

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES:

In their careers, our graduates will:

1. Work efficiently as Communication Engineers, including supportive and leadership roles on Multidisciplinary teams
2. Communicate effectively, recognize and incorporate societal needs and constraints in their professional endeavors, and practice their profession with high regard to legal and ethical responsibilities,
3. Engage in life-long learning, such as graduate study, to remain current in their profession and be leaders in our technological society.

PROGRAM OUTCOMES:

Students in the Electronic and Communication Engineering program should, at the time of their graduation, are in possession of:

- a) An ability to apply knowledge of mathematics, probability & statistics, science and engineering as it applies to the fields of software and hardware
- b) An ability to design and conduct experiments, as well as to organize, analyze, and interpret data
- c) An ability to identify, formulate, and solve hardware and software problems using Electronic Science principles
- d) An understanding of professional, legal, and ethical issues and responsibilities as it pertains to Communication engineering
- e) An ability to effectively communicate technical information in speech, presentation, and in writing
- f) A recognition of the need for an ability to engage in lifelong learning,
- g) A knowledge of contemporary issues
- h) An ability to design and construct a hardware and software system, component, or process to meet desired needs, within realistic constraints such as economic, environmental, social, political, ethical, health & safety, manufacturability, and sustainability.
- i) An ability to function on multidisciplinary teams.
- j) The broad education necessary to understand the impact of computing in a global, economic, environmental, and societal context.
- k) An ability to use the techniques, skills, and modern hardware and software tools necessary for Electronics engineering practice.
- l) An ability to be leaders in our technological society and improve lifelong learning.

AUTONOMOUS

Course	Units (Theory)	PEOs Assessment (Poor / Average / Good / Excellent)				Comments (e.g., needs, re-working, strengthening, etc.)			
		Theory	Lab	Assignments / Tests /	Project / Independent	Theory	Lab	Assignments / Tests /	Project / Independent
<hr/>									

	– Tutorial – Lab)			Exams	Study			Exams	Study
English	8	Good		Assignments	Independent Study	Good		Exams	Independent Study
Engineering Physics	8	Good		Assignments	Independent Study	Good		Tests & Assignments	Independent Study
Engineering Chemistry	8	Good		Assignments	Independent Study	Good		Assignments	Independent Study
Mathematics – I	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electronic Devices and Circuits	8	Good		Assignments	Independent Study	Good		Assignments	Independent Study
C Programming and introduction to Data Structures	8	Good		Assignments	Independent Study	Good		Tests & Exams	Independent Study
Engineering Drawing	8	Good		Assignments	Independent Study	Good		Exams	Project
Engineering and IT workshop	15		Good	Tests	Independent Study		Good	Exams	Independent Study
Electronic Devices and Circuits Lab	14		Good	Tests	Independent Study		Good	Exams	Project
Engineering Physics and Chemistry lab	20		Good	Tests	Independent Study		Good	Exams	Project
English Language & Communication Skills Lab	8		Good	Tests	Independent Study		Good	Exams	Independent Study
C Programming and Data Structures lab	20		Good	Tests	Independent Study		Good	Exams	Independent Study
II - I									
Mathematical Methods –II	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Environmental Studies	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electrical Circuit theory	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Random variable & Random Processes	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electronic Circuits	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Pulse & Digital Circuits	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electronic Circuits Lab	14		Good	Tests	Independent Study		Good	Tests	Project
Pulse & Digital Circuits Lab	14		Good	Tests	Independent Study		Good	Tests	Project
Seminar-1	2	Good			Independent Study		Good		Independent Study
II-II									
Mathematics – III	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electrical	8	Good		Assignments	Independent	Good		Tests	Independent

