

OFFICE OF REGISTRAR

MEWAR UNIVERSITY, GANGRAR CHITTORGARH RAJ

Ref. No.: MU/RO/2021/654

29th March 2021

OFFICE ORDERS

Sub: Reconstitution of Board of Studies for Departments of Electrical Engineering

The Board of studies for Department of Electrical Engineering is reconstituted as per rule 7 of the Statutes of Mewar University, as under:

- | | |
|---|-------------------|
| 1) Prof. (Dr.) Tanveer Ahmed Kazi (Dean of Engineering) | -Chairman |
| 2) Prof. (Dr.) Vinesh Agarwal, Sangam university, Bhilwara | - External Member |
| 3) Mr. Satyadeo Vyas, Energy Manager & Auditor, General Manager (E&I Dept.) Birla Cement Works, Chittorgarh | -External Member |
| 4) Mr. Suraj Kumhar, Assistant Professor | -Member |
| 5) Ms. Nirma Kumari Sharma, Assistant Professor | -Member |
| 6) Mr. Deepak Kumar Joshi, (HOD,EE) | -Convener |

The terms of reference for the Board of Studies are as provide in rule 7 of the Statutes.

The chairman of the Board of Studies may associate any member in the meeting, as special invitee if it is that considered his/her association will contribute in the task of the meeting, with the approval of the President/ Vice Chancellor.

The Convener of the meeting is advised to hold the meeting of the BOS seeking Convenience of the Chairman before the end of June, 2021. The proceeding of the meeting may send to the VC/ Registrar as early as possible.

The External Member shall be entitled for TA/DA and sitting fees as per the norms prescribed by the Mewar University.



Registrar
Registrar
Mewar University
Gangrar, (Chittorgarh)

Copy To:

- 1) Ps To Hon'ble Chairperson for kind information
- 2) Secretary, MES& Member, BOM for kind information
- 3) To President for kind information
- 4) Ps To Pro President for kind information
- 5) Dean/HODs/COE/Research/Stores/it/etc

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH
(RAJ.)DEPARTMENT OF ELECTRICAL ENGINEERING

DATE: 14.06.2021

Minutes of Meeting of Board of Studies

Minutes of the BOS of the Department of Electrical Engineering meeting held on 14-06-2021 in Room No. 211 at 11.30 AM.

The following members were present: (**Annexure 1**)

- | | |
|--|-------------------|
| 1) Prof. (Dr.) Tanveer Ahmed Kazi (Dean of Engineering) | - Chairman |
| 2) Prof. (Dr.) Vinesh Agarwal, Sangam University, Bhilwara | - External Member |
| 3) Mr. Satyadeo Vyas, Energy Manager & Auditor, General Manager (E&I Dept.)
Birla Cement Works, Chittorgarh | - External Member |
| 4) Mr. Suraj Kumhar, Assistant Professor | - Internal Member |
| 5) Ms. Nirma Kumari Sharma, Assistant Professor | - Internal Member |
| 6) Mr. Deepak Kumar Joshi, (HOD,EE) | - Convener |

Mr. Deepak Kumar Joshi, Head of the Department of Electrical Engineering, warmly welcomed all the board members. The Head also appreciated the presence of outside experts who took the pain and keen interest to attend this meeting.

Agenda 1: To approve minutes of the previous BOS, held on 10-06-2020

Resolution: Minutes of the previous BOS of the Electrical Engineering Department held on 10-06-2020 were discussed and approved.

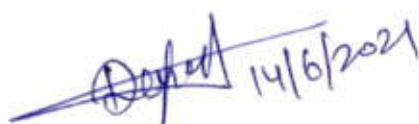
Agenda 2: Brief presentation of academic activities of the department before the BOS Committee by the convener

Resolution: Mr. Deepak Kumar Joshi (Head, Electrical Engineering) presented a departmental activity report mentioning all the activities conducted related to the curricular development such as the lecture plan, two-way teaching theory in the form of ACP, seminars, workshops, guest lecture, research development, faculty development and industrial collaboration.

Agenda 3: Introduction of New Programmes/Course

Resolution:

1. New Syllabus & Scheme of B.Tech-EE prepared according to the AICTE Curriculum and this Scheme is Lunched in the B.Tech 1st Year, 1st Semester for all the Branches.(Subject Name:- Basic Electrical Engineering) during this Session (2021-22)(**Annexure 2**)


14/6/2021



S. No.	Program Code	Course Name
1.	B.Tech-All Branch	Basic Electrical Engineering
2.	B.Tech-All Branch	Basic Electrical Engineering Lab

2. Addition of a new departmental elective course in M.Tech (Power System Engineering & Renewable Energy) were introduced for the upcoming session 2021-22. (Annexure 3)

S.No.	Program Code	Course Name
1	M.Tech-RE	Cad/Cam And Simulation Of Renewable Energy Systems
2	M.Tech-PSE	AI Applications To Power Systems

3. Addition of a new departmental elective course in M.Tech (Power Electronics & Drives) were introduced for the upcoming session 2021-22. (Annexure 4)

S. No.	Program Code	Course Code	Course Name
1.	M.Tech-PED	PED-109 (Elective-I)	Power Quality Management
2.	M.Tech-PED	PED-110 (Elective-I)	High Voltage Direct Current
3.	M.Tech-PED	PED-209 (Elective-II)	Embedded System Design

Agenda 4: Any other suggestions by BOS Committee

Resolution: Further based on suggestions of Dr. Vinesh Agarwal, Professor (Sangam University) & Mr. Satyadeo Vyas (Energy Manager & Auditor, General Manager, E&I Dept.) BCW, Chittorgarh, it is decided to include the Industry-based Skill Development Course as a Compulsory Course in the 3rd Year of the B.Tech-EE Program.

Agenda 6: To recommend the approved syllabus to Academic Council.

Resolution: Members of the Board of Studies approved the syllabus and recommended the same be forwarded to the Academic Council for their approval.

The meeting was dissolved with thanks to the Chair and all the Board of Studies Members.

[Signature] 14/6/2021



Annexure I Attendance Sheet

SN	Name	Designation	Post	Signature
1	Prof. (Dr.) Tanveer Ahmed Kazi	Dean of Engineering & Technology	Chairman	 14/6/21
2	Prof. (Dr.) Vinesh Agarwal	Professor (Sangam University)	External Member	 14/6/21
3	Mr. Satyadeo Vyas	Energy Manager & Auditor, General Manager (E&I Dept.) Birla Cement Works, Chittorgarh	External Member	 14/6/21
4	Mr. Suraj Kumhar	Assistant professor	Internal Member	 14/6/21
5	Ms. Nirma Kumari Sharma	Assistant professor	Internal Member	 14/6/2021
6	Mr. Deepak Kumar Joshi	HOD (EE)	Convener	 14/6/2021

MEWAR UNIVERSITY
 REVISED SYLLABUS EFFECTIVE FROM 2021-22
 COURSE: B.Tech BRANCH: Electrical Engineering

I SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1		BSC101	Physics	3	1	0	4	4	15	35	50	0	0	100
2	Basic	BSC102	Mathematics-I	3	1	0	4	4	15	35	50	0	0	100
3	Science	BSC103	Chemistry	3	1	0	4	4	15	35	50	0	0	100
4	course	BSC104	Physics Lab	0	0	2	2	1	0	0	0	25	25	50
5		BSC105	Chemistry Lab	0	0	2	2	1	0	0	0	25	25	50
6	Engineering	ESC101	Basic Electrical Engineering	3	1	0	4	4	15	35	50	0	0	100
7	Science	ESC102	Engineering Graphics & Design Lab	0	0	4	4	2	0	0	0	50	50	100
8	Courses	ESC103	Basic Electrical Engineering Lab	0	0	2	2	1	0	0	0	25	25	50
TOTAL				12	4	10	26	21						650

(Signature)



