

ORIENTAL UNIVERSITY

(Established under M.P. Niji Vishwavidyalay (Sthapana avam Sanchalan), Adhiniyum 2007)
(Recognized by University Grants Commission, New Delhi)
Opp. Rewati Range Gate no. 1, Post: Shri Aurobindo
Indore-Ujjain State Highway, Jakhya, Indore 453 555 (M.P.)
Website: www.orientaluniversity.in E-Mail: registrar@orientaluniversity.in Ph.-0731-3265651, 3295651



Date: 31.08.2019

Minutes of the Meeting of the Board of Studies for Department of Civil Engineering

Meeting of Board of Studies was held on 31.08.2019 at 12:40 PM in the Department of Civil Engineering of this University and the following point was discussed:


Agenda: To review and rectify the syllabus of Pavement Design (BTCE-8102)


Minutes:


Department including the committee members wants to add the topic in B. Tech. 8th semester, the committee members wants to implement in below head:-


1. Subject name: Pavement Design,
2. Subject Code: BTCE-8102,
3. Unit I: ESWL and Unit III: Rigid Pavements.
4. Topics added in Unit I: "Advance materials for pavement" and "Types of Pavement".
5. Topics added in Unit III: "Dowel Bars" and "Specifications of Dowel Bars used in Rigid Pavement".

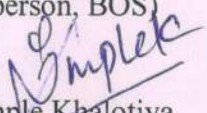
The above topic is useful for application of pavement design and has much scope in construction. It is available in books mentioned in syllabus of the same. The syllabus will be effective from session : January/2020.

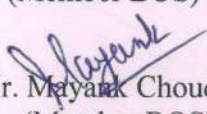

Prof. H.S. Goliya
(External Member)



Dr. Vandana Tare
(External Member)



Mr. M. L. Khalotiya
(External Member)

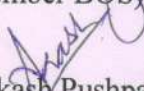

Dr. Kundan Meshram
(Chairperson, BOS)


Ms. Dimple Khalotiya
(Member BOS)


Mr. Mayank Choudhary
(Member BOS)


Mr. Ankit Pal
(Member BOS)


Mr. Sagar Janle
(Member BOS)


Mr. Akash Pushpad
(Member BOS)

Copy to:

- 1) Registrar, Oriental University, Indore.
- 2) Prof. H. S. Goliya, Associate Professor CE-AMD, SGSITS, Indore.
- 3) Dr. Vandana Tare, Dean (R&D), CE-AMD, SGSITS, Indore.
- 4) Mr. M. L. Khalotiya, Assistant Engineer, MPPHC, Indore.
- 5) All members of Civil Engineering Department of Oriental University.

ORIENTAL UNIVERSITY, INDORE
DEPARTMENT OF CIVIL ENGINEERING

Branch B. Tech Civil Engineering

Subject Wise Distribution of Marks and Corresponding Credits

Semester VIII

S. No.	Subject Code	Subject Name & Title	Maximum Marks Allotted										Total Credits	Remark
			Theory Slot			Practical Slot			Total Marks					
			End Sem	Mid Sem. MST (Two tests average)	Quiz, Assign ment	End Sem	Lab work & Sessional	Term work	Assignment / quiz	Period per week				
										L	T	P		
1	BTCE-801	Geo. Technical Engg. II	60	30	10	10	20	20	3	1	2	05		
2	BTCE-802	Construction Planning & Management	60	30	10	-	-	-	3	1	0	04		
3	BTCE-803	Advanced Structural Design-II (Steel)	60	30	10	10	20	20	3	1	2	05		
4	Ref table below	Elective-II	60	30	10	-	-	-	3	1	0	04		
5	BTCE-805	Major Project	-	-	-	120	40	40	0	0	6	06		
6	BTCE-806	General Proficiency	-	-	-	-	100	100	0	0	2	02		
Total			240	120	40	140	80	180	12	04	12	26	800	

MST: Mid Semester Tests Taken at Least twice per Semester

L: Lecture - T: Tutorial - P: Practical

Elective- II

Elective -II - Pavement Design

Approved
HOD, CE

ORIENTAL UNIVERSITY, INDORE

SYLLABUS FOR B.TECH-VIII SEM

SUBJECT CODE: BTCE-8102

SUBJECT NAME: PAVEMENT DESIGN

Unit -I.

Equivalent Single Wheel Load (ESWL) : Definition, calculation of ESWL, repetition of loads and their effects on the pavement structures, Advance materials for pavement, Types of Pavement.

Unit -II.

Flexible Pavements : Component parts of the pavement structures and their functions, stresses in flexible pavements, Stress distribution through various layers, Boussinesque's theory , Burmister's two layered theory, methods of design, group index method, CBR method, Burmister's method and North Dakota cone method.

Unit -III.

Rigid Pavements : Evaluation of sub grade, Modulus-K by plate bearing test and the test details, Westergaard's stress theory stresses in rigid pavements, Temperature stresses, warping stresses, frictional stresses, critical combination of stresses, critical loading positions, Dowel Bars, Specifications of Dowel Bars used in Rigid Pavement.

