

BIRLA INSTITUTE OF TECHNOLOGY- MESRA, RANCHI
NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for
In-depth Specialisation in Signal Processing

Semester/ Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial;P-Practicals</i>			Total Credits <i>C- Credits</i>
					L	T	P	C
THEORY								
FIFTH Monsoon	THIRD	PE	EC309	Adaptive Signal Processing	3	0	0	3
			EC311	DSP Processor	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC312	DSP Processor Lab	0	0	3	1.5
TOTAL								7.5
SIXTH Spring	THIRD	PE	EC355	Time Frequency and Wavelet Transform	3	0	0	3
			EC357	Speech and Audio Processing	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC356	Time Frequency and Wavelet Transform Lab	0	0	3	1.5
TOTAL								7.5
SEVENTH Monsoon	FOURTH	PE	EC405	Digital & Video Image Processing	3	0	0	3
	LABORATORIES							
	FOURTH	PC	EC406	Image Processing Lab	0	0	4	2
TOTAL								5
GRAND TOTAL								20
<i>Minimum requirement for In-depth Specialisation award</i>								

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NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for
In-depth Specialisation in Electronic Instrumentation

Semester/ Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practicals</i>			Total Credits <i>C- Credits</i>
					L	T	P	C
THEORY								
FIFTH Monsoon	THIRD	PE	EC313	Electronic Measurements	3	0	0	3
			EC315	Industrial Instrumentation	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC316	Industrial Instrumentation Lab	0	0	4	2
TOTAL								8
SIXTH Spring	THIRD	PE	EC359	Microcontrollers and Interfacing	3	0	0	3
			EC373	Introduction to Sensors and Transducers	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC360	Microcontroller Lab	0	0	3	1.5
TOTAL								7.5
SEVENTH Monsoon	FOURTH	PE	EC421	Bio-Medical Electronics & Signal Processing	3	0	0	3
	LABORATORIES							
	FOURTH	PC	EC422	Bio-Medical Signal Processing Lab	0	0	3	1.5
TOTAL								4.5
GRAND TOTAL								20
<i>Minimum requirement for In-depth Specialisation award</i>								

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NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for
In-depth Specialisation in Microwave Engineering

Semester/ Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practicals</i>			Total Credits <i>C- Credits</i>
					L	T	P	C
THEORY								
FIFTH Monsoon	THIRD	PE	EC323	Microwave Theory and Techniques	3	0	0	3
			EC325	Antenna and Wave Propagation	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC324	Microwave Engineering Lab	0	0	3	1.5
TOTAL								7.5
SIXTH Spring	THIRD	PE	EC365	Radar and Navigation System	3	0	0	3
			EC371	Introduction to Electromagnetic Compatibility	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC366	Microwave Measurement Lab	0	0	3	1.5
TOTAL								7.5
SEVENTH Monsoon	FOURTH	PE	EC419	Satellite Communication	3	0	0	3
	LABORATORIES							
	FOURTH	PC	EC420	Advanced Communication Lab	0	0	4	2
TOTAL								5
GRAND TOTAL								20
<i>Minimum requirement for In-depth Specialisation award</i>								

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NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
Based on CBCS & OBE model
Recommended scheme of study for
In-depth Specialisation in Wireless Communication and Networking

Semester/ Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial;P-Practicals</i>			Total Credits <i>C- Credits</i>
					L	T	P	C
THEORY								
FIFTH Monsoon	THIRD	PE	EC327	Mobile and Cellular Communication	3	0	0	3
			EC329	Information Theory and Coding	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC328	Mobile and Cellular Communication Lab	0	0	3	1.5
TOTAL								7.5
SIXTH Spring	THIRD	PE	EC367	Computer Networking	3	0	0	3
			EC369	Wireless Networks	3	0	0	3
	LABORATORIES							
	THIRD	PC	EC370	Wireless Networks Lab	0	0	3	1.5
TOTAL								7.5
SEVENTH Monsoon	FOURTH	PE	EC419	Satellite Communication	3	0	0	3
	LABORATORIES							
	FOURTH	PC	EC420	Advanced Communication Lab	0	0	4	2
TOTAL								5
GRAND TOTAL								20
<i>Minimum requirement for In-depth Specialisation award</i>								

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NEWCOURSE STRUCTURE - To be effective from academic session 2018- 19
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Recommended scheme of study for
In-depth Specialisation in VLSI Systems

Semester/ Session of Study (Recommended)	Course Level	Category of course	Course Code	Courses	Mode of delivery & credits <i>L-Lecture; T-Tutorial; P-Practicals</i>			Total Credits <i>C- Credits</i>	
					L	T	P	C	
THEORY									
FIFTH Monsoon	THIRD	PE	EC319	VLSI Systems	3	0	0	3	
			EC321	Microelectronic Devices and Circuits	3	0	0	3	
	LABORATORIES								
	THIRD	PC	EC320	VLSI Systems Lab	0	0	3	1.5	
TOTAL								7.5	
SIXTH Spring	THIRD	PE	EC361	Digital Systems Design with FPGAs	3	0	0	3	
			EC363	Nanoelectronics	3	0	0	3	
	LABORATORIES								
	THIRD	PC	EC362	Digital Systems Design with FPGAs Lab	0	0	4	2	
TOTAL								8	
SEVENTH Monsoon	FOURTH	PE	EC413	Real Time Embedded System	3	0	0	3	
	LABORATORIES								
	FOURTH	PC	EC414	Real Time Embedded System Lab	0	0	3	1.5	
TOTAL								4.5	
GRAND TOTAL								20	
<i>Minimum requirement for In-depth Specialisation award</i>									