Technology					Study				Study
Linear Control Systems	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Switching Theory and Logic Design	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Electromagnetic Waves and Transmission Lines	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Signals and Systems	8	Good		Assignments	Independent Study	Good		Tests	Independent Study
Signals and Systems Lab	14		Good	Tests	Independent Study		Good	Tests	Project
Electrical Technology Lab	14		Good	Tests	Independent Study		Good	Tests	Project
Soft skills		Good			project		Good		Project
III-I									
Analog Communication	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Linear IC Applications	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Digital IC Applications	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Antenna and Wave propagation	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Computer Organization	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Managerial Economics and Financial Analysis	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Seminar - II									
IC Applications Lab	14		Good		Independent Study		Good		Project
Advanced English Language and Communication Skills Lab	14		Good		Independent Study		Good		Project
III-II									
VLSI Design	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Microwave Engineering	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Microprocessors and Interfacing	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Digital and Data	8	Good		Tests	Independent Study	Good		Exams	Independent Study

Communications									
Electronic Measurements and Instrumentation	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Management Science	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Soft Skills – II									
Analog and Digital Communications Lab	14		Good		Independent Study		Good		Project
Microprocessors and Interfacing Lab	14		Good		Independent Study		Good		Project
IV-I									
Computer Networks	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Management Science	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Optical Communications	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Radar systems	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Embedded Real time Operating Systems	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Digital Design Through VERILOG HDL	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Microprocessors& DSP Lab	14		Good		Independent Study		Good		Independent Study
Microwave and Optical Communication Lab	14		Good		Independent Study		Good		Independent Study
IV-II									
Cellular and Mobile Communications	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Digital Image Processing	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Wireless Communications and Networks	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Satellite Communications	8	Good		Tests	Independent Study	Good		Exams	Independent Study
Seminar		Good			Independent Study	Good			Independent Study
Project work		Good		Tests		Good			project

IX-P.1 PEOs Mapping with Curriculum (30)

Assessment must be based on the PEOs defined for a course or a set of courses, and their mapping with the curriculum.

Subject Code	Course	PE Objectives	Outcomes
I YEAR			
1GC11	English	P1,P2,P3	d,e,f,g,h,i,j,k,l
1GC12	Engineering Physics	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC13	Engineering Chemistry	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC14	Mathematics – I	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G311	Electronic Devices and Circuits	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G112	C Programming and introduction to Data Structures	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G513	Engineering Drawing	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G411	Engineering and IT workshop	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G312	Electronic Devices and Circuits Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC16	Engineering Physics and Chemistry lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC17	English language communication skills lab	P1,P2,P3	d,e,f,g,h,i,j,k,l
1G114	C Programming and Data Structures lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
II YEAR I SEM			
1GC32	Mathematical Methods –II	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC34	Environmental Science	P1,P2,P3	d,e,f,g,h,i,j,k,l
1G236	Electrical Circuit theory	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G333	Random variable & Random Processes	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G331	Electronic Circuits	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G332	Pulse & Digital Circuits	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G335	Electronic Circuits Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G336	Pulse & Digital Circuits Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G335	Seminar-1	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l

II YEAR II SEM			
1G41	Mathematics – III	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G246	Electrical Technology	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G244	Linear Control Systems	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G345	Switching Theory and Logic Design	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G342	Electromagnetic Waves and Transmission Lines	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G341	Signals and Systems	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G344	Signals and Systems Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G249	Electrical Technology Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1GC11	Soft skills	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
III YEAR I SEM			
1G351	Analog Communication	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G352	Linear IC Applications	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G353	Digital IC Applications	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G354	Antenna and Wave propagation	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G457	Computer Organization	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1GA51	Managerial Economics and Financial Analysis	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G35S	Seminar - II	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G357	IC Applications Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1GC53	Advanced English Language and Communication Skills Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
III YEAR II SEM			
1G361	VLSI Design	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G362	Microwave Engineering	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G363	Microprocessors and Interfacing	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G364	Digital and Data Communications	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l
1G365	Electronic Measurements and Instrumentation	P1,P2,P3	a,b,c,d,e,f,g,h,i, j,k,l