Unit -IV.

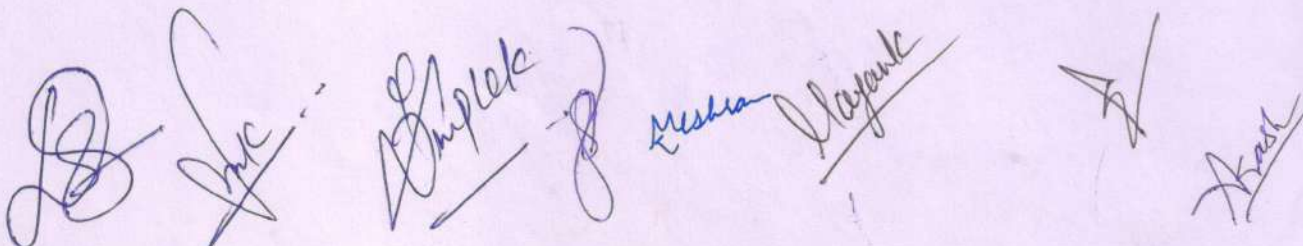
Rigid pavement design : IRC method, Fatigue analysis, PCA chart method, joints, design and construction & types, AASHTO Method, Reliability analysis.

Unit -V.

Evaluation and Strengthening of Existing Pavements : Benkleman beam method, Serviceability Index Method. Rigid and flexible overlays and their design procedures.

Reference Books :--

1. Principles of pavement design by E. J. Yoder & M.W. Witzcak
2. AASHO, "AASHO Interim Guide for Design of Pavement Structures", Washington, D.C.
3. Portland Cement Association, Guidlines for Design of Rigid Pavements, Washington
4. DSIR, Conc. Roads Design & Construction
5. Srinivasan M. "Modern Permanent Way"
6. Principles of pavement design by E. J. Yoder & M.W. Witzcak
7. AASHO, "AASHO Interim Guide for Design of Pavement Structures", Washington, D.C.
8. Portland Cement Association, Guidlines for Design of Rigid Pavements, Washington
9. DSIR, Conc. Roads Design & Construction
10. Srinivasan M. "Modern Permanent Way"

✓ Base


SYLLABUS: B.TECH CIVIL (VIII SEM)

ORIENTAL UNIVERSITY, INDORE

SYLLABUS FOR B.TECH-VIII SEM

SUBJECT CODE: BTCE-8102

SUBJECT NAME: PAVEMENT DESIGN

Unit -I.

Equivalent Single Wheel Load (ESWL) : Definition, calculation of ESWL, repetition of loads and their effects on the pavement structures.

Unit -II.

Flexible Pavements : Component parts of the pavement structures and their functions, stresses in flexible pavements, Stress distribution through various layers, Boussinesque's theory , Burmister's two layered theory, methods of design, group index method, CBR method, Burmister's method and North Dakota cone method.

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Unit -IV.

Rigid pavement design : IRC method, Fatigue analysis, PCA chart method, joints, design and construction & types, AASHTO Method, Reliability analysis.

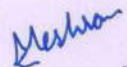
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9. DSIR, Conc. Roads Design & Construction
10. Srinivasan M. "Modern Permanent Way"

Vase



ORIENTAL UNIVERSITY, INDORE
DEPARTMENT OF CIVIL ENGINEERING

OU/CE/BOS/8/2019

Date: - 26/08/2019

Sub: Meeting of the Board of Studies for Civil Engineering Department

Respected Sir,

I am happy to inform you that the Meeting of Board of Studies is scheduled to be held as under:

Day & Date : Saturday, 31st August, 2019
Time : 12:30 p.m.
Venue : CE-Department, Oriental University, Indore

The Agenda for the Meeting is to change scheme as per UGC Guideline for batch 2018-19. Kindly make it convenient to attend this important meeting.

I shall be grateful to know what arrangements you would like me to make for your comfortable journey.

With regards,

Yours faithfully,

Meshram
Dr. Kundan Meshram
H.O.D. Civil Dept.
Oriental University, Indore

ORIENTAL UNIVERSITY INDORE

DEPARTMENT OF CIVIL ENGINEERING

OU/CE/BOS/10/2019/05

Date:-6/08/2019

To,

Prof. H. S. Goliya
Associate Professor CE-AMD,
SGSITS, Indore

Subject: - Nominated member of Board of Studies.

It gives me an immense pleasure to inform you that you have been nominated and co-opted to be a distinguished member of The Board of Studies in the department of Civil Engineering of this university.

The Board will review/revise and update the syllabi of various courses run by the above mentioned Department as and when required.

Thanking you and with warm regards,

Meshrum
Head of the Department
Civil Engineering,
Oriental University, Indore.

ORIENTAL UNIVERSITY INDORE

DEPARTMENT OF CIVIL ENGINEERING

OU/CE/BOS/10/2019/05

Date:-6/08/2019

To,

Dr. Vandana Tare,
Dean (R&D) CE-AMD,
SGSITS, Indore

Subject: - Nominated member of Board of Studies.

