SHRI G.S. INSTITUTE OF TECHNOLOGY & SCIENCE

(Govt. Aided,UGC Autonomous Institute under 2(F) & 12(B), Established in 1952)
23, Sir M. Visvesvaraya Marg (Park Road), INDORE - 452 003 (M.P.) India
(Shri Govindram Seksaria Institute of Technology & Science, Indore M.P.)

Ref. :

Date : 03|06|2024

Department of Electronics & Instrumentation Engineering

Agenda for Board of Studies Meeting

Circular

The meeting of BoS of EI department is scheduled on 14 June 2024 at 4:00 pm in Conference room of the department. It is requested to make it convenient to attend the meeting. The agenda of meeting is as follows:

1. To discuss and approve the scheme/syllabus of B. Tech. III year - 2022 admitted batch.
2. To discuss and approve the scheme/syllabus of B. Tech. II year 2023 admitted batch (under NEP policy).
3. To discuss and approve the scheme/syllabus of M. Tech – Microelectronics & VLSI Design.

03/06/2024

Dr. Rajesh Khatri
Asso. Prof. & HOD
Chairman, BoS

Copy to:

1. The Director, SGSITS, Indore
2. The Dean (Academics), SGSITS, Indore.
3. Registrar, SGSITS, Indore
4. All External members of BoS (Dr. S. Vishwakarma, Dr. R.B Pachori, Dr. B. Reniwal & Mr. Anuj Upadhaya)
5. BoS File, EID

SHRI G. S. INSTITUTE OF TECHNOLOGY & SCIENCE

Department of Electronics & Instrumentation engineering

Date: 14th June 2024

Minutes of BoS Meeting

A meeting of BoS of the department was held in conference room on 14 June 2024 at 4:00pm. The following members were present,

1.	Dr. Rajesh Khatri	Chairman -BoS
2.	Dr. R.C. Gurjar	Member
3.	Dr. Gireesh G. Soni	Member
4.	Dr. R.B. Pachori	External Expert (IIT-Indore) Nominated by VC
5.	Dr. Santosh Vishwakarma	Expert, Outside Parent University, IIT-Indore
6.	Dr. Vaibhav Neema	Expert, Outside Parent University-IET-DAVV Indore
7.	Mr. Anuj Upadhyaya	Expert (Industry), Ms. Farm Electronics Indore
8.	Dr. Bhupendra Reniwal	Alumni member (IIT-Jodhpur)
9.	All contract faculty members	Special invitee
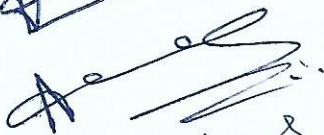
Dr. G. G. Soni has joined in online mode. Dr. P. P. Bansod Professor-EI dept. & Mr. D.S. Ajnar (Asso. Prof.) could not attended the meeting.

The deliberation of meeting were as follows:

1. The scheme & syllabus of B.Tech. II year, under NEP-2020 policy was discussed and recommended to be put in Academic council for subsequent approval. This scheme will be applicable with effect from July-2024 (2023-24 admitted students). The member Dr. S. Vishwakarma suggested to incorporate **Computer Architecture** as a chapter in digital electronics course running in 4th semester.
   He further also emphasis to add scripting language either in Software workshop Lab or as separate NPTEL course. Dr. R.B. Pachori has suggested to modify the syllabus of **Intelligent Instrumentation**. He also, suggested to include DSP processors in the Syllabus of Digital Signal Processing (E & TC Board)

2. The scheme & syllabus for B.Tech. III Year was discussed and recommended to be put in Academic council for subsequent approval. This scheme will be applicable with effect from July-2024 (2022-23 admitted students). Looking to syllabus, member suggested to modify the name of subject Circuit design using HDL as **Digital design using HDL.**

3. There was no change in the scheme & syllabus of M.Tech (Microelectronics & VLSI design). After discussion, the experts suggested few swapping of elective and compulsory subjects.
   Experts also suggested to include few more elective subjects, like Operating System, SoC test & verification, Advance Digital Design. They ask to include internal evaluation of internship for M.Tech Students.

The meeting ended with vote of thanks to all the BoS members.