1GA61	Management Science	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1GC61	Soft Skills – II	P1,P2,P3	C,d,e,f,g,h,i,j,k,l
1G367	Analog and Digital Communications Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G368	Microprocessors and Interfacing Lab	P1,P2,P3	b,c,d,e,f,g,h,i,j,k,l
IV YEAR I SEM			
1G371	Optical Communications	P1,P2,P3	c,d,e,f,g,h,i,j,k,l
1G472	Computer Networks	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G372	Digital Signal Processing	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G373	Digital Design Through Verilog HDL	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G374	Embedded Systems	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G376	Radar Engineering	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G37C	Comprehensive ECE	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G37A	DSP and Embedded Systems Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G379	Microwave and Optical Communication Lab	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
IV YEAR II SEM			
1G381	Cellular and Mobile Communications	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G382	Digital Image Processing	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G383	DSP Processors and Architectures	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G385	Wireless Communication Networks	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G38T	Technical Seminar	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l
1G38P	Project	P1,P2,P3	a,b,c,d,e,f,g,h,i,j,k,l

IX-P.2 PEOs Mapping with Content Delivery – Theory and Labs (30)

- Content delivery is well matching with the PEOs 1, 2 and 3.
- Students get adequate knowledge through theory classes and laboratory work.
- E-classes are conducted to balance any gap in the content to be covered.

YEAR / SEM	COURSE	MEETING PEOs	CONTENT DELIVERY	Knowledge Gained Through
------------	--------	--------------	------------------	--------------------------

				Theory 1) Curriculum, 2) Contents Beyond Syllabus	Lab works 1)Curriculum, 2) Advanced Experiments
I YEAR	English	P1,P2,P3	√	1,2	1,2
	Engineering Physics	P1,P2,P3	√	1,2	1,2
	Engineering Chemistry	P1,P2,P3	√	1,2	1,2
	Mathematics – I	P1,P3	√	1,2	1,2
	Electronic Devices and Circuits	P1,P2,P3	√	1,2	1,2
	C Programming and introduction to Data Structures	P1,P2,P3	√	1,2	1,2
	Engineering Drawing	P1,P3	√	1,2	1,2
	Engineering and IT workshop	P1,P3	√	1,2	1,2
	Electronic Devices and Circuits Lab	P1,P2,P3	√	1,2	1,2
	Engineering Physics and Chemistry lab	P1,P3	√	1,2	1,2
	English language communication skills lab	P1,P2,P3	√	1,2	1,2
	C Programming and Data Structures lab	P1,P2,P3	√	1,2	1,2
	II / I	Mathematical Methods –II	P1,P3	√	1,2
Environmental Science		P1,P3	√	1,2	1,2
Electrical Circuit theory		P1,P2,P3	√	1,2	1,2
Random variable & Random Processes		P1,P2,P3	√	1,2	1,2
Electronic Circuits		P1,P2,P3	√	1,2	1,2
Pulse & Digital Circuits		P1,P2,P3	√	1,2	1,2
Electronic Circuits Lab		P1,P2,P3	√	1,2	1,2
Pulse & Digital Circuits Lab		P1,P2,P3	√	1,2	1,2
Seminar-1		P1,P2,P3	√	1,2	
II / II	Mathematics – III	P1,P3	√	1,2	1,2
	Electrical Technology	P1,P2,P3	√	1,2	1,2