It gives me an immense pleasure to inform you that you have been nominated and co-opted to be a distinguished member of The Board of Studies in the department of Civil Engineering of this university.

The Board will review/revise and update the syllabi of various courses run by the above mentioned Department as and when required.

Thanking you and with warm regards,

Meshram
Head of the Department
Civil Engineering,
Oriental University, Indore.

ORIENTAL UNIVERSITY INDORE

DEPARTMENT OF CIVIL ENGINEERING

OU/CE/BOS/10/2019/05

Date:-6/08/2019

To,

Mr. M. L. Khalotiya,
Assistant Engineer,
MPPHC, Indore.

Subject: - Nominated member of Board of Studies.

It gives me an immense pleasure to inform you that you have been nominated and co-opted to be a distinguished member of The Board of Studies in the department of Civil Engineering of this university.

The Board will review/revise and update the syllabi of various courses run by the above mentioned Department as and when required.

Thanking you and with warm regards,

Mishra

Head of the Department
Civil Engineering,
Oriental University, Indore.

ORIENTAL UNIVERSITY, INDORE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

OU/EX/BOS/1/2018

Date: - 22/01/2018

MINUTES OF MEETING OF BOARD OF STUDIES

The Chairman Board of Studies inaugurated the meeting with the welcome of member from various places. The following points were discussed:

1. Review and verification of Scheme & syllabus for the B.Tech 4th, semesters for CBCS in Batch 2016-17 was done.

Above point under the agenda were already covered and so the meeting was concluded.



Dr. Pragya Nema

Chairman
Board of Studies

All Members:

Dr. Sandeep Bhongade



Mr. Rakesh Singh Lodhi



Ms. Neha Thakur



Mr. Ankush Yadav





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Department of Electrical & Electronics Engineering

Date: 22/01/18

MINUTES OF BOARD OF STUDIES MEETING

A meeting of Board of Studies of Electrical & Electronics Engineering was held on 22/01/18 at 12.30 pm in the Department of Electrical & Electronics Engineering, Oriental University, Indore regarding the approval of Scheme and Syllabus for B.Tech. Electrical & Electronics-IV sem to VIII sem as per Choice Based Credit System (CBCS).

Following members were present in the meeting:

1. Dr. Sandeep Bhongade, Professor SGSITS, Indore(External Member)
2. Dr. Pragya Nema Professor,& Head (EX-Department), Oriental University, Indore
3. Mr. Rakesh Singh Lodhi, Assistant Professor, EXE, Oriental University, Indore
4. Mr. Ankush Yadav, Asst. Professor, EXE, Oriental University
5. Ms. Neha Thakur Asst. Professor, EXE, Oriental University

In the presence of mentioned members, a meeting of Board of Studies was held on 22/01/2018 at 12.30 PM in the Department of Electrical & Electronics Engineering of Oriental University and the following agenda was discussed:

Agenda: To review and rectify the Scheme & syllabus of B.Tech. EXE IV sem to VIII sem as per CBCS

The scheme and syllabus of B.Tech Electrical & Electronics Engineering-IV sem to VIII sem as per Choice Based Credit System was prepared by the committee members and presented before board of studies.


Agenda: To review Academic Performance of Department

Electrical & Electronics Engineering department review about technical paper published by faculty members of department and result analysis of year 2017-18.

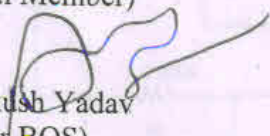
Agenda: To review new Guide list for M.Tech Research Scholar

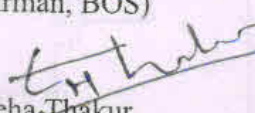
Electrical & Electronics Engineering department prepared new M.Tech Guide list for session 2017-18.


Dr. Sandeep Bhongade
(External Member)


Dr. Pragya Nema
(Chairman, BOS)


Mr. Rakesh Singh Lodhi
(Member BOS)


Mr. Ankush Yadav
(Member BOS)


Ms. Neha Thakur
(Member BOS)

Copy to:

- 1) Registrar, Oriental University, Indore.
- 2) All members of EXE Department of Oriental University.
- 3) Prof Sandeep Bhongade , SGSITS, Indore (External Member)

ORIENTAL UNIVERSITY, INDORE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

OU/EX/BOS/1/2018

Date: - 22/01/2018

Sub: Meeting of the Board of Studies for Ex-Department

Respected Sir,

I am happy to inform you that the Meeting of Board of Studies is scheduled to be held as under:

Day & Date : Monday, the 22nd January, 2018
Time : 12:30 p.m.
Venue : EX-Department, Oriental University Campus, Indore

The Agenda for the Meeting is to change scheme as per UGC Guideline for batch 2016-17. Kindly make it convenient to attend this important meeting.

I shall be grateful to know what arrangements you would like me to make for your comfortable journey.