II SEMESTER

S/N	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Basic Science course	BSC106	Mathematics -II	3	1	0	4	4	15	35	50	0	0	100
2	Engineering Science Courses	ESC104	Programming for Problem Solving	3	1	0	4	4	15	35	50	0	0	100
3		ESC105	Engineering Mechanics	3	1	0	4	4	15	35	50	0	0	100
4		ESC106	Basic Electronics	3	1	0	4	4	15	35	50	0	0	100
5	Humanities and Social Sciences including Mandatory courses	ESC107	Programming for Problem Solving Lab	0	0	4	4	2	0	0	0	50	50	100
6		ESC108	Workshop Practices Lab	0	0	4	4	2	0	0	0	50	50	100
7	Mandatory courses	HSMC 101	English	2	0	0	2	2	10	15	25	0	0	50
8		HSMC 102	English Lab	0	0	2	2	1	0	0	0	25	25	50
9		MC-1	Environmental Science	2	0	0	2	0	0	0	0	0	0	0
TOTAL				16	4	10	30	23						700

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III SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Basic Science course	BSC107	Mathematics-III	3	1	0	4	4	15	35	90	0	0	100
2		BSC108	Biology for Engineers	2	0	0	2	2	10	15	25	0	0	50
3		PCC-EE201	Electrical Machines - I	3	1	0	4	4	15	35	50	0	0	100
4		PCC-EE202	Analog Electronics	3	1	0	4	4	15	35	50	0	0	100
5		PCC-EE203	Electrical Circuit	3	1	0	4	4	15	35	50	0	0	100
6	Professional Core courses	PCC-EE204	Generation of Electrical Power	3	1	0	4	4	15	35	50	0	0	100
7		PCC-EE205	Electrical Machines Laboratory - I	0	0	2	2	2	0	0	0	25	25	50
8		PCC-EE206	Analog Electronics & Electrical Circuit Laboratory	0	0	2	2	2	0	0	0	25	25	50
9	Humanities and Social Sciences including Management courses	HSMC201	Organizational Behavior	3	0	0	3	3	10	25	40	0	0	75
TOTAL				20	5	4	29	27						725



IV SEMESTER

SN	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC-EE 207	Digital Electronics	3	1	0	4	4	15	35	50	0	0	100
2		PCC-EE 208	Electrical Machines - II	3	1	0	4	4	15	35	50	0	0	100
3		PCC-EE 209	Electrical Measurement & measuring Instrument	3	1	0	4	4	15	35	50	0	0	100
4		PCC-EE 210	Electromagnetic Field Theory	3	1	0	4	4	15	35	50	0	0	100
5		PCC-EE 211	Signal & System	3	1	0	4	4	15	35	50	0	0	100
6		PCC-EE 212	Digital Electronics Lab	0	0	2	2	1	0	0	0	25	25	50
7		PCC-EE 213	Electrical Machines Lab- II	0	0	4	4	2	0	0	0	50	50	100
8		PCC-EE 214	Electrical Measurement & measuring Instrument Lab	0	0	2	2	1	0	0	0	25	25	50
9		Humanities and Social Sciences including Management	H-102	Universal Human Values 2: Understanding Harmony	3	0	0	3	3	10	25	40	0	0
TOTAL				18	5	8	31	27						775



V SEMESTER

SN	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC-EE 301	Control Systems	3	1	0	4	4	15	35	50	0	0	100
2		PCC-EE 302	Microprocessors	4	0	0	4	4	15	35	50	0	0	100
3	Professional Elective courses	PCC-EE 303	Power System-I (Apparatus and Modelling)	3	1	0	4	4	15	35	50	0	0	100
4		PEC-EEL301	Elective-I	3	0	0	3	3	10	25	40	0	0	75
5	Professional Core courses	PEC-EE 305	Elective-II	3	0	0	3	3	10	25	40	0	0	75
6		PCC-EE 304	Power & Control Systems Lab	0	0	2	2	1	0	0	0	25	25	50
7	Humanities and Social Sciences including Management courses	HSMC301 (OEL II)	Humanities I (Effective Technical Communications)	2	0	0	2	2	10	15	25	0	0	50
8	Project (Summer Internship)	PROJ-EE 301	Minor Project/Seminar/Summer Internship	0	0	2	2	1	0	0	25	25	50	
TOTAL				18	2	4	24	22						600

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VI SEMESTER

S.N a.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva-Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC-EE 305	Power Electronics	3	0	0	3	3	10	25	40	0	0	75
		PCC-EE 306	Power Electronics Lab	0	0	2	2	1	0	0	0	25	25	50
2	Professional Elective courses	PEC EEI-306-310	Elective-III	3	0	0	3	3	10	25	40	0	0	75
3			Elective-IV	3	0	0	3	3	10	25	40	0	0	75
4	Open Elective courses	OEEC 301-303	Open Elective-1	3	0	0	3	3	10	25	40	0	0	75
5	Mandatory courses	MC-II	Essence of Indian Knowledge Tradition	2	0	0	2	0	0	0	0	0	0	0
6	Project	PROJ-EE 302	Project-II(Major Project)	0	0	10	10	5	0	0	0	125	125	250
TOTAL				14	0	12	26	18						600

(Signature)



VII SEMESTER

S.N No.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	T/A	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Professional Elective courses	PEC EEL401-409	Elective-V	3	0	0	3	3	10	25	40	0	0	75
2			Elective-VI	3	0	0	3	3	10	25	40	0	0	75
3	Open Elective courses	OEC 401-403	Open Elective II	3	0	0	3	3	10	25	40	0	0	75
4			OEC 404-406	Open Elective III	3	0	0	3	3	10	25	40	0	0
5	Mandatory courses	MCC-III	Constitution of India	2	0	0	2	0	0	0	0	0	0	0
6	Project (Or Summer Internship)	PROJ IE 401	Short Term Training (21-45 Days) Project-III	0	0	6	6	3	0	0	0	0	150	150
TOTAL				14	0	6	20	15						450



VIII SEMESTER

SN	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	Project Report	Internal Evaluation	Industry Evaluation	Internal Practical	End Term Practical	Total Marks
				L	T	P								
1	Project	PROJEE 402	Industrial Internship/Project-IV	0	0	20	20	10	100	100	300	0	0	500
TOTAL				0	0	20	10	10						500
													163	5000

Professional Elective courses (19)

PEC EEL 301	Wind and Solar Energy Systems
PEC EEL 302	Line-Commutated and Active PWM Rectifiers
PEC EEL 303	Electrical Drives
PEC EEL 304	Electrical and Hybrid Vehicles
PEC EEL 305	Electrical Machine Design
PEC EEL 306	Power System-II
PEC EEL 307	Power System Protection
PEC EEL 308	HVDC Transmission Systems
PEC EEL 309	Power Quality and FACTS
PEC EEL 310	High Voltage Engineering
PEC EEL 401	Industrial Electrical Systems
PEC EEL 402	Power System Dynamics and Control
PEC EEL 403	Digital Control Systems
PEC EEL 404	Computer Architecture
PEC EEL 405	Electromagnetic waves
PEC EEL 406	Computational Electromagnetics
PEC EEL 407	Control Systems Design
PEC EEL 408	Electrical Energy Conservation and Auditing
PEC EEL 409	Advanced Electric Drives

Open Elective Courses (9)

OEC 301	Soft Skills and Interpersonal Communication
OEC 302	ICT for Development
OEC 303	Human Resource Development and Organizational Behavior
OEC 401	Cyber Law and Ethics
OEC 402	Introduction to Philosophical Thoughts
OEC 403	Comparative Study of Literature
OEC 404	Indian Music System
OEC 405	History of Science & Engineering
OEC 406	Introduction to Art and Aesthetics



CAD/CAM AND SIMULATION OF RENEWABLE ENERGY SYSTEMS

UNIT - I BASIC CONCEPTS OF CAD

CAD Hardware and software operating system, application software, CAD workstation Principles of computer graphics – graphics programming, input techniques, transformation. Elements of mechanical drafting package, graphic standards, graphic libraries, design and drafting interface. Advanced modeling techniques.

UNIT - II ADVANCED MODELLING TECHNIQUES

Modeling of curve and surface, non uniform rotational of splines , commercial surface modeling software – principles of solid modeling – rendering methods – CAD/CAM data base development and database management systems –principles of optimum design

UNIT- III COMPUTER AIDED MANUFACTURING AND PROCESS

Computer aided manufacturing- fundamentals of CAD/CAM – computers in manufacture – Programming languages, process interface hardware – hierarchy of computers in CAM. Computer process monitoring, types of production monitoring systems – process control – modeling and analysis – direct digital control – supervisory computer control – steady state optimal control – adaptive control, on – line search strategies. Systems for manufacturing support.

