AMITY UNIVERSITY

RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Bachelor of Technology

(Electronics & Communication Engineering)

Programme Code: BEC

2017-2021

Duration – 4 Years Full Time

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE
Electronics & Communication Engineering

Program Outcomes (POs)
ELECTRONICS AND COMMUNICATION ENGG.

PLO.1-An ability to apply and understand the knowledge of mathematics, science and engineering.

PL0.2-Knowledge and understanding of mathematics through differential and integral calculus, and basic sciences and engineering topics (including computing science) necessary to analyze and design complex electrical and electronic devices, software, and systems containing embedded hardware and software components and their design.

PLO.3-Develop and deploy engineering/technological solutions using latest techniques & tools/CAD (VHDL, MATLAB, Or-cad, VLSI, Antenna Design) imbibing concern for eco-system, and an attitude to serve society & humanity at large.

PLO.4-Graduates will successfully engage themselves in practice of multidisciplinary engineering or relevant fields; They will pursue wide-spectrum careers appropriately as technologists, innovators, consultants, managers & entrepreneurs and will advance in their profession.

PLO.5-An ability to design and conduct experiments as well as to analyze and interpret data.

PLO.6-An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, health and safety.

PLO7-An ability to identify, formulate, and solve engineering problems.

PLO8-Knowledge of probability and statistics, including applications appropriate to the electrical engineering (Electronics, Communication, Processing and Embedded technology)

Credit Summary

Sem	Core course CC	Domain Electives DE	Values Added VAC	Open Electives	NTCC	Total
I	24	-	4	-	--	28
II	23	-	4	3	-	30
III	21	3	4	4	--	32
IV	18	4	4	3	---	29
V	24	3	4	3	--	34
VI	19	3	4	3	3	32
VII	17	3	4	3	3	30
VII	9	3	--	---	12	24

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Code	Course	Category	L	T	P	Credits
Semester I						
AM 101	Applied Mathematics – I	CC	3	1	-	4
AP 102	Applied Physics - I – Fields & Waves	CC	2	1		3
AC 103	Applied Chemistry	CC	2	1		3
BME-104	Element of Mechanical Engineering	CC	2	1		3
BCS- 105	Introduction to Computers & Programming in C	CC	2	1		3
BEE- 106	Electrical Science	CC	2	1		3
AP 122	Applied Physics - I – Fields & Waves lab	CC			2	1
AC 123	Applied Chemistry lab	CC			2	1
BME 124	Element of Mechanical Engineering lab	CC			2	1
BCS 125	Introduction to Computers & Programming in C lab	CC			2	1
BEE 126	Electrical Science lab	CC			2	1
Value Added						
BCS 101	English	VA	1	-	-	1
BSS 101	Behaviral Science-I	VA	1	-	-	1
FLF 101	French	VA	2	-	-	2
FLG 101	German					
FLS 101	Spanish					
FLC 101	Chinese					
Total						**28**

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE
Electronics & Communication Engineering

Code	Course	Category	L	T	P	Credits
Semester II						
AM-201	Applied Mathematics – II	CC	3	1	-	4
AP- 202	Applied Physics - II – Modern Physics	CC	2	1		3
BCS-203	Object Oriented Programming using C++	CC	2	1		3
BME-204	Engineering Mechanics	CC	2	1		3
BME-205	Engineering Graphics	CC	2			2
EVS001	Environmental Studies	CC	4	0	-	4
AP-222	Applied Physics - II – Modern Physics lab	CC			2	1
BCS-223	Object Oriented Programming using C++ lab	CC			2	1
BME-224	Engineering Mechanics lab	CC			2	1
BME-205	Engineering Graphics lab	CC			2	1
Open Elective-I						
	OPEN ELECTIVE – I	OE	3	-	-	3
Value Added						
BCS 201	English	VA	1	-	-	1
BSS 201	Behaviral Science-II	VA	1	-	-	1
FLT201 FLG 201 FLS 201 FLC 201	Foreign Language – II French German Spanish Chinese	VA	2	-	-	2
Total						**30**

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE
Electronics & Communication Engineering

Semester III

Code	Course	Category	L	T	P	Credits
AM301	Applied Mathematics – III	CC	3	1	-	4
BEC 302	Circuits & Systems	CC	3	1		4
BEC 303	Analog Electronics – I	CC	3	1		4
BEC 304	Signal & Systems	CC	2	1		3
BCS 304	Java Programming	CC	2	1		3
BEC 322	Circuits & Systems lab	CC			2	1
BCS 323	Analog Electronics - I lab	CC			2	1
BCS 324	Java Programming Lab	CC			2	1
Domain Elective-I: Student has to select one course from the following courses						
BEC 306	Electromagnetic Properties Of Materials	DE	2	1		3
BEC 307	Measurements & Instrumentation	DE	2	1		3
Open Elective						
	OPEN ELECTIVE – II	OE	3		-	3
Value Added						
BCS 301	Communication Skills – I	VA	1	-	-	1
BSS 301	Behaviral Science-III	VA	1	-	-	1
FLT 301 FLG 301 FLS 301 FLC 301	Foreign Language – III French German Spanish Chinese	VA	2	-	-	2
Total						**31**