With regards,

Yours respectfully,



Dr. Pragya Nema
H.O.D. EX-Dept.
Oriental University, Indore

To:
All members of the Board of Studies

Agenda

1. To review the approved scheme & syllabus of B.Tech 4th Semester for CBCS for batch 2016-17.

Oriental University, Indore
Scheme of Examination
Bachelor of Technology (B. Tech.) – Electrical & Electronics Engineering

IV-Semester:
As per CBCS Guidelines of UGC (effective from session 2016-17)

S. No.	Course Category	Subject Code	Subject Name & Title	Maximum Marks Allotted							Credits Allotted Subject	Total Credits			
				Theory Slot			Practical Slot						Total marks		
				End Sem.	Mid Sem. MST (Two tests average)	Quiz, Assignment	End Sem	Lab work & session 1	Term Assignment / quiz						
1	FC	BTEX-401	Energy, Environment, Ecology & Society	60	30	10	0	0	0	0	100	L	T	P	0
2	DCC	BTEX-402	Electrical and Electronics Material	60	30	10	0	0	0	100	3	1	0	0	4
3	DCC	BTEX-403	Digital Electronics Logic Design-I	60	30	10	10	20	0	150	3	1	0	0	4
4	DCC	BTEX-404	Electrical Machine -I	60	30	10	10	20	20	150	3	1	2	0	5
5	DCC	BTEX-405	Electronic Devices and Circuits - II	60	30	10	10	20	20	150	3	1	2	0	5
6	DCC	BTEX-406	Electrical Engineering Simulation Lab -I	0	0	0	10	20	20	50	3	1	2	0	5
7	MLC	BTEX-407	Self Study (Internal Assessment)	0	0	0	0	0	50	50	0	0	2	0	01
8	MLC	BTEX-408	Seminar / Group Discussion	0	0	0	0	0	50	50	0	0	2	0	01
TOTAL				300	150	50	40	80	180	50	15	5	12	26	01*

Note: 1) * BTEX-407 and BTEX-408 there will be no examination and credits will be awarded only on the basis of internal assessment.
 2) FC: Foundation Course and DCC: Departmental Core Course and MLC: Mandatory Learning Course

E: Lecture
 T: Tutorial
 P: Practical

[Handwritten Signature]

Electrical & Electronics Engineering,

IV-Semester

. BTEX-401

Energy, Environment, Ecology & Society

Unit -I Energy- Sources of Energy :

Renewable & Non Renewable, Fossil fuel, Biomass Geothermal, Hydrogen, Solar, Wind, hydal, nuclear sources.

Unit -II Ecosystem – Segments of Environment:

Atmosphere, hydrosphere, Lithosphere, biosphere. Cycles in Ecosystem – Water, Carbon, Nitrogen. Biodiversity: Threats and conservation,

Unit -III Air Pollution & Sound Pollution - Air Pollution:

Air pollutants, classification, (Primary & secondary Pollutants) Adverse effects of pollutants. Causes of Air pollution chemical, photochemical, Green house effect, ozone layer depletion, acid Rain. Sound Pollution: Causes, controlling measures, measurement of sound pollution (deciblage), Industrial and non – industrial.

Unit -IV Water Pollution– Water Pollution:

Pollutants in water, adverse effects. Treatment of Domestic & Industrial water effluent. Soil Pollution – Soil Profile, Pollutants in soil, their adverse effects, controlling measures.

Unit -V Society, Ethics & Human values:

Impact of waste on society. Solid waste management Nuclear, Thermal, Plastic, medical, Agriculture, Domestic and e-waste). Ethics and moral values, ethical situations, objectives of ethics and its study . Preliminary studies regarding Environmental Protection Acts , introduction to value education, self exploration, sanyam & swasthya.

References:

1. Harris, CE, Prichard MS, Rabin's MJ, "Engineering Ethics"; Cengage Pub.
2. Rana SVS ; "Essentials of Ecology and Environment"; PHI Pub.
3. Raynold, GW "Ethics in information Technology"; Cengage.
4. Svakumar; Energy Environment & Ethics in society; TMH
5. AK De "Environmental Chemistry"; New Age Int. Publ.
6. BK Sharma, "Environmental Chemistry" ; Goel Publ. House.
7. Bala Krishnamoorthy; "Environmental management"; PHI
8. Gerard Kiely, "Environmental Engineering" ; TMH
9. Miller GT JR; living in the Environment Thomson/cengag