1. Dr. Rajesh Khatri
2. Dr. R.C. Gurjar
3. Dr. R.B. Pachori
4. Dr. Santosh Vishwakarma
5. Dr. Vaibhav Neema
6. Mr. Anuj Upadhyaya
7. Dr. Bhupendra Reniwal
8. Dr Anuj Rawat
9. Kirti Bhargava
10. Tarni Joshi

S. G.S. Institute of Technology & Science, Indore
Electronics & Instrumentation Engineering Department
B.Tech (Applicable to 2023-24 Enrolled Students)

Batch 2023-2027(NEP-20)
Acadmic Year :2024-25

II Year / Semester-III

S.No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				Total
				L	T	P	Th	Pr	Theory		Practical		
									Th.	CW	SW	Pr.	
1	BSC	MA-27xxx	Mathematics-III	3	1	-	4	-	70	30	-	-	100
2	PCC	EI-27xxx	Circuit Analysis & Synthesis	3	-	-	3	-	70	30	-	-	100
3	PCC	EI-27xxx	Digital Electronics	3	-	-	3	-	70	30	-	-	100
4	PCC	EI-27xxx	Electronics Devices & Circuits	3	-	-	3	-	70	30	-	-	100
5	ESC	EI-27xxx	Fundamentals of Measurement	3	-	-	3	-	70	30	-	-	100
6	LC(EI)	EI-27xxx	Circuit Analysis & Synthesis	-	-	2	-	1	-	-	40	60	100
7	LC(EI)	EI-27xxx	Digital Electronics	-	-	2	-	1	-	-	40	60	100
8	LC(EI)	EI-27xxx	Electronics Devices & Circuits	-	-	2	-	1	-	-	40	60	100
9	LC(EI)	EI-27xxx	Fundamentals of Measurement	-	-	2	-	1	-	-	40	60	100
10	LC(EI)	EI-27xxx	Electronics Workshop Lab	-	-	2	-	1	-	-	40	60	100
11	MC	CHM-27xxx	Environmental Science*	2	-	-	-	-	-	50			50
			Total	17	1	10	16	5	350	200	200	300	1050

*Non-credit mandatory subject

II Year / Semester-IV

S.No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				Total
				L	T	P	Th	Pr	Theory		Practical		
									Th.	CW	SW	Pr.	
1	HSMC	HU-27xxx	Economics for Engineers	3	-	-	3	-	70	30	-	-	100
2	PCC	EI-27xxx	Analog Electronics	3	-	-	3	-	70	30	-	-	100
3	PCC	EI-27xxx	Sensors & Transducers	3	-	-	3	-	70	30	-	-	100
4	BSC	MA-27xxx	Mathematics – IV	3	1	-	4	-	70	30	-	-	100
5	PCC	EI-27xxx	Digital Circuit Design using HDLs	3	-	-	3	-	70	30	-	-	100
6	LC (EI)	EI-27xxx	Analog Electronics (Lab)	-	-	2	-	1	-	-	40	60	100
7	LC (EI)	EI-27xxx	Sensors & Transducers (Lab)	-	-	2	-	1	-	-	40	60	100
8	LC (EI)	EI-27xxx	Circuit Design using HDLs (Lab)	-	-	2	-	1	-	-	40	60	100
9	LC (EI)	EI-27xxx	Software workshop	-	-	2	-	1	-	-	40	60	100
10	MC	HU-27xxx	Values, Humanity and Professional Ethics	2	-	-	2	-	-	100	-	-	100
12	PROJ	Internship-1		4-6 weeks-during vacation. Evaluation & Credit in V Semester									
			TOTAL	17	1	8	18	4	350	250	160	240	1000

*Non-credit mandatory subject

Diploma in Electronics & Instrumentation Engg. will be awarded after acquiring additional 10 credits out of which 6 credits as 3 months industrial training within 5 years.

