Central University of Jammu

Rahya-Suchani (Bagla) District Samba – 181143, Jammu (J&K)

Department of Electronics and Communication Engineering

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Semester I
B.Tech.- ECE

Semester	Course Code	Course Title	Credits	L	T	P
First		Induction Program	0	-	-	-
	BEECE1C001	Engineering Mathematics-I	4	3	1	0
	BEECE1C002	Engineering Physics-I	5	3	1	2
	BEECE1C003	English for Technical Communication	4	3	1	0
	BEECE1C004	Data Structure using C Programming	6	3	1	4
	BEECE1C005	Problem Solving and Computer Programming in C	5	3	1	2
	BEECE1C006	Environmental Studies* Course from MOOCs/SWAYAM/NPTEL	0	2	0	0
		Total	**24**	**17**	**5**	**8**

*Audit Course

Semester II
B.Tech.- ECE

Semester	Course Code	Course Title	Credits	L	T	P
Second	BEECE1C007	Engineering Mathematics-II	4	4	0	0
	BEECE1C008	Data Science	4	3	0	0
	BEECE1C009	Basic Electronics	4	3	0	2
	BEECE1C010	Introduction to MATLAB	4	2	0	4
	BEECE1C011	Professional Communication	4	3	0	2
	BEECE1C012	Project Phase-I	2	0	0	4
	BEECE1C013	Rights, Responsibilities, Law and Constitution* Course from MOOCs/SWAYAM/NPTEL	0	2	0	0
		Total	**22**	**17**	**0**	**12**

*Audit Course

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Semester III
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Third	BEECE2C001	Analog Communication	5	3	1	2
	BEECE2C002	Python Programming	5	2	1	4
	BEECE2C003	Analog Electronic Circuits	3	3	0	0
	BEECE2C004	Engineering Graphics	4	1	0	6
	BEECE2C005	Basic Electrical Engineering	5	3	1	2
	BEECE2C006	Project Phase-II	2	0	0	4
	BEECA2C007	Indian Knowledge Systems* Course from MOOC/SWAYAM/NPTEL	-	2	-	-
	Total		**24**	**14**	**3**	**18**

*Audit Course

Semester IV
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Fourth	BEECE2C008	Database Management System	4	4	0	0
	BEECE2C009	Introduction to Machine Learning	4	3	0	2
	BEECE2C010	Digital Electronics	4	3	0	2
	BEECE2C011	Digital Communication	3	3	0	0
	BEECE2C012	Control System	3	3	0	0
	BEECE2C013	Signals and Systems	3	3	0	0
	BEECE2C014	Innovation and Entrepreneurship	1	1	0	0
	BEECE2C015	Project Phase-III	1	0	0	2
	Total		**23**	**20**	**0**	**6**

Semester V
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Fifth	BEECE3C001	Internet of Things	4	3	0	2
	BEECE3C002	Network Analysis and Synthesis	3	3	0	0
	BEECE3C003	Electro Magnetic Field Theory	3	3	0	0
	BEECE3C004	VLSI Design	3	3	0	0
	BEECE3C005	Computer Networks and Data Communication	3	3	0	0
	BEECE3C006	Digital Signal Processing	3	3	0	0
	BEECE3C007	Project Phase-IV	1	0	0	2
	BEECE3C008	Industrial Economics* Course from MOOC/SWAYAM/NPTEL	0	2	0	0
	Total		**20**	**20**	**0**	**4**

*Audit Course

Semester VI
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Sixth	BEECE3C008	Deep Learning	3	2	0	2
	BEECE3C009	RF and Microwave	3	3	0	0
	BEECE3C010	Block Chain	3	3	0	0
	BEECE3C011	Big Data Analysis	3	2	0	2
	BEECE3C012	Cyber Physical System	3	3	0	0
	BEECE3C013	Advanced 5G/6G Wireless Networks	3	3	0	0
	BEECE3C014	Project Phase-V	1	0	0	2
	BEECE3C015	Project/Internship**	0	0	0	0
	Total		**19**	**16**	**0**	**6**