UNIT- IV CAD MODELLING AND SIMULATION OF SOLAR AND WIND ENERGY SYSTEMS:- Solar collectors, solar cooker, solar water heater, solar pasteurizer, solar drier, wind mill and wind generator.

UNIT- V CAD MODELLING AND SIMULATION OF SYSTEMS USING BIOMASS :- Updraft gasifier – downdraft gasifier, cross draft gasifier – multi fuel gasifier – fixed and fluid bed gasifier – Biogas plant.

REFERENCES:

1. William M Newman and Robert Sproul “principles of interactive graphics” McGraw Hill, 1984.
2. RadhaKrishnan.P. &Kothandaraman.C.P. “Computer graphics design” DhanpatRai and Sons, 1990.
3. Groover.M.P. “Automation, Production systems and Computer Aided Manufacturing” Prentice Hall, 1984.
4. CAD/CAM Theory & practice, Inbrahim&Zeid Pub: Tata McGraw Hill.



AI APPLICATIONS TO POWER SYSTEMS

Introduction to AI: Definition, Applications, Components of an AI program; production system. Problem Characteristics. Overview of searching techniques. Knowledge representation: Knowledge representation issues; and overview. Representing knowledge using rules; procedural versus declarative knowledge. Logic programming, forward versus backward reasoning, matching. Control knowledge.

Statistical Reasoning: Probability and Bayes's theorem. Certainty factor and rule based systems. Bayesian Networks, Dempster Shafer theorem. Semantic nets and frames, Scripts. Examples of knowledge based systems.

Pattern Recognition: Introduction, automatic pattern recognition scheme. Design Concepts, Methodologies, Concepts of Classifier, concept of feature selection. Feature selection based on means and covariances. Statistical classifier design algorithms; increment-correction and LMSE algorithms. Applications.

Artificial Neural Networks: Biological Neuron, Neural Net, use of neural 'nets, applications, Perception, idea of single layer and multilayer neural nets, back propagation, Hopfield nets, supervised and unsupervised learning.

Expert Systems: Introduction. Study of some popular expert systems, Expert System building tools and Shells, Design of Expert Systems.

Applications of AI Techniques: Load forecasting – Load flow studies – Economic load dispatch – Load frequency control – Single area system and two area system – Small Signal Stability (Dynamic stability) Reactive power control

REFERENCE BOOKS

1. Neural Networks, Fuzzy Logic & Genetic Algorithms, S.Rajasekaran and G.A.V.Pai,- PHI, New Delhi, 2003.
2. Computing Theory & Practice, P.D.Wasserman, VanNostrand Reinhold, Neural- New York, 1989.
3. Neural Network & Fuzzy System, Bart Kosko, Prentice Hall, 1992.
4. Fuzzy sets, Uncertainty and Information, G.J.Klir and T.A.Folger, PHI, Pvt.Ltd, 1994.
5. Genetic Algorithms, D.E.Goldberg, Addison Wesley 1999.



Power Quality management

UNIT-I:-INTRODUCTION: Power Quality phenomena – Basic terminologies – various events in Power Quality – Causes for reduction in Power Quality — Power Quality Standards

UNIT-II VOLTAGE SAG: Causes of voltage sags – magnitude and duration of voltage sags – effect on adjustable AC Drives, DC drives, computers and consumer electronics – monitoring and mitigation of voltage sags.

UNIT-III

INTERRUPTION: Origin of Long and Short interruptions – influence on various equipments – reliability of power supply – basic reliability evaluation techniques – monitoring and mitigation of interruptions **HARMONICS:** Origin of harmonics – effect of harmonics on adjustable speed ac drives – harmonic reduction using PWM and harmonic injection.

UNIT-IV

POWER QUALITY MEASUREMENTS: Interpretation and analysis of Power Quality Measurements, Active Filters as Power Quality Conditioners – Basic concept of Unified Power Quality Conditioners.

Text:

1. Math. H. J. Bollen, “Understanding Power Quality Problems – Voltage Sags and Interruptions”, IEEE Press, 2000
2. David D. Shipp and William S. Vilcheck, “Power Quality and Line Considerations for Variable Speed AC Drives”, IEEE Transactions on Industry Applications, Vol. 32, March / April – 1996

Reference:

1. Po – Tai Cheng, Subhashish Bhattacharya and Deepak. D. Divan, “Line Harmonics Reduction in High – Power Systems Using Square – Wave Inverters – Based Dominant Harmonic Active Filter”, IEEE Transactions on Power Electronics, Vol. 14, No. 2, March 1999
2. Hideaki Fujita and HifofumiAkagi, “The Unified Power Quality Conditioner: The Integration of Series and Shunt Active Filters”, IEEE Transactions on Power Electronics, Vol. 13, No. 2, March 1998.
3. Christopher J. Melhorn and Mark. F. McGranaghan, “Interpretation and Analysis of Power Quality Measurements”, Electrotek Concepts, Inc. 1998
4. Harmonic Distortion in the electric supply system”, – Technical Note No. 3 from Integral Energy Power Quality Centre, University of Wollongong, March 2000



High Voltage DC Transmission

INTRODUCTION: Introduction to AC and DC Transmission – application of DC Transmission – description of DC transmission – DC system components and their functions – modern trends in DC Transmission
CONVERTER: Pulse Number – Converter configuration – analysis of Graetz circuit – converter bridge characteristics – characteristics of 12 Pulse converter

HVDC CONTROLLERS: General principle of DC link control – converter control characteristics – system control hierarchy – firing angle control – current and extinction angle control – Dc link power control – high level controllers

FILTERS: Introduction to harmonics – generation of harmonics – design of AC filters – DC filters – carrier frequency and RI noise

PROTECTION: Basics of protection – DC reactors – voltage and current oscillations – circuit breakers – over voltage protection – switching surges – lightning surges – lightning arresters for DC systems

Text/Reference:

1. Kimbark, "Direct Current Transmission – Vol. I", John Wiley and Sons Inc., New York, 1971
2. Padiyar. K. R., "HVDC Power Transmission Systems", Wiley Eastern Limited, New Delhi, 2000.
3. Arrillaga. J, "High Voltage Direct Current Transmission", Peter Peregrines, London, 1983



Embedded System Design

Embedded System -Types of Embedded System - Requirements of Embedded System - Issues in Embedded software development - Applications.

Processor & Memory Organization: Structural units in processor - Processor selection - Memory devices - Memory selection - Memory Allocation & Map –Interfacing Devices - Device Drives & Buses For Device Networks: I/O devices - Timers & Counter devices - Serial Communication - Communication between devices using different buses. Device drives - Parallel and serial port device drives in a system - Interrupt servicing mechanism - context and periods for context switching - Deadline and Interrupt Latency.

Programming & Program Modeling Concepts : Program elements - Modeling Processes for Software Analysis - Programming Models - Modeling of Multiprocessor Systems - Software algorithm Concepts -Design -Implementation -Testing -Validating -Debugging - Management and maintenance - Necessity of RTOS.

Hardware and Software Co-Design: Embedded system design and co- design issues in software development -Design cycle in development phase for Embedded System - Use of ICE & Software tools for development of ES - Issues in embedded system design.

References

- [1] Brown S, and Vranesic Z, Fundamentals of Digital logic with Verilog design, McGraw Hill Education 2017.
- [2] Mazidi, Mckinlay and Causey, PIC Micro-controllers and Embedded Systems, Pearson education India: First Edition 2008.
- [3] Franklin G F, Powell J D and Naeni, Feedback Control of Dynamic Systems, Pearson 2008.
- [4] Sedra A. S and Smith K, Microelectronic Circuits: theory and Applications, Oxford University Press, 2017
- [5] Proakis J G and Manolakis D K, Digital Signal Processing, Pearson 2007.