ORIENTAL UNIVERSITY, N. DORE

Semester IV

012 scheme

Branch- Electrical & Electronics Engineering

Subject wise distribution of marks and corresponding credits

S. No	Subject Code	Subject Name & Title	Maximum Marks Allotted						Total Marks	Credits Allotted Subject wise	Total Credits	Remark
			Theory Slot			Practical Slot						
			End Sem.	Mid Sem. MST (Two tests average)	Quiz, Assignment	End Sem	Term work Lab work & sessional	Assignment/ quiz				
1	BT-401	Mathematics -III	70	20	10	-	-	-	100	L 3 T 1 P -	04	
2	BTEX-402	Electrical and Electronics Material	70	20	10	-	-	-	100	3 1 -	04	
3	BTEX-403	Digital Electronics Logic Design -I	70	20	10	30	10	10	150	3 1 2	06	
4	BTEX-404	Electrical Machine -I	70	20	10	30	10	10	150	3 1 2	06	
5	BTEX-405	Electronic Devices and Circuits - II	70	20	10	30	10	10	150	3 1 2	06	
6	BTEX-406	Electrical Engineering Simulation Lab -I	-	-	-	30	10	10	50	0 0 2	02	
7	BTEX-407	Self Study (Intern Assessment)	-	-	-	-	-	-	50	0 0 2	02	Grand Total
8.	BTEX-408	Seminar / Group Discussion (Internal Assessment)	-	-	-	-	-	-	50	0 0 2	02	
		Total	350	100	50	120	40	140	800	15 5 12	32	800

MST: Mid Semester Tests Taken at Least twice per Semester

L: Lecture - T: Tutorial - P: Practical

[Signature]

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ORIENTAL UNIVERSITY, INDORE

BT-401(Engineering Mathematics-III)

Unit I

Functions of complex variables : Analytic functions, Harmonic Conjugate, Cauchy-Riemann Equations, Line Integral, Cauchy's Theorem, Cauchy's Integral Formula, Singular Points, Poles & Residues, Residue Theorem , Application of Residues theorem for evaluation of real integrals

Unit II

Errors & Approximations, Solution of Algebraic & Trancedental Equations (Regula Falsi , Newton-Raphson, Iterative, Secant Method), Solution of simultaneous linear equations by Gauss Elimination, Gauss Jordan, Crout's methods, Jacobi's and Gauss-Siedel Iterative methods

Unit III

Difference Operators, Interpolation (Newton Forward & Backward Formulae, Central Interpolation Formulae, Lagrange's and divided difference formulae), Numerical Differentiation and Numerical Integration.

Unit IV

Solution of Ordinary Differential Equations(Taylor's Series, Picard's Method, Modified Euler's Method, Runge-Kutta Method, Milne's Predictor & Corrector method), Correlation and Regression.

Unit V

Fourier Transform:Definition and properties of Fourier transform,Sine and Cosine transform. Z-transform .Testing of Hypothesis :Students t-test, Fisher's z-test, Chi-Square Method

References:

- (i) Numerical Methods using Matlab by J.H.Mathews and K.D.Fink, P.H.I.
- (ii) Numerical Methods for Scientific and Engg. Computation by MKJain, Iyengar and RK Jain, New Age International Publication
- (iii) Mathematical Methods by KV Suryanarayan Rao, SCITECH Publuication
- (iv) Numerical Methods using Matlab by Yang,Wiley India
- (v) Pobability and Statistics by Ravichandran ,Wiley India
- (vi) Mathematical Statistics by George R., Springer
- (vii) Higher Engineering Mathematics by B. S. Grewal
- (viii)Advanced Engineering Mathematics by Erwin Kreyszig

K. S. G.

Sachin Wani

(Asst. Prof.) Mathematics

Praveen Panthia
(Praveen Panthia)

ORIENTAL UNIVERSITY

Department of Mechanical Engineering

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3295651**

Date: 15/07/19

MINUTES OF BOARD OF STUDIES MEETING

A meeting of Board of Studies of Mechanical Engineering was held on 15/07/19 at 11.00 am in the Department of Mechanical Engineering, Oriental University, Indore.

Following members were present in the meeting:

1. Dr. Ashok Kr. Gupta, MD Falodi Garments, Indore (Industrial Representative)
2. Prof. Hari Sharan Sahu, MIT, Bhopal (RGPV, Bhopal) (Representative from other university)
3. Dr. Mohit Maheshwarkar , HoD-ME, Oriental University, Indore
4. Mr. Kartik Upadhyay, Asstt. Professor, ME, Oriental University
5. Mr. S. N. Dubey, Asstt. Professor, ME, Oriental University
6. Dr. Tanmay Kasbe, Asst. Prof., Department of CS, Oriental University

In the presence of mentioned members, a meeting of Board of Studies was held on 15/07/19 at 11.30 AM in the Department of Mechanical Engineering of this University and the following agenda was discussed:

Agenda:

1. Academic Activities
2. Research Activities
3. Award/Achievements
4. Expert Lecture
5. Amendments in Existing Ordinance
6. Result semester wise
7. Confirmation of Passed out students for award of degree/ diploma
8. Syllabus changes in B. Tech and M. Tech classes for Even semester examinations

1) Academics Activities

a) Research Activities (Research Paper Publications (Jan to July, 2019): 01

- Publication of research paper of Dr. Mohit Maheshwarkar in International Journal of Knowledge Management Studies, Inderscience Publications.