** Grades will be awarded in the successive semester

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Semester VII
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Seventh	BEECE4C001	Optical Communication	4	3	0	2
	DEL-I*	DEL-I	3	3	0	0
	DEL-II*	DEL-II	3	3	0	0
	OEL-I**	OEL-I	3	3	0	0
	BEECE4C005	Project Phase-VI	2	0	0	4
	BEECE3C014	Project/Internship	2	0	0	4
	Total		**17**	**12**	**0**	**10**

*Refer Table-I, **Refer Table-II

Semester VIII
B.Tech.-ECE

Semester	Course Code	Course Title	Credits	L	T	P
Eighth	BEECE4C006	Major Project/ Internship	12	0	0	24
	Total		**12**	**0**	**0**	**24**

Total Credits Earned = 161

Central University of Jammu

Rahya-Suchani (Bagla) District Samba – 181143, Jammu (J&K)

Department of Electronics and Communication Engineering

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Table-I	
Department Electives (DEL-I) any one will be offered	
Course Code	**Course Title**
DEL001	Digital Forensic and Cyber Security
DEL002	Drone Technology
DEL003	Antenna and Wave Propagation
Department Electives (DEL-II) any one will be offered	
DEL004	Wireless Networks & Security Issues.
DEL005	Advanced Functional Verification with Universal Verification Methodology
DEL006	Statistical Signal Processing
DEL007	Remote Sensing and GIS
DEL008	Nano Satellite and Ground Station Management
DEL009	ASIC Verification
DEL010	Microprocessor Architecture
DEL011	LTE and 5G Communication
DEL012	Quantum Computing

Table-II	
Open Electives (OEL-I) any two will be offered	
Course Code	**Course Title**
OEL001	Signal Processing and Machine Learning
OEL002	Biomedical Signal Processing
OEL003	Advance Antenna Design
OEL004	Cyber Security
OEL005	RF MEMS
OEL006	Industrial and Biomedical Applications of RF Energy
OEL007	Communication System
OEL008	Fundamentals of Wireless Networks
OEL009	Industrial IoT 5.0
OEL010	Basic PCB Fabrication
OEL011	Electrical Vehicle Design and Modeling
OEL012	Under Water Communication and Free Space Optics
OEL013	Industrial Automation with PLC and Logic Design
OEL014	Silicon On Chip (SOC)
OEL015	Semiconductor Device Technology

Semester I
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
First		Induction Program	0	-	-	-
	BEECA1C001	Engineering Mathematics-I	4	3	1	0
	BEECA1C002	Engineering Physics-I	5	3	1	2
	BEECA1C003	English for Technical Communication	4	3	1	0
	BEECA1C004	Data Structure using C Programming	6	3	1	4
	BEECA1C005	Problem Solving and Computer Programming in C	5	3	1	2
	BEECA1C006	Environmental Studies* Course from SWAYAM	0	2	0	0
		Total	**24**	**17**	**5**	**8**

*Audit Course

Semester II
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Second	BEECA1C007	Engineering Mathematics-II	4	4	0	0
	BEECA1C008	Data Science	4	3	0	0
	BEECA1C009	Basic Electronics	4	3	0	2
	BEECA1C010	Introduction to MATLAB	4	2	0	4
	BEECA1C011	Professional Communication	4	3	0	2
	BEECA1C012	Project Phase-I	2	0	0	4
	BEECA1C013	Rights, Responsibilities, Law and Constitution* Course from MOOCs/SWAYAM/NPTEL	0	2	0	0
		Total	**22**	**17**	**0**	**12**

*Audit Course

Semester III
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Third	BEECA2C001	Analog Communication	5	3	1	2
	BEECA2C002	Python Programming	5	2	1	4
	BEECA2C003	Introduction to Aerospace Engineering	3	3	0	0
	BEECA2C004	Engineering Graphics	4	1	0	6
	BEECA2C005	Basic Electrical Engineering	5	3	1	2
	BEECA2C006	Project Phase-II	2	0	0	4
	BEECA2C007	Indian Knowledge Systems* Course from MOOC/SWAYAM/NPTEL	0	2	0	0
Total			**24**	**14**	**3**	**18**