	Linear Control Systems	P1,P2,P3	√	1,2	1,2
	Switching Theory and Logic Design	P1,P2,P3	√	1,2	1,2
	Electromagnetic Waves and Transmission Lines	P1,P2,P3	√	1,2	1,2
	Signals and Systems	P1,P2,P3	√	1,2	1,2
	Signals and Systems Lab	P1,P2,P3	√	1,2	1,2
	Electrical Technology Lab	P1,P3	√	1,2	1,2
	Soft skills	P1,P2,P3	√	1,2	
III/I	Analog Communication	P1,P2,P3	√	1,2	1,2
	Linear IC Applications	P1,P2,P3	√	1,2	1,2
	Digital IC Applications	P1,P2,P3	√	1,2	1,2
	Antenna and Wave propagation	P1,P2,P3	√	1,2	1,2
	Computer Organization	P1,P3	√	1,2	1,2
	Managerial Economics and Financial Analysis	P1,P3	√	1,2	1,2
	Seminar - II	P1,P2,P3	√	1,2	
	IC Applications Lab	P1,P2,P3	√	1,2	1,2
	Advanced English Language and Communication Skills Lab	P1,P2,P3	√	1,2	1,2
III/II	VLSI Design	P1,P2,P3	√	1,2	1,2
	Microwave Engineering	P1,P2,P3	√	1,2	1,2
	Microprocessors and Interfacing	P1,P2,P3	√	1,2	1,2
	Digital and Data Communications	P1,P3	√	1,2	1,2
	Electronic Measurements and Instrumentation	P1,P2,P3	√	1,2	1,2
	Management Science	P1,P3	√	1,2	1,2

	Soft Skills – II	P1,P2,P3	√	1,2	
	Analog and Digital Communications Lab	P1,P2,P3	√	1,2	1,2
	Microprocessors and Interfacing Lab	P1,P2,P3	√	1,2	1,2
IV/I	Optical Communications	P1,P2,P3	√	1,2	1,2
	Computer Networks	P1,P2,P3	√	1,2	1,2
	Digital Signal Processing	P1,P2,P3	√	1,2	1,2
	Digital Design Through Verilog HDL	P1,P2,P3	√	1,2	1,2
	Embedded Systems	P1,P2,P3	√	1,2	1,2
	Radar Engineering	P1,P2,P3	√	1,2	1,2
	Comprehensive ECE	P2,P3	√		
	DSP and Embedded Systems Lab	P1,P2,P3	√	1,2	1,2
	Microwave and Optical Communication Lab	P1,P2,P3	√	1,2	1,2
IV/II	Cellular and Mobile Communications	P1,P2,P3	√	1,2	1,2
	Digital Image Processing	P1,P2,P3	√	1,2	1,2
	DSP Processors and Architectures	P1,P2,P3	√	1,2	1,2
	Wireless Communication Networks	P1,P2,P3	√	1,2	1,2
	Technical Seminar	P1,P2,P3	√	1,2	
	Project	P1,P2,P3	√	1,2	1,2

IX-P.3 PEOs Mapping with Evaluation (Examinations/Tests/Assignments) (30)

Assessment must be based on the PEOs defined for a course or a set of courses, and their mapping with examinations, class tests, and take-home work (assignments and independent study).

Produce sample (best and average quality) examination/tests question papers,

assignment sheets along with model solutions to assess how the PEOs are achieved through such evaluations. In case of an affiliated institution, there may be a provision for additional/supplementary tests/examinations in order to cater to additional subject topics, required for achieving the identified PEOs.

This exercise is aimed at assessing the possibility, provision and capability of the institution to do the above in order to achieve the stated PEOs.

PEOs 1, 2, and 3

As per the curriculum/syllabi the college has provided necessary emphasis on laboratory and project work in each semester/year. In first year out of 56 credits, 20 credits have been allocated to laboratory work, from II B.Tech I Semester to IV B.Tech I Semester 04 credits have been allotted to each theory and 02 credits for labs. In each semester 06 theory and 02 labs are prescribed. We have established all the laboratories as per the curriculum, and to provide additional laboratory work beyond syllabi to acquire additional skills/knowledge as well as to strengthen the PEO's .

In addition to Classes and labs, assignment, supplementary tests/tutorials are conducted to assess the students and motivate them to study and acquire knowledge. Educational tours and JKC training are being arranged to students for further improvement.

