 102 English Composition	3
Arts, Humanities, Social Sciences		**21**
	BNG 103 Bangla Language & Literature	3
	HUM 103 Ethics and Culture	3
	EMB101/ DEV 101 Emergence of Bangladesh / Bangladesh Studies	3
	BUS201 Business and Human Communication	3
	Any two (2) courses (6 credits) from the following: HUM101, ECO101, ANT101, HST102, SOC201	6
	Any one (1) course (3 credits) from the following: SOC101, PSY101, POL101/	3
Mathematics, Science		**6**
	MAT 110 Mathematics I	3
	PHY 111 Principles of Physics I	3
NON-MAJOR (minimum 2 courses - 6 credits)		**6**
Student may take any non-overlapping course from other departments as non-major course. Some of the suggested non-major courses are: ECO101 , ECO102 , BUS101 , BCH101 , BIO101, BTE101, CHE101, CHE110, CHN101, FRN101, ANT101, GEO101, HST102, HUM101, LAW101, POL101, PSY101, SOC101, SOC201, ENV101/ ENV103, HUM111/HST407		
SCHOOL CORE		**15**
	MAT 110 Mathematics I *	3
	MAT 120 Mathematics II	3
	MAT 215 Mathematics III	3
	MAT 216 Mathematics IV	3
	PHY 111 Principles of Physics I *	3
	PHY 112 Principles of Physics II	3
	STA 201 Elements of Statistics and Probability	3
	**** Credits counted toward University Core (GED)***	
PROGRAM CORE		**75**
	CSE 110 Programming Language I	3
	CSE 111 Programming Language II	3
	CSE 220 Data Structure	3
	CSE 221 Algorithm	3
	CSE 230 Discrete Mathematics	3
	CSE 250 Circuits and Electronics	3
	CSE 251 Electronic Devices and Circuits	3
	CSE 260 Digital Logic Design	3
	CSE 320 Data Communication	3
	CSE 321 Operating Systems	3
	CSE 330 Numerical Method	3
	CSE 331 Automata and Computability	3
	CSE 340 Computer Architecture	3
	CSE 341 Microprocessor	3

	CSE 350	Digital Electronics and Pulse Techniques	3
	CSE 360	Computer Interface	3
	CSE 370	Database Systems	3
	CSE 420	Compiler Design	3
	CSE 421	Computer Networks	3
	CSE 422	Artifical Intelligence	3
	CSE 423	Computer Graphics	3
	CSE 460	VLSI Design	3
	CSE 461	Digital System Design	3
	CSE 470	Software Engineering	3
	CSE 471	System Analysis and Design	3
FINAL-YEAR PROJECT/INTERNSHIP/THESIS		**CSE400**	**4**
PROGRAM ELECTIVE	- Minimum one (1) course (3 credits) from the following:		**3**
	CSE 310	Object Oriented Programming	3
	CSE 342	Computer Systems engineering	3
	CSE 390	Technical Communication	3
	CSE 391	Programming for the Internet	3
	CSE 392	Signals and Systems	3
	CSE 410	Advance Programming In UNIX	3
	CSE 419	Programming Languages	3
	CSE 424	Pattern Recognition	3
	CSE 425	Neural Networks	3
	CSE 426	Basic Graph Theory	3
	CSE 427	Machine Learning	3
	CSE 428	Image Processing	3
	CSE 429	Basic Multimedia Theory	3
	CSE 430	Digital Signal Processing	3
	CSE 431	Natural Language Processing	3
	CSE 432	Speech Recognition and Synthesis	3
	CSE 462	Fault Tolerant Systems	3
	CSE 472	Human Computer Interface	3
	CSE 473	Decision Support System	3
	CSE 474	Simulation and Modeling	3
	CSE 490	WAN Routing and Technologies (Special Topics)	3
	CSE 490	Special Topics	3
	CSE 491	Independent Study	3