b) Achievements of the Department: NIL

c) Workshops/ Seminars

- Workshop on Application of Hydraulic & Pneumatic Technology by Mr. T. S. Bedi, CRISP Indore was organized on 26th February, 2019 in which 40 students participated. Time of event was 11.00 am to 01.20 pm.
- A seminar on Introduction to Solidworks software by Mr. Abhishek Tripathi was organized on 11th April, 2019 from 12.00 pm to 01.20 pm in which 40 students participated.

d) Expert Lectures

- Expert lecture by Dr. Ashok Kr. Gupta on 27th August, 2019

The lecture was based on Considerations in engineering design which was attended by students of B. Tech Mechanical Engineering. Total number of students participated were 35. Time of expert lecture was: 11.00 am to 01.10 pm.

e) Industrial Visits

- Industrial visit at Gabriel India Limited, Dewas on 11th September, 2019

The visit was provided to the students of Mechanical Engineering considering importance of shock absorbers, which the firm manufactures. Total number of students participated were 33. Time of expert lecture was: 11.00 am to 03.00 pm.

Other Activities

- Plantation on 22nd August, 2019

During plantation around 20 plants were planted in the presence of Registrar, Oriental University. Time of event was 12.00 pm to 01.20 pm. Total number of students participated is 32.

- Technical Quiz for engineering students on 18th September, 2019

During technical quiz questions from different streams of engineering were asked to the students belonging all the streams of engineering at Oriental University, Indore. Time of quiz was 02.00 pm to 03.00 pm, and the total number of students participated was 48.

2) Amendments in Existing ordinance

NIL

Exam Results (June-2019)

S. No	Course	Students appeared	Students passed	Pass with distinction	Pass with first division	Pass with second division	No of students failed
1	M.TECH TE (II)	NIL	NIL	NIL	NIL	NIL	NIL
2	B.TECH ME (IV)	20	17	00	03	14	03
3	B.TECH ME (VI)	25	20	00	03	17	05
4	B.TECH ME (VIII)	26	26	00	04	22	00

Confirmation of Passed out students for award of degree:

S.No	Course	Students appeared	Students passed	Pass with distinction	Pass with first division	Pass with second division	No of students failed
1	B.TECH ME (VIII)	26	26	00	04	22	00
2	M.TECH TE (IV)	NIL	NIL	NIL	NIL	NIL	NIL


Proposed Activities for the session (Sept 2019 - March 2020)

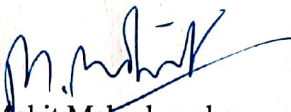
1. One day Workshop on Intellectual Property Rights on 12th October, 2019
2. Industrial Visit to National Steels and Agro Industries Limited in the month of November, 2019
3. Industrial visit to Indo German Tool Room, Indore in the month of November, 2019.


Syllabus changes in B. Tech and M. Tech classes for Even semester examinations

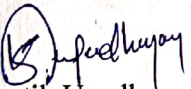
Syllabus changes are made in upcoming even semesters at UG and PG level. Following are the details of changes:


1. At UG level (B. Tech VIII semester), a new subject called *Employability Skills* is introduced; and
2. At PG level (M. Tech II semester), a new subject called *Refrigeration and Air Conditioning* is introduced, and a subject Design of *Power Generation Systems* is shifted to elective category.



Dr. Ashok Kr. Gupta
(External Member)


Dr. Mohit Maheshwarkar
(Chairman, BOS)


Prof. Hari Sharan Sahu
(Member from other
University)


Mr. Kartik Upadhyay,
(Member BOS)


Mr. S. N. Dubey
(Member BOS)


Dr. Tanmay Kasbe
(Member BOS)

M.Tech Thermal Engineering Scheme (from Jan-2020)

IIInd Semester

S.No.	Subject Code	Subject Name	Periods per week			Credits	Maximum Marks (Theory Slot)			Maximum Marks (Practical Slot)			Total Marks
			L	T	P		End Sem. Exam.	Tests (Two)	Assignments /Quiz	End Sem. Practical /Viva	Practical Record /Assignment /Quiz/Presentation		
1.	MTTE 201	Instrumentation & Control	3	1	-	4	70	20	10	-	-	100	
2.	MTTE 202	Thermal Power Plant Engg.	3	1	-	4	70	20	10	-	-	100	
3.	MTTE 203	Theory and Design of Heat Exchangers.	3	1	-	4	70	20	10	-	-	100	
4.	MTTE 204	Refrigeration and Air Conditioning	3	1	-	4	70	20	10	-	-	100	
5.	MTTE 211-215	Elective -II	3	1	-	4	70	20	10	-	-	100	
6.	MTTE 206	Thermal Engg Lab - II	-	-	6	6	-	-	-	90	60	150	
7.	MTTE 207	Seminar - II	-	-	6	6	-	-	-	90	60	150	
		Total	15	5	12	32	350	100	50	180	120	800	

L: Lecture - T: Tutorial - P: Practical

Elective - II

MTTE 211 - Theory and Design of Gas Turbines

MTTE 212 - Wind Energy and Its Utilization

MTTE 213 - Reliability, Availability & Maintainability Engineering

MTTE 214 - Numerical Heat Transfer

MTTE215 - Design of Power Generation Systems

MTTE204: REFRIGERATION AND AIR CONDITIONING

UNIT 1 Introduction: Thermodynamics Properties of pure and Mixed Refrigerants and their selection. Vapor Compression System, Actual Vapor Compression System, Deviation from theoretical System, Multi-pressure System with Flash Chamber and Inter Cooling. Cascade system.