SEM	COURSE	PEO	TESTS	ASSIGNMENTS	UNIV EXAMS
I YEAR	English	P1,P2	√	√	√
	Engineering Physics	P1,P2, P3	√	√	√
	Engineering Chemistry	P1,P2, P3	√	√	√
	Mathematics – I	P1,P3	√	√	√
	Electronic Devices and Circuits	P1,P3	√	√	√
	C Programming and introduction to Data Structures	P1,P2, P3	√	√	√
	Engineering Drawing	P1,P2, P3	√	√	√
	Engineering and IT workshop	P1,P3	√	√	√
	Electronic Devices and Circuits Lab	P1,P2, P3	√	√	√
	Engineering Physics and Chemistry lab	P1,P2,	√	√	√

		P3			
	English language communication skills lab	P1,P2, P3	√	√	√
	C Programming and Data Structures lab	P1,P2, P3	√	√	√
II / I	Mathematical Methods –II	P1,P2, P3	√	√	√
	Environmental Science	P1,P3	√	√	√
	Electrical Circuits	P1,P3	√	√	√
	Random Variables and Random Processes	P1,P3	√	√	√
	Pulse and Digital Circuits	P1,P3	√	√	√
	Electronic Circuits	P1,P3	√	√	√
	Electronic Circuits Lab	P1,P3	√	√	√
	Pulse and Digital Circuits Lab	P1,P3	√	√	√
	Seminar-1	P1,P3	√	√	√
II / II	Mathematics – III	P1,P3	√	√	√
	Electrical Technology	P1,P3	√	√	√
	Linear Control Systems	P1,P3	√	√	√
	Switching Theory and Logic Design	P1,P3	√	√	√
	Electromagnetic Waves and Transmission Lines	P1,P3	√	√	√
	Signals and Systems	P1,P3	√	√	√
	Signals and Systems Lab	P1,P3	√	√	√
	Electrical Technology Lab	P1,P3	√	√	√
	Soft skills	P1,P3	√	√	√
III/I	Analog Communication	P1,P2, P3	√	√	√
	Linear IC Applications	P1,P3	√	√	√
	Digital IC Applications	P1,P3	√	√	√
	Antenna and Wave propagation	P1,P3	√	√	√

	Computer Organization	P1,P3	√	√	√
	Managerial Economics and Financial Analysis	P1,P3	√	√	√
	Seminar - II				
	IC Applications Lab	P1,P2, P3	√	√	√
	Advanced English Language and Communication Skills Lab	P1,P3	√	√	√
III/II	VLSI Design	P1,P2, P3	√	√	√
	Microwave Engineering	P1,P3	√	√	√
	Microprocessors and Interfacing	P1,P2, P3	√	√	√
	Digital and Data Communications	P1,P3	√	√	√
	Electronic Measurements and Instrumentation	P1,P3	√	√	√
	Management Science	P1,P3	√	√	√
	Soft Skills – II				
	Analog and Digital Communications Lab	P1,P3	√	√	√
	Microprocessors and Interfacing Lab	P1,P3	√	√	√
IV/I	Optical Communications	P1,P3	√	√	√
	Computer Networks	P1,P3	√	√	√
	Digital Signal Processing	P1,P3	√	√	√
	Digital Design Through Verilog HDL	P1,P3	√	√	√
	Embedded Systems	P1,P3	√	√	√
	Radar Engineering	P1,P3	√	√	√
	Comprehensive ECE	P1,P3	√	√	√

	DSP and Embedded Systems Lab	P1,P3	√	√	√
	Microwave and Optical Communication Lab	P1,P3	√	√	√
IV/II	Cellular and Mobile Communications	P1,P2, P3	√	√	√
	Digital Image Processing	P1,P3	√	√	√
	DSP Processors and Architectures	P1,P2, P3	√	√	√
	Wireless Communication Networks	P1,P3	√	√	√
	Technical Seminar	P1,P2, P3	√	√	√
	Project	P1,P2, P3	√	√	√