**OFFICE OF THE REGISTRAR
MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2021/517

10th March, 2021

OFFICE ORDER

Sub.: Reconstitution of Board of Studies for Department of Mechanical Engineering

The Board of Studies for the Department of Mechanical Engineering is reconstituted as per Rule 7 of the Statutes of Mewar University, as under:

- | | |
|---|-------------------|
| 1) Dr. Tanveer Ahmed Kazi, Dean, Faculty of Engineering & Technology | - Chairman |
| 2) Prof. (Dr.) Rakesh Bhandari, Associate Professor, Sangam University | - External Member |
| 3) Mr. Upeesh Kumar Jain- Senior Engineer, Jindal Saw Ltd. | - External Member |
| 4) Mr. Dinesh Kumar, Assistant Professor, Mechanical Engg. | - Internal Member |
| 5) Mr. Sunil Kumar Katheria, Assistant Professor, Mechanical Engg. | - Internal Member |
| 6) Mr. Rakesh Nai, Senior Engineer, Bharat Benz | - Alumni |
| 7) Mr. Kapil Nahar, Head, Mechanical Engg. | - Convener |

The terms of reference for the Board of Studies are as provided in Rule 7 of the Statutes.

The Chairman of the Board of Studies may associate any member in the meeting, as special invitee if it is considered his association will contribute in the task of the meeting with the approval of the President/Vice Chancellor.

The Convener of the Meeting is advised to hold the meeting of the BOS seeking convenience of the Chairman in the first week of June 2021. The proceedings of the meeting may be sent to the VC/Registrar as early as possible.

The External Members shall be entitled for TA/DA and sitting fees as per the norms prescribed by the Mewar University.


Registrar

**Registrar
Mewar University
Gangrar, (Chittorgarh)**

Copy to:

- PS to Hon'ble Chairperson (for kind information)
- PS to Hon'ble President (for kind information)
- PS to Hon'ble Pro-President (for kind information)
- All concerned Deans/Directors/HoD's (for kind information & necessary action)
- Accounts/Examination/Library/Store/Warden/Security/IT Head.
- Coordinator, IQAC Cell.
- Record file.

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF MECHANICAL ENGINEERING

DATE: 10.06.2021

Minutes of Meeting of Board of Studies

Minutes of the BOS of the Department of Mechanical Engineering meeting held on 10-06-2021 at 11.30 AM.

The following members were present: (**Annexure 1**)

- | | |
|---|-------------------|
| 1) Dr. Tanveer Ahmed Kazi, Dean, Faculty of Engineering & Technology | - Chairman |
| 2) Prof. (Dr.) Rakesh Bhandari, Associate Professor, Sangam University | - External Member |
| 3) Mr. Upeesh Kumar Jain- Senior Engineer, Jindal Saw Ltd. | - External Member |
| 4) Mr. Dinesh Kumar, Assistant Professor, Mechanical Engg. | - Internal Member |
| 5) Mr. Sunil Kumar Katheria, Assistant Professor, Mechanical Engg. | - Internal Member |
| 6) Mr. Rakesh Nai, Senior Engineer, Bharat Benz | - Alumni |
| 7) Mr. Kapil Nahar, Head, Mechanical Engg. | - Convener |

Mr. Kapil Nahar (Head, Department of Mechanical Engineering) warmly welcomed all the board members. The Head also appreciated the presence of outside experts who took the pain and keen interest to attend this meeting.

Agenda 1: To approve minutes of the previous BOS, held on 18-06-2020

Resolution: Minutes of the previous BOS of the Mechanical Engineering Department held on 18-06-2020 were discussed and approved.

Agenda 2: Brief presentation of academic activities of the department before the BOS Committee by the convener

Resolution: Mr. Kapil Nahar (Head, Mechanical Engineering) presented departmental activity report mentioning all the activities conducted related to curricular development, research and development, faculty development and Industrial collaboration.

Agenda 3: Revision of Existing Programmes/ Courses

Resolution: As per the recommendation of the expert committee revision in the curriculum of the Ph.D. programme approves for the upcoming session 2021-22.

Agenda 4: Introduction of New Programmes/Course

Resolution:

1. As per the suggestions received from the Peer Team of NAAC, it is decided to implement the AICTE Model curriculum from the next academic session 2021-22 as **Annexure 2**.

Kapil Nahar
10/06/2021



2. Based on the industry demand, it has been decided to offer a Value-added course on “Additive Manufacturing & Tooling” to B.Tech Graduates as **Annexure 3**.
3. As per suggestions received from the members of the previous BOS committee, two courses were introduced in the M. Tech. Manufacturing System Engineering for the upcoming session 2021-22 is as follows. The detailed syllabus is attached as **Annexure 4**.
 - Advanced Automation and Control Systems
 - Digital Transformation in Manufacturing
4. As per suggestions received from the members of the previous BOS committee, two courses were introduced in the M. Tech. Thermal Engineering for the upcoming session 2021-22 is as follows. The detailed syllabus is attached as **Annexure 5**.
 - Advanced Materials for Thermal Engineering
 - Advanced Thermoeconomic Analysis

Agenda 5: Any other suggestions by the BOS committee

Resolution:

- The BOS committee suggested more online/offline interaction with industry experts and students
- The Committee proposed to incorporate AICTE based curriculum.

Agenda 6: To recommend the approved syllabus to Academic Council.



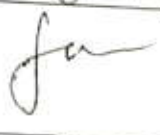



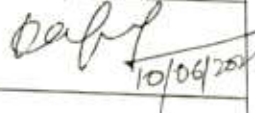
Resolution: Members of the Board of Studies approved the revised syllabus and recommended the same be forwarded to the Academic Council for their approval.

The meeting was dissolved with thanks to the Chair and all the Board of Studies Members.

Paul
10/06/2021



Annexure 1: Attendance Sheet

S.NO.	Name & Designation	Designation in BOS	Signature
1	Dr. Tanveer Ahmed Kazi, Dean, Engineering	Chairman	
2	Prof. (Dr.) Rakesh Bhandari, Associate Professor, Sangam University	External Member	 10/06/2021
3	Mr. Upeesh Kumar Jain- Senior Engineer, Jindal Saw Ltd.	External Member	
4	Mr. Dinesh Kumar, Assistant Professor, Mechanical Engg.	Internal Member	
5	Mr. Sunil Kumar Katheria, Assistant Professor, Mechanical Engg.	Internal Member	 10-06-21
6	Mr. Rakesh Nai, Senior Engineer, Bharat Benz	Alumni	
7	Mr. Kapil Nahar, Head, Mechanical Engg.	Convener	 10/06/2021
		Special Invitee (if any)	

Name of Course: Additive Manufacturing & Tooling

Type of Course: Value Added Course

Course Code: ME-12021

Academic Year: 2021-22

Duration of course: 30 Hours

Course Outcomes

Students will be able to:

- (a) Explain additive manufacturing, its advantages and disadvantages
- (b) Explain the effects of surface finish and microstructural properties on behaviour for components produced using additive manufacturing
- (c) Understand an awareness of residual stresses that may occur during additive manufacturing and their effects.
- (d) Describe the processes used in additive manufacturing for a range of materials and applications
- (e) Display the role of additive manufacturing in the design process and the implications for design.

Unit-1

Introduction: Historical developments, Fundamentals of RP Systems and its Classification, Rapid prototyping process chains, 3D modeling and mesh generation, Data conversion and transmission.

Unit-2

Systems: Liquid polymer based rapid prototyping systems, Teijin Seikis' solid form and other similar commercial RP systems, Solid input materials based rapid prototyping systems, laminated object manufacturing (LOM) and fused deposition modelling systems etc., Power based rapid prototyping systems, selective Laser sintering, SoligenDiren's shell production casting (DSPC), Fraunhofer's multiphase jet solidification (MJS) and MIT's 3D printing (3DP) etc.

Unit-3

S →/K
(Sunil Kr. Kathuria)



RP Database: Rapid prototyping data formats, STL format, STL file problems, STL file repair, Network based operations, Digital inspection, Data warehousing and learning from process data.

RP Applications: Development of dies for moulding, RP applications in developing prototypes of products, application in medical fields, Development of bone replacements and tissues, etc., RP materials and their biological acceptability.

Books:

1. Rapid Prototyping Of Digital Systems: A Tutorial Approach Hamblen James O Kluwer Aca
2. Rapid Prototyping: Principles And Applications Kai Chua Chee World Science
3. Rapid System Prototyping With Fpgas: Accelerating The Design Process R C Cofer Newnes
4. Rapid Prototyping of Digital Systems James O Hamblen Springer, Third edition Tata McGraw- Hill, 2007

S → K
(Sunil Kr. Katheris)

Advanced Automation and Control Systems

Unit 1: Advanced Control Strategies for Manufacturing Systems

Introduction to advanced control strategies, such as model predictive control (MPC), fuzzy logic control, and adaptive control. Application of advanced control strategies in manufacturing processes to improve performance, quality, and energy efficiency. Design and implementation considerations for advanced control systems in manufacturing.