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester IV						
Code	Course	Category	L	T	P	Credits
BEC 401	Digital Circuits & Systems-I	CC	3	1		4
BEC 402	Analog Electronics – II	CC	3	1		4
BEC 403	Electromagnetic Field Theory	CC	3	-	-	3
BEC 405	Communication Systems	CC	3	1		4
BEC 421	Digital Circuits & Systems-I lab	CC			2	1
BEC 422	Analog Electronics - II lab	CC			2	1
BEC 425	Communication Systems Lab	CC			2	1
Domain Elective-II: Student has to select one course from the following courses						
BEE 404	Control Systems	DE	2	1	0	3
BEE 424	Control Systems with lab	DE			2	1
BEC 407	Data Structure & Algorithms	DE	3	1		4
Open Elective						
	OPEN ELECTIVE – III	OE	3			3
Value Added						
BCS 401	Communication Skills – II	VA	1	-	-	1
BSS 401	Behaviral Science-IV	VA	1	-	-	1
FLT 401 FLG 401 FLS 401 FLC 401	Foreign Language – IV French German Spanish Chinese	VA	2	-	-	2
Total						29

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Code	Course	Category	L	T	P	Credits
Semester V						
BEC 501	Digital Circuits & Systems – II	CC	3	1		4
BEC 502	Microprocessor and Microcontroller Systems	CC	3	1		4
BEC 503	Digital Communications	CC	3	1		4
BEC 550	Practical Training (Evaluation)	CC	-	-	-	6
BEC 521	Digital Circuits & Systems - II lab	CC			2	1
BEC 522	Microprocessor and Microcontroller Systems lab	CC			2	1
BEC 504	Power Electronics	CC	2	1		3
BEC524	MATLAB theory and practices	CC	-	-	2	1
Domain Elective-III: Student has to select one course from the following courses						
BEC 505	Telecommunication Networks	DE	3			3
BEC 506	Operating Systems	DE	3			3
Open Elective						
	OPEN ELECTIVE – IV	OE	3			3
Value Added						
BCS 501	Communication Skills – III	VA	1	-	-	1
BSS 501	Behaviral Science-V	VA	1	-	-	1
FLT 501 FLG 501 FLS 501 FLC 501	Foreign Language – V French German Spanish Chinese	VA	2	-	-	2
Total						34

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Code	Course	Category	L	T	P	Credits
Semester VI						
BEC 601	VLSI Design	CC	3	1		4
BEC 602	Digital Signal Processing	CC	3	1		4
BEC 603	Microwave Engineering	CC	3	1		4
BEC 621	VLSI Design lab	CC			2	1
BEC 622	Digital Signal Processing lab	CC			2	1
BEC 623	Microwave Engineering lab	CC			2	1
BEC 650	Minor Project	CC				3
BEC 624	Scientific Computing Lab	CC			2	1
BEC 604	Measurement & Measuring Instruments	CC	3	-	-	3
Domain Elective-IV: Student has to select one course from the following courses						
BEC 605	Optical Communication	DE	3			3
BEC 606	Computer Networks	DE	3			3
BEC 607	Information Theory & Coding	DE	3			3
Open Elective						
	OPEN ELECTIVE – V	OE	3			3
Value Added						
BCS 601	Communication Skills – IV	VA	1	-	-	1
BSS 601	Behaviral Science-VI	VA	1	-	-	1
FLT 601 FLG 601 FLS 601 FLC 601	Foreign Language – VI French German Spanish Chinese	VA	2	-	-	2
Total						**32**

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Code	Semester VII Course					
Code	**Course**	**Category**	**L**	**T**	**P**	**Credits**
BEC 701	Radar & Satellite Communications	CC	3	1		4
BEC 702	Digital Image Processing	CC	3	1		4
BEC 703	Analog CMOS IC Design	CC	3	1		4
BEC 750	Industrial Training (Evaluation)	CC				3
BEC 721	Radar & Satellite Communications lab	CC			2	1
BEC 722	Digital Image Processing lab	CC			2	1
BEC 723	Analog CMOS IC Design lab	CC			2	1
BEC 724	Soft Computing Using Matlab	CC				2
Domain Elective-V: Student has to select one course from the following courses						
BEC 704	Biomedical Signal Processing	DE	3			3
BEC 705	Wireless Communication	DE	3			3
BEC 706	Microelectronics	DE	3			3
Open Elective						
	OPEN ELECTIVE – VI	OE	3			3
Value Added						
BCS 701	Communication Skills – V	VA	1	-	-	1
BSS 701	Behaviral Science – VII	VA	1	-	-	1
FLT 701 FLG 701 FLS 701 FLC 701	Foreign Language – VII French German Spanish Chinese	VA	2	-	-	2
	TOTAL					**30**

AMITY UNIVERSITY RAJASTHAN

PROGRAMME STRUCTURE

Electronics & Communication Engineering

Semester VIII						
Code	**Course**	**Category**	**L**	**T**	**P**	**Credits**
BEC 801	Antenna & Wave Propagation	CC	3	1	-	4
BEC 802	Embedded System Design and Device Driver Development	CC	3	-		3
BEC 822	Embedded System Design and Device Driver Development lab	CC		-	4	2
BEC 860	Project	CC				12
Domain Elective-V: Student has to select one course from the following courses						
BEC 803	Instrumentation	DE	3			3
BEC 804	Nanoscience & Nanotechnology	DE	3			3
BEC 805	Robotics & Automation	DE	3			3
	Total					**24**

Total credit	**239**