Shri G.S. Institute of Technology & Science, Indore
Electronics & Instrumentation Engineering Department
B.Tech (Applicable to 2022-23 Enrolled Students)
Tentative scheme (Subjected to be approved by Academic Council)

III Year/ V Sem

S.no.	Category	Subject Code	Subject Name	L	T	P	Theory End Sem	CW	Practical End Sem	SW	Credits T	Credits P	Total	Total Marks
1	DC-8	IT37005	Data Structure	3		2	70	30	60	40	3	1	4	200
2	DC-9	EI37006	Microprocessor Systems	3		2	70	30	60	40	3	1	4	200
3	DC-9	EI37xxx	CMOS VLSI Design	3		2	70	30	60	40	3	1	4	200
4	OEC-I		Open Elective-1	3		2	70	30	60	40	3	1	4	200
5	PEC-1		Program Elective -I	3			70	30			3		3	100
6	DLC-3	EI37481	Test & Calibration	3			70	30			3		3	100
7	MC-3	HU	Constitution of India	2		4			60	40		2	2	100
8	DLC-4	EI37482	Internship-1 (Evalution)					50		50		2	2	50
			Total	17	0	10	350	200	240	210	15	7	22	1000

III Year/ VI Sem

S.no.	Category	Subject Code	Subject Name	L	T	P	Theory End Sem	CW	Practical End Sem	SW	Credits T	Credits P	Total	Total Marks
1	DC-10	EI37511	Filter Design & Simulation	3		2	70	30	60	40	3	1	4	200
2	DC-11	EI37xxx	Microcontroller & Embedded System	3		2	70	30	60	40	3	1	4	200
3	DC-12	EExxx	Control System	3		2	70	30	60	40	3	1	4	200
4	OEC-II		Open Elective-II	3		2	70	30	60	40	3	1	4	200
5	PEC-II		Program Elective-II	3			70	30			3		3	100
6	DLC-5	EI37991	Mini Project			4			60	40		2	2	100
			Total	15	0	12	350	150	300	200	15	6	21	1000

Internship-II To be completed any time during V/VI semester. Its evaluation/credits to be added in Semester VII(Minimum 4 Weeks Duration)

List of Electives for 5th & 6th Semester
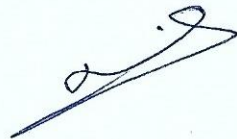
		Program Elective-I
1	EC 37xxx	Analog & Digital Communication
2	EI 37xxx	Smart Sensors
3	EI 37xxx	Peripherals & Interfacing
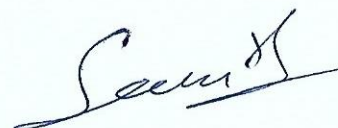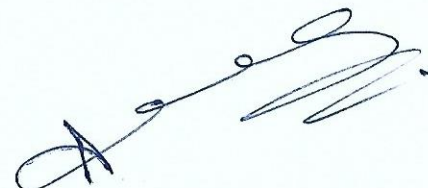
		Program Elective-I
1	EI37xxx	High Frequency Engineering
2	EI37xxx	Analog Integrated Circuits
3	EI37xxx	Analytical Instrumentation

		Open Elective-I
1	IP37251	Industrial Engineering & Management
2	CO37253	Artificial Intelligence/ NPTEL NPTEL Courses: 1. Fundamentals of Artificial Intelligence 2. Artificial Intelligence -"Search Methods for Problem Solving"

		Open Elective-II
1	IT 37xxx	Web Engineering
2	EC 37xxx	Mobile Communication
3	EC37xxx	Digital Signal Processing

Academic Year 2024-25

Semester-III

S.no.	Subject Code	Subject Name	L	T	P	Theory End Sem	Theory CW	Practical End Sem	Practical SW	Credits T	Credits P	Total Credits	Total Marks
1	EI69931	Industrial Training/Term Paper/Seminar*			8				50		4	4	50
2	EI69932	Dissertation Phase-I			20			60	40		10	10	100
3	MA69902	Research Methodology & IPR**	2			70	30			2		2	100
		Total	2	0	28	70	30	60	90	2	14	16	250

***Industrial Training to be carried out between II & III semester during Vacation.**

****** This course can be staudied on;line with prior permission of HOD, however end sem exam will be conducted in institute.**

Semester-IV

S.no.	Subject Code	Subject Name	L	T	P	Theory End Sem	Theory CW	Practical End Sem	Practical SW	Credits T	Credits P	Total	Total Marks
1	EI69952	Dissertation Phase-II			32			120	80		16	16	200
		Total	0	0	32	0	0	120	80	0	16	16	200