Unit 2: Real-Time Optimization of Manufacturing Processes

Optimization techniques for real-time decision-making and control of manufacturing processes. Integration of mathematical models, process data, and optimization algorithms for process optimization. Case studies and examples of real-time optimization in various manufacturing industries.

Unit 3: Distributed Control Systems and Networked Control

Concepts and principles of distributed control systems (DCS) in manufacturing. Networked control systems and communication protocols for distributed control. Design and implementation of distributed control systems for efficient and reliable manufacturing operations.

Unit 4: Fault Diagnosis and Fault-Tolerant Control

Techniques for fault diagnosis and detection in manufacturing systems. Fault-tolerant control strategies to ensure system stability and performance in the presence of faults. Implementation of fault diagnosis and fault-tolerant control algorithms in manufacturing processes.

Unit 5: Adaptive and Intelligent Control Systems

Introduction to adaptive control techniques for adjusting control parameters based on system changes and uncertainties. Intelligent control systems utilizing machine learning and artificial intelligence algorithms for optimal control. Applications of adaptive and intelligent control in manufacturing systems for improved efficiency and robustness.

S. N. K.

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10/6/21



Digital Transformation in Manufacturing

Unit 1: Digitalization and Connectivity in Manufacturing Systems

Introduction to digital transformation and its impact on manufacturing. Integration of IoT devices and sensors for data collection and connectivity. Smart factories and cyber-physical systems in digital manufacturing.

Unit 2: Cloud Computing and Edge Computing in Manufacturing

Utilizing cloud computing for data storage, processing, and analysis in manufacturing. Edge computing and edge devices for real-time data processing and decision-making. Hybrid cloud and edge architectures in manufacturing systems.

Unit 3: Data Analytics and Machine Learning for Digital Transformation

Techniques for data analytics and machine learning in manufacturing data. Predictive maintenance and quality control using data-driven approaches. Optimization and decision support systems based on machine learning algorithms.

Unit 4: Cybersecurity and Data Privacy in Digital Manufacturing


Challenges and solutions for ensuring cybersecurity in digital manufacturing systems. Data privacy regulations and compliance considerations. Risk assessment and mitigation strategies for cybersecurity in manufacturing.

Unit 5: Business Process Reengineering for Digital Transformation

Redesigning manufacturing processes and workflows for digital transformation.

Lean and agile methodologies for process optimization.

Change management and organizational considerations in digital transformation.

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10/16/21


Advanced Materials for Thermal Engineering

Unit 1: High-Temperature Materials for Energy Applications

Properties and characteristics of high-temperature materials, such as refractory metals, ceramics, and intermetallic compounds.

Applications of high-temperature materials in energy systems, including gas turbines, nuclear reactors, and high-temperature solar thermal systems.

Challenges and considerations in the design and use of high-temperature materials.

Unit 2: Heat-Resistant Coatings and Thermal Barrier Coatings

Coating technologies for enhancing heat resistance and thermal protection.

Types of heat-resistant coatings, such as ceramic coatings and thermal barrier coatings.

Techniques for deposition and characterization of coatings in thermal engineering applications.

Unit 3: Nanomaterials for Heat Transfer Enhancement

Introduction to nanomaterials and their unique thermal properties.

Use of nanomaterials for improving heat transfer efficiency in thermal systems.

Synthesis, characterization, and application of nanomaterials in thermal engineering.

Unit 4: Advanced Insulation Materials

Insulation materials for reducing heat loss and improving energy efficiency.

Analysis of different types of insulation materials, including aerogels, foams, and vacuum insulation panels.

Design considerations and selection of insulation materials for specific thermal engineering applications.

Unit 5: Phase Change Materials for Thermal Energy Storage

Principles and applications of phase change materials (PCMs) in thermal energy storage.

Types of PCMs and their phase change behavior.

Design and integration of PCM-based thermal energy storage systems.

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Advanced Thermo-economic Analysis

Unit 1: Thermo-economic Modeling and Analysis of Energy Systems

Introduction to thermo-economic analysis and its application in energy systems.

Modeling energy systems using thermo-economic principles and techniques.

Cost allocation methods for identifying the cost distribution of different components in an energy system.

Unit 2: Exergy Analysis and Exergoeconomic Optimization

Exergy analysis as a tool for assessing the thermodynamic efficiency and quality of energy in a system.

Exergoeconomic analysis to evaluate the cost and value of exergy flows in an energy system.

Optimization techniques for exergoeconomic analysis and system design

Unit 3: Economic Assessment of Energy Efficiency Improvements

Evaluation of energy efficiency improvements in terms of cost savings and economic benefits.

Methods for quantifying energy savings and calculating payback periods.

Financial evaluation techniques, such as net present value (NPV) and internal rate of return (IRR), for energy efficiency projects.

Unit 4: Life Cycle Cost Analysis of Thermal Systems

Life cycle cost analysis (LCCA) as a tool for evaluating the economic performance of thermal systems over their entire life cycle.

Consideration of costs related to installation, operation, maintenance, and decommissioning of thermal systems.

Sensitivity analysis and uncertainty assessment in LCCA.

Unit 5: Sustainability and Economic-Environmental Trade-offs in Energy Systems

Integration of sustainability considerations into thermo-economic analysis.

Assessment of economic-environmental trade-offs in energy systems, such as greenhouse gas emissions and resource depletion.

Decision-making frameworks for balancing economic, environmental, and social aspects in energy system planning and design.

S. J. K.

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20/11/21



MEWAR UNIVERSITY

REVISED SYLLABUS EFFECTIVE FROM 2021-22

COURSE: B.Tech BRANCH: Mechanical Engineering

I SEMESTER

SN o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term 2 / Vva- Voce	Internal Practica 1	End Term Practical	Total Marks
				L	T	P								
1	Basic Science course	BSC101	Physics	3	1	0	4	4	15	35	50	0	0	100
2		BSC102	Mathematics-I	3	1	0	4	4	15	35	50	0	0	100
3		BSC103	Chemistry	3	1	0	4	4	15	35	50	0	0	100
4		BSC104	Physics Lab	0	0	2	2	1	0	0	0	25	25	50
5		BSC105	Chemistry Lab	0	0	2	2	1	0	0	0	25	25	50
6	Engineering Science Courses	ESC101	Basic Electrical Engineering	3	1	0	4	4	15	35	50	0	0	100
7		ESC102	Engineering Graphics & Design Lab	0	0	4	4	2	0	0	0	50	50	100
8		ESC103	Basic Electrical Engineering Lab	0	0	2	2	1	0	0	0	25	25	50
TOTAL				12	4	10	26	21						650



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 (Dinesh Ka)

II SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical 1	End Term Practical	Total Marks
				L	T	P								
1	BASIC Science	BSC106	Mathematics -II	3	1	0	4	4	15	35	50	0	0	100
2	Engineering Science Courses	ESC104	Programming for Problem Solving	3	1	0	4	4	15	35	50	0	0	100
3		ESC105	Engineering Mechanics	3	1	0	4	4	15	35	50	0	0	100
4		ESC106	Basic Electronics	3	1	0	4	4	15	35	50	0	0	100
5		ESC107	Programming for Problem Solving Lab	0	0	4	4	4	0	0	0	50	50	100
6	Humanities and Social Sciences	ESC108	Workshop Practices Lab	0	0	4	4	4	0	0	0	50	50	100
7		HSMC 101	English	2	0	0	2	2	10	15	25	0	0	50
8	Sciences including Mandatory courses	HSMC 102	English Lab	0	0	2	2	2	0	0	0	25	25	50
9		MC-1	Environmental Science	2	0	0	2	2	0	0	0	0	0	0
TOTAL				16	4	10	30	23						700



