



ADAMAS UNIVERSITY

**SCHOOL OF ENGINEERING &
TECHNOLOGY**

SoET 2.0

(Engineering +)

UG PROGRAM

Course Structure of

**Bachelor of Technology (B.Tech) in Computer Science &
Engineering (CSE)**

Applicable for Academic Year: 2020-21

ADAMAS UNIVERSITY

Adamas Knowledge City

Barasat-Barrackpore Road

P.O. –Jagannathpur, District -24 Parganas (North)

Kolkata -700126, West Bengal, India

FIRST YEAR

ADAMAS UNIVERSITY
SCHOOL OF ENGINEERING & TECHNOLOGY
UG Program: (B.Tech) in CSE

SEMESTER I

S. No	Type	Course Code	Course Title	L	T	P	Contact Hrs/week	Credits
1.	Theory BSC	SMA41101	Engineering Mathematics-I	3	1	0	4	4
2.	Theory BSC	SPH41109/ SCY41106	Applied Science	3	0	0	3	3
3.	Theory ESC	ECS41101/ EEE41102	Introduction to Programming /Electrical and Electronics Technology	3	0	0	3	3
4.	Theory HSSM	HEN41117	HSSM –I (English Communication-I)	3	0	0	3	3
5.	Theory HSSM/BSC	HEN41119/ SBT41108	HSSM –II (Human Values & Ethics and Psychology) / Life Sciences	3	0	0	3	3
6.	Practical BSC	SPH41209/ SCY41206	Applied Science Lab	0	0	3	3	2
7.	Practical ESC	ECS41201/ EEE41202	Programming Lab / Electrical and Electronics Technology Lab	0	0	3	3	2
8.	Practical ESC	ECE41201/ EME41204	Engineering Drawing and CAD/ Engineering Workshop	0	0	3	3	2
9.	Practical MC	EMC41201	Communication and Collaboration Skill -I	0	0	2	2	1
10.	Practical		Avant Grade Project-I	0	0	2	2	1
Total				15	1	13	29	24

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SEMESTER II

S. No	Type	Course Code	Course Title	L	T	P	Contact Hrs/week	Credits
1.	Theory BSC	SMA41102	Engineering Mathematics– II	3	1	0	4	4
2.	Theory ESC	EEE41102/ ECS41101	Electrical and Electronics Technology / Introduction to Programming	3	0	0	3	3
3.	Theory BSC/ HSSM	SBT41108/ HEN41119	Life Sciences/ (Human Values & Ethics and Psychology)	3	0	0	3	3
4.	Theory ESC	EME41104	Engineering Mechanics	3	1	0	4	4
5.	Theory		Environmental Science	3	0	0	3	3
6.	Practical ESC	EEE41202/ ECS41201	Electrical and Electronics Technology Lab / Programming Lab	0	0	3	3	2
7.	Practical ESC	EME41204/ ECE41201	Engineering Workshop/ Engineering Drawing and CAD	0	0	3	3	2
8.	Practical MC	EMC41202	Communication and Collaboration Skill -II	0	0	2	2	1
9.	Practical		Avant Grade Project-II	0	0	2	2	1
Total				15	2	10	27	23

Total Credit (First Year): 47

HSSM: Humanities, Social Sciences & Management

BSC: Basic Science

ESC: Engg. Science

SECOND YEAR

ADAMAS UNIVERSITY SCHOOL OF ENGINEERING & TECHNOLOGY UG Program: (B.Tech) in CSE								
Semester- III								
S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory	SMA42111	Probability, Statistics and Numerical Methods	3	1	0	4	4
2.	Theory		Psychology	3	0	0	3	3
3.	Theory		HSSM –IV (Economics for Engineers)	3	0	0	3	3
4.	Theory	ECS42101	Data Structures and Algorithms (Prof. Core- I)	3	0	0	3	3
5.	Theory	ECS42105	Switching Circuits and Logic Design (Prof. Core- II)	3	0	0	3	3
6.	Theory	ECS42103	Formal Languages and Automata Theory (Prof. Core- III)	3	0	0	3	3
7.	Practical	ECS42201	Data Structures and Algorithms Lab (Prof. Core-I Lab)	0	0	3	3	2
8.	Practical		Interdisciplinary Project AU	1	0	2	3	3
9.	Practical		Design Thinking-I	0	0	3	3	2
10.	Practical		Avant Grade Project-III	0	0	2	2	1
11.	Practical		#Adamas Foundation (CSR Activity)	--	--	-	--	1
Total				22	1	10	33	28

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Semester-IV

S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory		Operations Research	3	0	0	3	3
2.	Theory	ECS42106	Design & Analysis of Algorithm (Prof. Core- IV)	3	0	0	3	3
3.	Theory	ECS42108	Object Oriented Programming (Prof. Core- V)	3	0	0	3	3
4.	Theory	ECS42102	Software Engineering (Prof. Core- VI)	3	0	0	3	3
5.	Theory	ECS42104	Computer Architecture (Prof. Core- VII)	3	0	0	3	3
6.	Practical		Numerical Techniques Lab	0	0	3	3	2
7.	Practical	ECS42206	Design & Analysis of Algorithm Lab (Prof. Core- IV Lab)	0	0	3	3	2
8.	Practical	ECS42208	Object Oriented Programming Lab (Prof. Core- V Lab)	0	0	3	3	2
9.	Practical		Design Thinking-II	0	0	3	3	2
10.	Practical		Avant Grade Project-IV	0	0	2	2	1
Total				18	0	14	32	24