UNIT 2 Refrigeration Equipment: Compressors, Analysis and Thermal Design of Reciprocating, Centrifugal and Screw Compressors, Performance Characteristics & Capacity control. Expansion Devices: Capillary, Automatic and Thermostatic Expansion Valve. Other Equipments: Liquid Receiver, Oil Separators, Liquid Line Strainers, Driers, Liquid Sub coolers. **Condenser & Evaporator:** Types, performance & Their Controls.

UNIT 3 Thermodynamics of Refrigerant: Absorbent Combinations, Analysis of simple and Industrial Vapor Absorption system using various working fluids Solar Powered Refrigeration & Heat Pump.

UNIT 4 Psychrometrics: Calculation of psychrometric properties of air by table and charts; psychrometric processes: sensible heating and cooling, evaporative cooling, cooling and dehumidification, heating and humidification, mixing of air stream, sensible heat factor; principle of air conditioning, requirements of comfort air conditioning, ventilation standards, infiltrated air load, fresh air load human comfort, effective temperature & chart, heat production & regulation of human body,

UNIT 5 Air conditioning loads: calculation of summer & winter air conditioning load, bypass factor of coil, calculation of supply air rate & its condition, room sensible heat factor, grand sensible heat factor, effective sensible heat factor, dehumidified air quantity. Problems on cooling load calculation. Air distribution and ventilation systems

Books:

1. Refrigeration & Air Conditioning by W.F.Stoecker.
2. Refrigeration & Air Conditioning by C.P.Arora.
3. Refrigeration & Air Conditioning by Manohar Prasad.

MTTE-215 DESIGN OF POWER GENERATION SYSTEMS

A.

Stator Design :

Design of Casing & Diaphragms: Design and construction of diaphragms, diaphragms considering flow analysis. Casing, steam sealing systems; labyrinth, glands, packing & bearing, Design and RAM Analysis of steam turbine components.

Rotor Design:

Rotor Stresses & Design:

Design of turbine rotors. Rotors of constant strength and of constant thickness rotors with hyperbolic profile. Temperature stresses in rotors, graphical method of modification of rotor profile, mathematical and finite difference methods of calculating stresses in rotors of given profile. Wheel drums, stress analysis of drums, type of rotors, stresses at slots.

Turbine Rotor Vibration:

Critical speeds, balancing of rotors. Stress analysis of steam turbine diaphragm components. Diaphragms of constant and variable thickness. Blade section, centrifugal stresses in blades, gas bending stresses, blade vibrations, analysis of factors causing blade vibrations. Experimental techniques for the study of blade vibrations. Numerical analog and other experimental methods for studying blade stresses.

B.

Steam Turbine Systems:

Design procedure for steam turbine stages. Blade erosion, Binary Vapour Cycle and Cogeneration. System of turbine governing, Overspeed tripping, design of the lubricating system.

Engines Systems:

(a) **Fuel Systems:** S.I. Engine, CI Engines and Gas Turbines

(b) **Combustion:** S.I. and C.I. Engine Combustion, and Gas Turbines & Combustion chamber design.

Trends in Engine Technology:

(a) **Gas Exchange Process:** Valve Operation & Manifolds. Valves Configuration, Variable Valve Actuation, Valve failure and Maintenance. Induction Process & Exhaust Process & Systems.

(b) **Alternative Technology:** Alternative power Sources: Fuel cells, Hybrid Engine Technology, Rotary Engines etc. Fuels: Use of Alternative Fuels.

Books:

1. Steam Turbines - R. Yadav
2. Steam Turbines - Keorton
3. IC Engines Fundamentals - J.B. Heywood
4. Introduction to IC Engines - Richard Stone
5. Power Generation Handboojk - Philip Kiameh
6. Internal Combustion Engine Handbook - Richard Van Basshuysen, Fred Schaefer.

M. Tech Thermal Engineering Scheme (till December, 2019)

IIInd Semester

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4.	MTTE 204	Design of Power Generation Systems	3	1	-	4	70	20	10	-	-	100
5.	MTTE 211-214	Elective -II	3	1	-	4	70	20	10	-	-	100
6.	MTTE 206	Thermal Engg Lab - II	-	-	6	6	-	-	-	90	60	150
7.	MTTE 207	Seminar - II	-	-	6	6	-	-	-	90	60	150
		Total	15	5	12	32	350	100	50	180	120	800

L: Lecture - T: Tutorial - P: Practical
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 MTTE 212 - Wind Energy and Its Utilization
 MTTE 213 - Reliability, Availability & Maintainability Engineering
 MTTE 214 - Numerical Heat Transfer