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III SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical 1	End Term Practical	Total Marks
				L	T	P								
1	Basic Science course	BSC107	Mathematics-III	3	1	0	4	4	15	35	50	0	0	100
2		BSC108	Biologv for Engineers	2	0	0	2	2	10	15	25	0	0	50
3	Professional Core courses	PCC-ME201	Thermodynamics -	3	1	0	4	4	15	35	50	0	0	100
4		PCC-ME202	Strength of Materials -	3	1	0	4	4	15	35	50	0	0	100
5		PCC-ME203	Materials Engineering -	3	1	0	4	4	15	35	50	0	0	100
6		PCC-ME204	Fluid Mechanics & Fluid Machines	3	1	0	4	4	15	35	50	0	0	100
7	Humanities and Social Sciences including Management courses	PCC-ME205	Strength of Materials Lab -	0	0	2	2	1	0	0	0	25	25	50
8		PCC-ME206	Fluid Mechanics & Fluid Machines Lab -	0	0	2	2	1	0	0	0	25	25	50
9	Humanities and Social Sciences including Management courses	HSMC201	Organizational Behavior	3	0	0	3	3	10	25	40	0	0	75
TOTAL				20	5	4	29	27					725	




 (Vinesh K)

IV SEMESTER

S.N o.	Category	Course Code	Course Title	Contract hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practical 1	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC- ME 207	Applied Thermodynamics	3	1	0	4	4	15	35	50	0	0	100
2		PCC- ME 208	Instrumentation & Control	3	1	0	4	4	15	35	50	0	0	100
3		PCC- ME 209	Solid Mechanics	3	1	0	4	4	15	35	50	0	0	100
4		PCC- ME 210	Manufacturing Processes	3	1	0	4	4	15	35	50	0	0	100
5		PCC- ME 211	Kinematics & Theory of Machines	3	1	0	4	4	15	35	50	0	0	100
6		PCC- ME 212	Instrumentation & Control Lab	0	0	2	2	1	0	0	0	25	25	50
7		PCC- ME 213	Manufacturing Processes Lab	0	0	4	4	2	0	0	0	50	50	100
8		PCC- ME 214	Kinematics & Theory of Machines Lab	0	0	2	2	1	0	0	0	25	25	50
9		Humanities and Social Sciences including Management	H-102	Universal Human Values 2: Understanding Harmony	3	0	0	3	3	10	25	40	0	0
TOTAL				18	5	8	31	27						775



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V SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part 1	End Term Part 2 / Viva- Voce	Internal Practica 1	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC- ME 301	Heat Transfer	3	1	0	4	4	15	35	50	0	0	100
2		PCC ME 302	Manufacturing Technology	4	0	0	4	4	15	35	50	0	0	100
3	Professional Elective courses	PCC ME 303	Design of Machine Elements	3	1	0	4	4	15	35	50	0	0	100
4		PEC MEL301 -305	Elective-I	3	0	0	3	3	10	25	40	0	0	75
5	Professional Core courses	PCC ME 304	Elective-II	3	0	0	3	3	10	25	40	0	0	75
6			Heat Transfer Lab	0	0	2	2	1	0	0	0	25	25	50
7	Humanities and Social Sciences including Management courses	HSMC301 (OEL II)	Humanities I (Effective Technical Communication)	2	0	0	2	2	10	15	25	0	0	50
8	Project (Summer internship)	PROJ- ME 301	Minor Project/ Seminar/Seminar Internship	0	0	2	2	1	0	0	0	25	25	50
TOTAL				18	2	4	24	22						600



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C. Binesh Kumar

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VI SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part I	End Term Part 2 / Viva- Voce	Internal Practica 1	End Term Practical	Total Marks
				L	T	P								
1	Professional Core courses	PCC- ME 306	Automation in Manufacturing	3	0	0	3	3	10	25	40	0	0	75
		PCC- ME 307	Automation in Manufacturing Lab	0	0	2	2	1	0	0	0	25	25	50
2	Professional Elective courses	PEC MEL,306- 310	Elective-III	3	0	0	3	3	10	25	40	0	0	75
			Elective-IV	3	0	0	3	3	10	25	40	0	0	75
4	Open Elective courses	OEC 301-303	Open Elective-I	3	0	0	3	3	10	25	40	0	0	75
5	Mandatory courses	MC-II	Essence of Indian Knowledge Tradition	2	0	0	2	0	0	0	0	0	0	0
6	Project	PROJ-ME 302	Project-II(Major Project)	0	0	10	10	5	0	0	0	125	125	250
TOTAL				14	0	12	26	18						600



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VII SEMESTER

S.N	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	TA	End Term Part I	End Term Part 2 / Viva-Voice	Internal Practica I	End Term Practical	Total Marks
				L	T	P								
1	Professional Elective courses	PEC MEL401-405	Elective-V	3	0	0	3	3	10	25	40	0	0	75
2			Elective-VI	3	0	0	3	3	10	25	40	0	0	75
3	Open Elective courses	OEC 401-403	Open Elective II	3	0	0	3	3	10	25	40	0	0	75
4			Open Elective III	3	0	0	3	3	10	25	40	0	0	75
5	Mandatory courses	MC-III	Constitution of India	2	0	0	2	0	0	0	0	0	0	
6	Project (Or Summer internship)	PROJ ME 401	Short Term Training (21-45 Days)/ Project-III	0	0	6	6	3	0	0	0	150	150	
TOTAL				14	0	6	20	15					450	



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VIII SEMESTER

S.N o.	Category	Course Code	Course Title	Contact hours per Week			Total contact hours	Credits	Project Report	Internal Evaluation	Industry Evaluation	Internal Practical I	End Term Practical	Total Marks			
				L	T	P											
1	Project	PROJ-ME 402	Industrial Internship/Project-IV	0	0	20	20	10	100	100	300	0	0	500			
TOTAL														10	163	500	5000

Professional Elective courses (15)

- PEC MEL 301 Internal Combustion Engines —
- PEC MEL 302 Automobile Engineering ✗
- PEC MEL 303 Composite Materials ✗
- PEC MEL 304 Mechatronic Systems ✗
- PEC MEL 305 Microprocessors in Automation ✗
- PEC MEL 306 Energy Conservation and Management ✗
- PEC MEL 307 Refrigeration and Air Conditioning —
- PEC MEL 308 Process Planning and Cost Estimation ✗
- PEC MEL 309 Principles of Management ✗
- PEC MEL 310 Design of Transmission Systems ✗
- PEC MEL 401 Gas Dynamics and Jet Propulsion ✗
- PEC MEL 402 Total Quality Management ✗
- PEC MEL 403 Power Plant Engineering ✗
- PEC MEL 404 Computer Aided Design ✗
- PEC MEL 405 Finite Element Analysis ✗

Open Elective Courses (10)

- OEC 301 Soft Skills and Interpersonal Communication —
- OEC 302 ICT for Development —
- OEC 303 Human Resource Development and Organizational Behavior —
- OEC 401 Cyber Law and Ethics —
- OEC 402 Introduction to Philosophical Thoughts —
- OEC 403 Comparative Study of Literature —
- OEC 404 Indian Music System —
- OEC 405 History of Science & Engineering —
- OEC 406 Introduction to Art and Aesthetics —



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OFFICE OF THE REGISTRAR

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2021/520

11th March 2021

OFFICE ORDER

Sub.: Reconstitution of Board of Studies for Department of Paramedical Science

The Board of Studies for the Department of Paramedical Science is reconstituted as per Rule 7 of the Statutes of Mewar University, as under:


- | | |
|---|-------------------|
| 1) Mr. D.K. Sharma, Dean Academics | - Chairman |
| 2) Dr. K.C. Jain, Radiologist | - External Member |
| 3) Dr. S.L. Mundra, Senior Medical Officer | - Internal Member |
| 4) Ms. ShantiNath, Assistant Professor | - Internal Member |
| 5) Mr. Aabid Hussain, Assistant Professor | - Internal Member |
| 6) Mr. Shadab Khan, Assistant Professor | - Internal Member |
| 7) Mr. Jay Prakash Agarwal | - Alumni |
| 8) Dr. Faiq Ahmad, Head & Assistant professor | - Convener |

The terms of reference for the Board of Studies are as provided in Rule 7 of the Statutes.

The Chairman of the Board of Studies may associate any member in the meeting, as special invitee if it is considered his association will contribute in the task of the meeting with the approval of the President/Vice Chancellor.

The Convener of the Meeting is advised to hold the meeting of the BOS seeking convenience of the Chairman in the first week of June 2021. The proceedings of the meeting may be sent to the VC/Registrar as early as possible.