Total Credit (Second Year): 52

THIRD YEAR

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Semester-V

S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory	ECS43105	Computer Networks (Prof. Core- XI)	3	0	0	3	3
2.	Theory	ECS43107	Database Management Systems (Prof. Core- IX)	3	0	0	3	3
3.	Theory	ECS43101	Operating Systems (Prof. Core- X)	3	0	0	3	3

4.	Theory		Prof. Elective- I	3	0	0	3	3
5.	Practical	ECS43205	Computer Networks Lab (Prof. Core- XI Lab)/	0	0	3	3	2
6.	Practical	ECS43207	Database Management Systems Lab (Prof. Core- IX Lab)	0	0	3	3	2
7.	Practical	ECS43201	Operating Systems Lab (Prof. Core- X Lab)	0	0	3	3	2
8.	Practical		Venture Ideation	0	0	2	2	1
9.	Practical		Avant Grade Project-V	0	0	2	2	1
Total				12	0	13	25	20

ADAMAS UNIVERSITY SCHOOL OF ENGINEERING & TECHNOLOGY UG Program: (B.Tech) in CSE								
Semester-VI								
S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory	ECS43104	Compiler Design (Prof. Core- VIII)	3	0	0	3	3
2.	Theory	ECS43106	Artificial Intelligence and Machine Learning (Prof. Core- XII)	3	0	0	3	3
3.	Theory		Prof. Elective- II	3	0	0	3	3
4.	Theory		Open Elective- I	2	0	0	2	2
5.	Practical	ECS43204	Compiler Design Lab (Prof. Core- VIII Lab)	0	0	3	3	2
6.	Practical	ECS43206	Artificial Intelligence and Machine Learning Lab (Prof. Core- XII Lab)	0	0	3	3	2
7.	Practical		Prof. Elective- II Lab	0	0	3	3	2
Total				11	0	9	20	17

Total Credit (Third Year): 37

FOURTH YEAR

<p align="center">ADAMAS UNIVERSITY SCHOOL OF ENGINEERING & TECHNOLOGY UG Program: (B.Tech) in CSE</p>								
<p align="center">Semester-VII</p>								
S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory	MBA43144	HSSM –V (Industrial Management)	3	0	0	3	3
2.	Theory		Prof. Elective- III	3	0	0	3	3
3.	Theory		Prof. Elective- IV	3	0	0	3	3
4.	Theory		Open Elective- II	3	0	0	3	3
5.	Theory		Open Elective- III	3	0	0	3	3
6.	Practical		Prof. Elective- IV Lab	0	0	3	3	2
7.	Practical		#Summer Internship	--	--	--	--	2
8.	Practical		Minor Project	0	0	6	6	3
Total				15	0	9	24	22

Summer Internship for 30 days will be taken at the end of 6th semester, and will be evaluated in the 7th semester.

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<p align="center">Semester-VIII</p>								
S. No	Type	Course Code	Subject Name	L	T	P	Contact Hrs/week	Credits
1.	Theory/Project	ECS44402	Industry Work Experience / SIRE* / Major Project	0	0	0	12 (For Major Project only)	5
2.	Viva	ECS44502	Comprehensive Viva Voce	-----			-----	2
Total								7

*SIRE: Scientific Investigation & Research Experience

Total Credits (Fourth Year): 29

Total Credits (Over four years): 47+52+37+29= 165

Total Credit (Fourth Year): 29

Total Credits (Over four years): 165

List of Electives: -

- PE I (Theory):** **Applied Graph Theory (ECS43111)**
Communication Network (ECS43113)
Big Data Analytics (ECS43115)
- PE II (Theory):** **High Performance Computer Architecture (ECS43110)**
Pattern Recognition (ECS43112)
Computational Geometry (ECS43114)
- PE III (Theory):** **Image Processing (ECS44101)**
Cloud Computing (ECS44103)
Information Retrieval (ECS44105)
Computer Graphics (ECS44107)
Artificial Neural Network and Deep Learning (ECS44109)
- PE III (Lab):** **Image Processing Lab (ECS44201)**
Cloud Computing Lab (ECS44203)
Information Retrieval Lab (ECS44205)
Computer Graphics Lab (ECS44207)
Artificial Neural Network and Deep Learning Lab (ECS44209)
- PE IV (Theory):** **Cryptography & Cyber Security (ECS44111)**
Internet of Things (IoT) (ECS44113)
5G Wireless Communication Network (ECS44115)
- OE I (Theory):** **Artificial Intelligence (ECS43116)/ Computational Geometry (ECS43114)**
- OE II (Theory):** **Machine Learning (ECS44117)**
- OE III (Theory):** **Internet of Things (IoT) (ECS44113)**
- OE IV (Theory):** **Computer Graphics (ECS44121)**