*Audit Course

Semester IV
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Fourth	BEECA2C008	Introduction to Space Technology	4	4	0	0
	BEECA2C009	Introduction to Machine Learning	4	3	0	2
	BEECA2C010	Digital Electronics	4	3	0	2
	BEECA2C011	Digital Communication	3	3	0	0
	BEECA2C012	Control System	3	3	0	0
	BEECA2C013	Signals and Systems	3	3	0	0
	BEECA2C014	Innovation and Entrepreneurship	1	1	0	0
	BEECA2C015	Project Phase-III	1	0	0	2
Total			**23**	**20**	**0**	**6**

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Department of Electronics and Communication Engineering

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Semester V
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Fifth	BEECA3C001	Internet of Things	4	3	0	2
	BEECA3C002	Network Analysis and Synthesis	3	3	0	0
	BEECA3C003	Electro Magnetic Field Theory	3	3	0	0
	BEECA3C004	Material Science and Metallurgy	3	3	0	0
	BEECA3C005	Computer Networks and Data Communication	3	3	0	0
	BEECA3C006	Digital Signal Processing	3	3	0	0
	BEECA3C007	Project Phase-IV	1	0	0	2
	BEECA3C008	Industrial Economics* Course from MOOC/SWAYAM/NPTEL	0	2	0	0
Total			**20**	**20**	**0**	**4**

*Audit Course

Semester VI
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Sixth	BEECA3C008	Deep Learning	3	2	0	2
	BEECA3C009	RF and Microwave	3	3	0	0
	BEECA3C010	Navigation System and sensors	3	3	0	0
	BEECA3C011	Power Electronics	3	3	0	0
	BEECA3C012	Cyber Physical System	3	3	0	0
	BEECA3C013	Advanced 5G/6G Wireless Networks	3	3	0	0
	BEECA3C014	Project Phase-V	1	0	0	2
	BEECA3C015	Project/Internship**	0	0	0	0
Total			**19**	**16**	**0**	**6**

** Grades will be awarded in the successive semester

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Semester VII
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Seventh	BEECA4C001	Satellite and Optical Communication	4	3	0	2
	DEL-I*	DEL-I	3	3	0	0
	DEL-II*	DEL-II	3	3	0	0
	OEL-I**	OEL-I	3	3	0	0
	BEECA4C005	Project Phase-VI	2	0	0	4
	BEECA3C014	Project/Internship	2	0	0	4
	Total		**17**	**12**	**0**	**10**

***Refer Table-I, **Refer Table-II**

Semester VIII
B.Tech.- ECE-Avionics

Semester	Course Code	Course Title	Credits	L	T	P
Eighth	BEECA4C006	Major Project/ Internship	12	0	0	24
	Total		**12**	**0**	**0**	**24**

Total Credits Earned = 161

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Department of Electronics and Communication Engineering

Table-I	
Department Electives (DEL-I) any one will be offered	
Course Code	**Course Title**
DEL001	Digital Forensic and Cyber Security
DEL002	Drone Technology
DEL003	RF and Microwave
Department Electives (DEL-II) any one will be offered	
DEL004	Wireless Networks & Security Issues.
DEL005	Satellite Communication
DEL006	Nano Satellite and Ground Station Management
DEL007	Antenna and Wave Propagation
DEL008	Quantum Computing
DEL009	Advanced Sensors and Interface Electronics

Table-II	
Open Electives (OEL-I) any two will be offered	
Course Code	**Course Title**
OEL001	Computer Organization and Architecture
OEL002	Embedded System and Microcontroller
OEL003	Operating System
OEL004	Signal Processing and Machine Learning
OEL005	Biomedical Signal Processing
OEL006	Advance Antenna Design
OEL007	Cyber Security
OEL008	RF MEMS
OEL009	Industrial and Biomedical Applications of RF Energy
OEL010	Communication System
OEL011	Fundamentals of Wireless Networks
OEL012	Industrial IoT 5.0
OEL013	Basic PCB Fabrication
OEL014	Electrical Vehicle Design and Modeling
OEL015	Under Water Communication and Free Space Optics
OEL016	Introduction to Aeronautical Engineering
OEL017	Silicon on Chip (SoC)
OEL018	Semiconductor Device Technology
OEL019	Guidance System
OEL 020	Introduction to Computer Vision