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4. Introduction to IC Engines - Richard Stone
5. Power Generation Handboojk - Philip Kiameh
6. Internal Combustion Engine Handbook - Richard Van Basshuysen, Fred Schaefer.
7. Journal of Engineering for Gas Turbines and Power - ASME Pub

Proposed Subject Scheme

(from Jan-2019)

Oriental University, Indore (MP)

Semester VIII

Branch: Mechanical Engineering

Course: - B Tech

SCHEME

S.No	Subject Code	Subjects	Maximum Marks Allotted						Credits Allotted Subject wise	Total Credits	Remark			
			Theory Slot			Practical Slot		Total Marks				Period per week		
			End Sem.	Mid Sem. MST (Two tests average)	Quiz, Assignment	End Sem	Term work		L	T		P		
							Lab work & sessional	Assignment/ quiz						
1	BTME-801	Elective III	60	30	10	-	-	-	100	3	1	-	4	
2	BTME-802	Refrigeration & Air Conditioning	60	30	10	10	20	20	150	3	1	2	5	
3	BTME-803	Machine Design III	60	30	10	10	20	20	150	3	1	2	5	
4	BTME - 804	Computer Integrated Manufacturing	60	30	10	10	20	20	150	3	1	2	5	
5	BTME - 805	Major Project	-	-	-	120	40	40	200	0	0	10	5	
	BTME - 806	Seminar / Group Discussion (Internal)	-	-	-	-	-	20	20	0	0	2	1	
8	BTME-807	Employability Skills	-	-	-	-	-	30	30	0	0	2	1	Grand Total
		Total	240	120	40	150	100	150	800	12	4	10	26	800

MST: Mid Semester Tests Taken at Least twice Per Semester L: Lecture -T: Tutorial -P: Practical

BTME- 801 – Elective III

- BTME 801(A) Energy Management & Audit
- BTME 801 (B) Tools Design and Machine Tools
- BTME 801 (C) Reliability and Maintenance Engineering
- BTME 801 (D) Simulation & Process Modeling

Proposed Subject Syllabus

(from Jan-2019)

BTME 807: Employability Skills

Unit I: Basics of Management Concepts

Type of organizations, managerial skills, responsibilities of a Mechanical Engineer, maintenance practices, overview of Industrial sectors, Job opportunities after graduation.

Unit II: Technical Writings and Software

Revision of MS Word, Power point and Excel, Procedures of writing technical letters, filling quotations and tenders, MRP and ERP software, SAP.

Unit III: Basic Production and Measurement Practices

Elementary ideas of manufacturing practices and machine tools, Metrology measurements, measurements of linear and angular dimensions, gauges, RPM, Mechanical and thermal properties, pressure, temperature, , force, torque, work, power, Humidity.

Unit IV: Quality Aspects

Different charts in SQC, sampling procedures.

Unit V: Advancements in Mechanical Engineering

CNC, PLC and ROBOT based Concepts: Types, basic parts, simple examples of programming.

Reference Books:

1. K. Aswathappa and K. Shridhara Bhatt, Production and Operations Management, Himalaya Publication
2. Chary SN, Production and Operations Management, TMH
3. Rao PN; Manufacturing Tech- Foundry, forming welding; TMH
4. Rao PN; Manufacturing Tech- Metal cutting and machine tools; TMH
5. Chapman; Workshop Technology
6. Microsoft MS word Manual, 2013.
7. Groover MP; Automation, Production Systems & CIM; P.H.I.
8. Magazine on Manufacturing Technology.

Semester VIII

Oriental University, Indore (MP)

Branch Mechanical Engineering

Course: - B. Tech

SCHEME (2019-20)

S.No	Subject Code	Subjects	Maximum Marks Allotted						Credits Allotted Subject wise	Total Credits	Remark			
			Theory Slot			Practical Slot						Total Marks		
			End Sem.	Mid Sem. MST (Two tests average)	Quiz, Assignment	End Sem	Term work							
							Lab work & sessional	Assignment/ quiz	Period per week					
						L T P								
1	BTME-801	Elective III	60	30	10	*	*	*	100	3	1	-	4	
2	BTME-802	Refrigeration & Air Conditioning	60	30	10	10	20	20	150	3	1	2	5	
3	BTME-803	Machine Design III	60	30	10	10	20	20	150	3	1	2	5	
4	BTME - 804	Computer Integrated Manufacturing	60	30	10	10	20	20	150	3	1	2	5	
5	BTME - 805	Major Project				120	40	40	200	0	0	10	5	
8	BTME - 806	Seminar / Group Discussion (Internal)						50	50	0	0	4	2	Grand Total
		Total	240	120	40	150	100	150	800	800	12	4	26	800

MST: Mid Semester Tests Taken at Least twice Per Semester L: Lecture -T: Tutorial -P: Practical

MTME- 801 – Elective III

- BTME 801(A) Energy Management & Audit
- BTME 801 (B) Tools Design and Machine Tools
- BTME 801 (C) Reliability and Maintenance Engineering
- BTME 801 (D) Simulation & Process Modeling