DEVI AHILYA VISHWAVIDYALAYA, INDORE

Institute of Engineering & Technology

Master of Engineering (Fulltime)

M. E. in Electronics Engineering (Specialisation in IOT and System Design)

Duration and seats: 2 Yrs. (Full Time) – 18 seats

Eligibility: A candidate seeking admission to the program should have passed with 60% (or Equivalent) in BE/ BTech (or Equivalent) in an allied branch of engineering from recognized Institute/University and Valid GATE Score in the relevant/allied branch of Engineering / Technology.

AGE LIMIT: As per the directives of Government of Madhya Pradesh, there is no upper age limit for admission in the programme.

Fees Structure:

Semester	Academic Fee	Development & Maintenance Fee	Students' Services Fee		Examination Fee	Total (Rs.)	
			Boys	Girls		Boys	Girls
First	15000	31000	3300	3111	2500	51800	51611
Second	15000	----	2911	2722	2500	20411	20222
Third	15000	31000	3300	3111	2500	51800	51611
Fourth	15000	----	2911	2722	2500	20411	20222

- Caution money (Refundable) of Rs. 4000/- will be charged additionally in the first semester.
- Alumni Fee of Rs. 500/- will be charged extra in the first semester.
- If a student repeats a paper(s) in a semester, an additional fee of Rs.500/- per paper shall be payable.
- For NRI/ FN/ PIO Candidates, a fee of US$ 3500 Per Annum shall be payable on yearly basis. They will have to pay a refundable deposit of US$ 500 once at the time of admission.
- Hostel Fee and Central Library Fee will be extra.

Objectives: Students learn the concepts of electronics engineering and focus on principles of IOT, system design and implementation. The course focuses on the various aspects of cost effective and efficient system development. The course also has lab assignments, exposure to case studies and projects to improve their practical skills. Subject such as, Internet of Things: sensors and actuators, Embedded Microcontroller, VLSI design techniques, Computer Networks, optical networks, wireless sensor network are based on the modern and recent development in designing and implementing IOT network. The subjects like object oriented programming, Embedded C and Linux, Embedded RTOS and Data management in IOT will help the students to analyse, design and develop software system. These skills are necessary to plan and conduct complex systems development projects to meet customer needs and integrate hardware and software solutions into IOT environment.

Outcomes: The development of professional skills, and ethics in students. The course provides conceptual frameworks, methods, technologies and hands-on experience necessary for software development. All this forms a basis for a career in the Electronics and IOT industry. Students also acquire specialised knowledge of specific topics, particularly in the area of IOT system development and networking. After completion of the course on M.E (Electronics Engineering) a students should be able to design system and solve specific problems alone or in teams and manage project.

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S. No.	Category	No. of Credits			
		SEM I	SEM II	SEM III	SEM IV
1.	Course Compulsory	12	12	-	-
2.	Generic Elective	4	4	-	-
3.	Programme Elective	4	4	-	-
4.	Skill development	2	2	-	-
5.	LAB- x	2	2		
6.	LAB-y	2	2		
7.	Seminar/ Workshop	2	2	-	-
8.	Dissertation Phase	-	-	12	12
Actual Credits per Semester		**28**	**28**	**12**	**12**
Total actual Programme Credits					**80**
7.	Virtual Credited Comprehensive Viva	4	4	4	4
Total Credits per Semester		**32**	**32**	**16**	**16**
Total Programme Credits					**96**

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SEM I				
S.No.	**Sub Code**	**Sub Name**	**Number of Credit L-T-P**	**Sub Type**
1.	IOR1C1	Fundamentals of IOT & Wireless Sensor Network	3-1-0	PC1
2.	IOR1C2	Embedded System with ARM Microcontroller	3-1-0	PC2
3.	IOR1C3	Advance System Design	3-1-0	PC3
4.	IOR1Gx	Generic Elective I	3-1-0	GE1
5.	IOR1Ex	Programme Elective I	3-1-0	PE1
6.	ASR1S1	Soft Skills -1	2-0-0	
7.	IOR1L1	Lab-1	0-0-2	PC
8.	IOR1L2	Lab-2	0-0-2	PC
9.	IOR1W1	Seminar/ Workshop/Research Tool	0-2-0	
10.	IOR1V1	Comprehensive Viva I	0-0-4	
Total Credit for SEM I			**28 actual + 4 Virtual credits**	
		List of Generic Elective I	**L-T-P**	
1.	IOR1G1	Internetworking with TCP/ IP	3-1-0	
2.	IOR1G2	Object Oriented Programming	3-1-0	
3.	IOR1G3	Advance Digital Signal Processing	3-1-0	
4.	IOR1G4	Software Engineering	3-1-0	
		List of Programme Elective I	**L-T-P**	
1.	IOR1E1	Internet of Things: Sensing and Actuator Devices	3-1-0	
2.	IOR1E2	Wireless Mobile Communication	3-1-0	
3.	IOR1E3	Kernel & Driver Programming	3-1-0	
4.	IOR1E4	Embedded C and Linux	3-1-0	
SEM II				
1.	IOR2C1	Software & Programming in IOT	3-1-0	PC4
2.	IOR2C2	IoT Architecture, Protocols & Applications	3-1-0	PC5
3.	IOR2C3	VLSI Design Techniques	3-1-0	PC6
4.	IOR2Gx	Generic Elective II	3-1-0	GE2
5.	IOR2Ex	Programme Elective II	3-1-0	PE2
6.	ASR2S2	Soft Skills -2	2-0-0	
7.	IOR2L3	Lab-3	0-0-2	PC
8.	IOR2L4	Lab-4	0-0-2	PC
9.	IOR2W2	Seminar/ Workshop/ Research Tool	0-2-0	
10.	IOR2V2	Comprehensive Viva II	0-0-4	
Total Credit for SEM II			**28 actual + 4 Virtual credits**	
		List of Generic Elective II	**L-T-P**	
1.	IOR2G1	Data Management in IOT	3-1-0	
2.	IOR2G2	Modelling & Simulation	3-1-0	
3.	IOR2G3	Optical Networks	3-1-0	
4.	IOR2G4	Embedded RTOS	3-1-0	

		List of Programme Elective II	**L-T-P**	
1.	IOR2E1	System Design using HDL	3-1-0	
2.	IOR2E2	Machine Learning	3-1-0	
3.	IOR2E3	Mobile Computing	3-1-0	
4.	IOR2E4	Broad band Access Technology	3-1-0	

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SEM III			**L-T-P**	
1	IOR3D1	Dissertation Phase I	0-0-12	
2	IOR3V3	Comprehensive Viva III	0-0-4	
Total Credit for SEM III			**12 actual + 4 Virtual credits**	
SEM IV			**L-T-P**	
1	IOR4D2	Dissertation Phase II	0-0-12	
2	IOR4V4	Comprehensive Viva IV	0-0-4	
Total Credit for SEM IV			**12 actual + 4 Virtual credits**	
Total Credit			**80 actual + 16 Virtual credits=96**	