The External Members shall be entitled for TA/DA and sitting fees as per the norms prescribed by the Mewar University.


Registrar
Registrar
Mewar University
Gangrar, (Chittorgarh)

Copy to:

- PS to Hon'ble Chairperson (for kind information)
- PS to Hon'ble President (for kind information)
- PS to Hon'ble Pro-President (for kind information)
- All concerned Deans/Directors/HoD's (for kind information & necessary action)
- Accounts/Examination/Library/Store/Warden/Security/IT Head.
- Coordinator, IQAC Cell.
- Record file.

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF PARAMEDICAL SCIENCES

DATE: 05.06.2021

Minutes of Meeting of Board of Studies

The Board of Studies meeting of the Department of Paramedical Science was held on 05th June 2021 in Room No. 135 at 11:00 am onwards to approve the new curriculum and syllabus for session 2021-22.

The following members were present: **(Annexure 1)**

- | | |
|---|-------------------|
| 1) Mr. D.K. Sharma, Dean Academics | - Chairman |
| 2) Dr. K.C. Jain, Radiologist | - External Member |
| 3) Dr. S.L. Mundra, Senior Medical Officer | - Internal Member |
| 4) Ms. ShantiNath, Assistant Professor | -Internal Member |
| 5) Mr. Aabid Hussain, Assistant Professor | - Internal Member |
| 6) Mr. Shadab Khan, Assistant Professor | - Internal Member |
| 7) Mr. Jay Prakash Agarwal | - Alumni |
| 8) Dr. Faiq Ahmad, Head & Assistant professor | -Convener |

Dr. Faiq Ahmad (Head, Department of Paramedical) warmly welcomed all the board members. The Head also appreciated the presence of outside experts who took the pain and keen interest to attend this meeting.

Agenda 1: To approve minutes of the previous BOS, held on 15-12-2020

Resolution: Minutes of the previous BOS of the Paramedical Department held on 15-12-2020 were discussed and approved.

Agenda 2: Brief presentation of academic activities of the department before the BOS Committee by the convener

Resolution: Dr. Faiq Ahmad (Head, Paramedical) presented a departmental activity report mentioning all the activities conducted related to curricular development, research development, faculty development and Industrial collaboration.

Agenda 3: Review of Existing Programmes/Courses

Resolution:

- The Committee reviewed and approved the scheme and syllabus of courses for BMLT, B.Sc Cardiac Care, M.Sc MLT and BRIT for the upcoming session from 2021-22. **(Annexure 2)**
- BMLT, B.Sc. Cardiac Care and BRIT programs is changed in semester wise and 4 years program (3+1) in which student will go for 6 month internship and 6 month project work.



Agenda 4: Any other suggestions by BOS Committee

Resolution:

- Based on members of BOS, it is decided to offer a value added course "Hospital Infection Control" to Paramedical Students.

Agenda 5: To recommend the approved syllabus to Academic Council.

Resolution: Members of the Board of Studies approved the syllabus and recommended the same be forwarded to the Academic Council for their approval.

The meeting was dissolved with thanks to the Chair and all the Board of Studies Members.


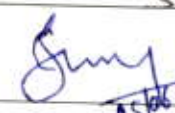
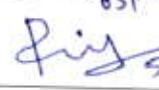

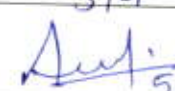

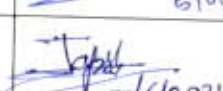
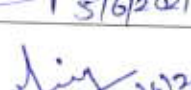


MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF PARAMEDICAL SCIENCES

DATE: 05.06.2021

Annexure 1: Attendance Sheet

S.NO.	Name & Designation	Designation in BOS	Signature
1	Mr. D.K. Sharma, Dean Academics	Chairman	 5/6/21
2	Dr. K.C. Jain, Radiologist	External Member	 5/6/21
3	Dr. S.L. Mundra, Senior Medical Officer	Internal Member	 5/6/2021
4	Ms. Shanti Nath	Internal Member	 5/6/2021
5	Mr. Aabid Hussain	Internal Member	 5/6/2021
6	Mr. Shadab Khan	Internal Member	 5/6/2021
7	Mr. Jay Prakash Agarwal	Alumni	 5/6/2021
8	Dr. Faiq Ahmad, Head, Paramedical	Convener	 5/6/2021

Hospital Infection Control

Course Outcome

At the end of the course, students will be able to:

- Understand the basic principles of infection control in a healthcare setting, including the modes of transmission of infections and the importance of hand hygiene.
- Identify the common healthcare-associated infections, including the signs and symptoms, and the strategies to prevent and control them.
- Explain the importance of environmental cleaning and disinfection in preventing the spread of infections in a hospital.
- Understand the role of personal protective equipment (PPE) in preventing the transmission of infectious agents.
- Analyze the principles and practices of aseptic technique in sterile procedures and patient care.

Overall, this course will equip students with the knowledge and skills necessary to promote and maintain a safe and healthy healthcare environment through effective infection control practices.

SYLLABUS

COURSE CONTENTS

- **Routes of transmission and their prevention**
 - Contact Transmission (most common mode of transmission)
 - Droplet transmission
 - Airborne transmission
 - Prevention**
 - Patient placement, Precaution for HCWs and patients Patient transport
 - Contact precaution (most common mode of transmission)
 - Droplet precaution
 - Airborne precaution
- **Surveillance**
 - Definition of health care associated infections
 - Central line associated blood stream infections (CLABSI)
 - Ventilator associated Pneumonia
 - Catheter associated urinary tract infections (CA-UTI)
 - Surgical site infections (SSI-Clean wound)
 - Bedsore
- **Needle stick injury and post exposure prophylaxis**
 - What to do
 - Steps of managing occupational exposure
 - Category of exposure
 - Source assessment

Dr. Faiz Ahmad



Gloves
Face & eye protective
Marks
Respiratory protection
Goggles
Face shields
Key points of PPE
Sequence of wearing PPE- Donning & Doffing

- **Biomedical Medical Waste Management**
Rationale of hospital waste management
Segregation of waste

Classification of BM waste based on type of waste with colour coding
Treatment & Disposal
Segregation, packaging, transportation & storage
Label for BM waste containers or bags
Safety measures
Management & administration

- **Device associated infections**

Catheter associated infection prevention bundle
Catheter associated urinary tract infection bundle
VAP prevention handle, CRBSI prevention bundle

- **Antibiotic policy**

Attributes of antibiotic policy
Requirements
Audit
Antibiotic stewardship

- **Vaccination, Blood spill and Hand hygiene**

Spill management
Hepatitis B virus
Hepatitis C virus
Human Immunodeficiency virus
Hand hygiene
Why, How & When?
Who
How
Alcohol based hand rub
Soap & water
Methods of hand hygiene
5 moments for hand hygiene



OFFICE OF THE REGISTRAR
MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

Ref. No.: MU/RO/2021/311-A

06 June 2021

OFFICE ORDER

Sub.: Reconstitution of Board of Studies for Department of Physics

The Board of Studies for the Department of Physics is reconstituted as per Rule 7 of the Statutes of Mewar University, as under:

- | | |
|---|-------------------|
| 1. Mr. D. K. Sharma, Dean Academics | - Chairman |
| 2. Prof. R K Paliwal, Retd. Professor, MLV Govt. College Bhilwara | - External Member |
| 3. Ms. Madhuri Jariya, Assistant Professor, Physics | - Internal Member |
| 4. Dr. Pramod Mehta, Assistant Professor. | - Internal Member |
| 5. Mr. Deepak Suthar | - Alumni |
| 6. Dr. Gulzar Ahmed, Head & Associate Professor | - Convener |

The terms of reference for the Board of Studies are as provided in Rule 7 of the Statutes.

The Chairman of the Board of Studies may associate any member in the meeting, as special invitee if it is considered his association will contribute in the task of the meeting with the approval of the President/Vice Chancellor.

The Convener of the Meeting is advised to hold the meeting of the BOS seeking convenience of the Chairman in the fourth week of June 2019. The proceedings of the meeting may be sent to the VC/Registrar as early as possible.

The External Members shall be entitled for TA/DA and sitting fees as per the norms prescribed by the Mewar University.