List of Electives

Elective-I Semester-I	
EI69205	Analog IC Design
EI69211	Application Specific Integrated Circuit
EI69206	Memory Design & Testing

Elective-II Semester-I		
1	EI69301	VLSI Technology
2	EI69302	Electromechanical Systems (MEMS) structure, Sensor & Application
3	EI69303	SoC Design

Elective-III Semester-II	
EI69705	System Hardware Design
EI69706	Embedded System Design
EI69707	VLSI Signal Processing

Elective-IV Semester-II		
1	EI69751	Low Power VLSI Design
2	EI69752	NanoTechnology
3	EI69751	Optoelectronics Integrated Circuits

S. G. S. Institute of Technology & Science Indore
Electronics & Instrumentation Engineering Department
M.Tech. (Microelectronics & VLSI Design)

Semester-I

S.no.	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits		Total Credits	Total Marks
			L	T	P	Theory		Practical		T	P		
						End Sem	CW	End Sem	SW				
1	EI69012	Design of Integrated circuits	3			70	30			3		3	100
2	EI69014	Hardware Descriptive Laguage	3			70	30			3		3	100
3	EI69015	Semiconductor Device & Process Modelling	3			70	30			3		3	100
4		Elective -I	3			70	30			3		3	100
5		Elective-II	3			70	30			3		3	100
6	EI69453	LAB-I (CAD Tool Design I)			4			60	40		2	2	100
7	EI69454	LAB-II (CAD Tool Design II)			4			60	40		2	2	100
8	EI69500	Comprehensive Viva										Grade	Grade
		Total	15	0	8	350	150	120	80	15	4	19	700

Semester-II

S.no.	Subject Code	Subject Name	Period/Week			Maximum Marks				Credits		Total Credits	Total Marks
			L	T	P	Theory		Practical		T	P		
						End Sem	CW	End Sem	SW				
1	EI69511	Communication RF-IC Design	3			70	30			3		3	100
2	EI69512	Mixed Signal Circuit Design	3			70	30			3		3	100
3	EI69513	VLSI Test & Testability	3			70	30			3		3	100
4		Elective -III	3			70	30			3		3	100
5		Elective-IV	3			70	30			3		3	100
6	EI69853	LAB-III (VLSI Design Lab-I)			4			60	40		2	2	100
7	EI69854	LAB-IV (VLSI Design Lab-II)			4			60	40		2	2	100
8	EI69882	Minor Project/LAB-II			2				50		1	1	50
9	EI69900	Comprehensive Viva										Grade	Grade
		Total	15	0	10	350	150	120	130	15	5	20	750

Shri G. S. Institute of Technology and Science, Indore
Department of Electronics and Instrumentation Engineering

Exit clause subjects (As per NEP-2020)

I-Year (Engineering Certificate)

S. No.	Subject code	Subject Name	Hours per week			Credits	
			L	T	P	T	P
1.	EI27003	Electronics Devices & Circuits	2	-	-	2	0
2.	EI27498	Electronics Workshop	-	-	4	-	2
3.	EI27XXX	Internship/Industrial Training	-	-	12	-	6

II-Year (Diploma in Electronics & Instrumentation Engg.)

S. No.	Subject code	Subject Name	Hours per week			Credits	
			L	T	P	T	P
1.	EI37006	Microprocessor System	2	-	-	2	0
2.	EI37991	Mini Project	-	-	4	-	2
3.	EI37XXX	Industrial Training	-	-	12	-	6

III-Year (Vocational degree in Electronics & Instrumentation Engg.)

S. No.	Subject code	Subject Name	Hours per week			Credits	
			L	T	P	T	P
1.	EI47053	Process Instrumentation	2	-	-	2	0
2.	EI47999	Major Project	-	-	4	-	2
3.	EI47XXX	Industrial Training	-	-	12	-	6

*L=Lecture, T=Tutorial, P=Practical

Asso. Professor & Head
Electronics & Instrumentation Department
S. G. S. Institute of Tech. & Sci.
INDORE (INDIA)

14/6/24

26/2/2024