Registrar
Mewar University
Gangrar, (Chittorgarh)

Copy to:

- PS to Hon'ble Chairperson (for kind information)
- PS to Hon'ble President (for kind information)
- PS to Hon'ble Pro-President (for kind information)
- All concerned Deans/Directors/HoD's (for kind information & necessary action)
- Accounts/Examination/Library/Store/Warden/Security/IT Head.
- Coordinator, IQAC Cell.
- Record file.

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF PHYSICS

DATE: 26.06.2021

Minutes of Meeting of Board of Studies

The Board of Studies meeting of the Department of Physics under the Faculty of Science and Technology was held on 26th June 2021 in Room No. 135 at 10:00 am onwards to approve the new curriculum and Syllabus for session 2021-22.

The following members were present: **(Annexure 1)**

- | | |
|---|-------------------|
| 1. Mr. D. K. Sharma, Dean Academics | - Chairman |
| 2. Prof. R K Paliwal, Retd. Professor, MLV Govt. College Bhilwara | - External Member |
| 3. Ms. Madhuri Jariya, Assistant Professor | - Internal Member |
| 4. Dr. Pramod Mehta, Assistant Professor. | - Internal Member |
| 5. Mr. Deepak Suthar | - Alumni |
| 6. Dr. Gulzar Ahmed, Head & Associate Professor | - Convener |

Dr. Gulzar Ahmed, (Head of the Physics Department) warmly welcomed all the board members. The Head also appreciated the presence of outside experts who took the pain and keen interest to attend this meeting.

Agenda 1: To approve minutes of the previous BOS, held on 14-06-2019

Resolution: Minutes of the previous BOS of the Physics department held on 14-06-2019 were discussed and approved.

Agenda 2: Brief presentation of academic activities of the department before the BOS Committee by the convener

Resolution: Dr. Gulzar Ahmed, (Head, Physics Department) presented a departmental activity report mentioning all the activities conducted related to curricular development, research development, faculty development, and Industrial collaboration.

Agenda 3: Review and Approval of Existing Programmes/ Courses

Resolution: The BOS committee review the scheme and syllabus of P.G. program and approved the reviewed syllabus and scheme of M.Sc Physics for session 2021-22 **(Annexure 2)**



Agenda 4: To recommend the approved syllabus to Academic Council

Resolution: Members of the Board of Studies approved the revised syllabus and recommended the same be forwarded to the Academic Council for their approval.

The meeting was dissolved with thanks to the Chair and all the Board of Studies Members.



MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF PHYSICS

DATE: 26.06.2021

Annexure I: Attendance Sheet

S.NO.	Name & Designation	Designation in BOS	Signature
1	Mr. D. K. Sharma, Dean Academics	Chairman	 26/6/2021
2	Prof. R K Paliwal, Retd. Professor, MLV Govt. College Bhilwara	External Member	 26/6/21
3	Ms. Madhuri Jariya, Assistant Professor	Internal Member	
4	Dr. Pramod Mehta, Assistant Professor	Internal Member	
5	Mr. Deepak Suthar	Alumni	 Deepak
6	Dr. Gulzar Ahmed, Head & Associate Professor	Convener	 26/6/21
		Special Invitee (if any)	

**OFFICE OF THE REGISTRAR
MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)**

Ref. No.: MU/RO/2021/ 756

05th May 2021

OFFICE ORDER

Sub.: Reconstitution of Board of Studies for Department of Political Science

The Board of Studies for the Department of Political Science is reconstituted as per Rule 7 of the Statutes of Mewar University, as under:

- | | |
|---|-------------------|
| 1) Prof. (Dr.) Chitrlekha Singh, Dean, Humanities, Social Science & Fine Arts | - Chairman |
| 2) Prof. (Dr.) G.K. Sharma, Vikram University, Ujjain | - External Member |
| 3) Prof. (Dr.) Md. Muheeb ul haque, Aligarh Muslim University, Aligarh | - External Member |
| 4) Dr. Lokesh Sharma, Assistant Professor | - Internal Member |
| 5) Dr. M.C. Dubey, Associate Professor | - Internal Member |
| 6) Dharmendra Gurjar | - Alumni |
| 7) Dr. Sonia Singla, Associate Professor & Head | - Convener |

The terms of reference for the Board of Studies are as provided in Rule 7 of the Statutes.

The Chairman of the Board of Studies may associate any member in the meeting, as special invitee if it is considered his association will contribute in the task of the meeting with the approval of the President/Vice Chancellor.

The Convener of the Meeting is advised to hold the meeting of the BOS seeking convenience of the Chairman in the first week of June 2021. The proceedings of the meeting may be sent to the VC/Registrar as early as possible.

The External Members shall be entitled for TA/DA and sitting fees as per the norms prescribed by the Mewar University.

Copy to:

- PS to Hon'ble Chairperson (for kind information)
- PS to Hon'ble President (for kind information)
- PS to Hon'ble Pro-President (for kind information)
- All concerned Deans/Directors/HoD's (for kind information & necessary action)
- Accounts/Examination/Library/Store/Warden/Security/IT Head.
- Coordinator, IQAC Cell.
- Record file.


Registrar
Mewar University
Gangrar, (Chittorgarh)

MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF POLITICAL SCIENCE

DATE: 04.06.2021

Minutes of Meeting of Board of Studies

The Board of Studies meeting of the Department of Political Science was held on 04th June 2021 in Room No. 135 at 11:00 am onwards to approve the new curriculum and syllabus for session 2021-22.

The following members were present: **(Annexure 1)**

- 1) Prof. (Dr.) Chitralkha Singh, Dean, Humanities, Social Science & Fine Arts - Chairman
- 2) Prof. (Dr.) G.K. Sharma, Vikram University, Ujjain - External Member
- 3) Prof. (Dr.) Md. Muheeb ul haque, Aligarh Muslim University, Aligarh - External Member
- 4) Dr. Lokesh Sharma, Assistant Professor - Internal Member
- 5) Dr. M.C. Dubey, Associate Professor - Internal Member
- 6) Dharmendra Gurjar - Alumni
- 7) Dr. Sonia Singla, Associate Professor & Head - Convener

Dr. Sonia Singla (Head, Department of Political Science) warmly welcomed all the board members. The Head also appreciated the presence of outside experts who took the pain and keen interest to attend this meeting.

Agenda 1: To approve minutes of the previous BOS, held on 14-06-2019

Resolution: Minutes of the previous BOS of the Political Science department held on 14-06-2019 were discussed and approved.

Agenda 2: Brief presentation of academic activities of the department before the BOS Committee by the convener

Resolution: Dr. Sonia Singla (Head, Dept. of Political Science) presented a departmental activity report mentioning all the activities conducted related to curricular development, research development and faculty development.

Agenda 3: Review of Existing Programmes/Courses

Resolution: The Committee reviewed and approved the scheme and syllabus of course for M.A. Political Science for the upcoming session from 2021-22. **(Annexure 2)**



Agenda 4: To recommend the approved syllabus to Academic Council.

Resolution: Members of the Board of Studies approved the reviewed syllabus and recommended the same be forwarded to the Academic Council for their approval.

The meeting was dissolved with thanks to the Chair and all the Board of Studies Members.

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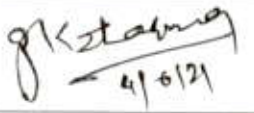
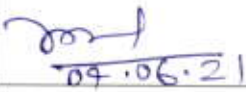






MEWAR UNIVERSITY, GANGRAR, CHITTORGARH (RAJ.)

DEPARTMENT OF POLITICAL SCIENCE

DATE: 04.06.2021

Annexure 1: Attendance Sheet

S.NO.	Name & Designation	Designation in BOS	Signature
1	Prof. (Dr.) Chitralkha Singh, Dean, Humanities, Social Science & Fine Arts	Chairman	 4.6.2021
2	Prof. (Dr.) G.K. Sharma, Vikram University, Ujjain	External Member	 4/6/21
3	Prof. (Dr.) Md.Muheeb ul haque, AMU, Aligarh	External Member	 04.06.21
4	Dr. Lokesh Sharma, Assistant Professor	Internal Member	 4/6/21
5	Dr. M.C. Dubey, Associate Professor	Internal Member	 04.06.2021
6	Dharmendra Gurjar	Alumni	 Dharmendra
7	Dr. Sonia Singla, Assistant Professor	Convener	 4/6/21