

# A.M. REDDY MEMORIAL COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Approved by AICTE New Delhi, Permanently Affiliated to JNTU - Kakinada, Accredited by NAAC

Recognized by UGC 2(f), An ISO Certified 9001:2015

Vinukonda Road, Petturivaripalem, Narasaraopet, Palnadu District, Andhra Pradesh - 522 601.



## DEPARTMENT OF DEPARTMENT OF STRUCTURAL DESIGN

### CONVENING ORDER - BOARD OF STUDIES

The Board of Studies is the basic constituent of the academic system of an autonomous college. Its functions will include framing the syllabi for various courses, reviewing and updating syllabi from time to time, introducing new courses of study, determining details of continuous assessment, recommending panels. of examiners under the semester system, etc. The Board of studies is constituted with the following members:

S. No	Name of the Member	Designation/occupation	category
1	Dr. K. Sreekar Chand	Head of the Department	Chairman
2	Dr. B.Krishna Rao	Professor, CIVIL Department, UCEK, JNTUK Kakinada	University Nominee
3	Dr.D.Srinivas	Associate Professor & HOD, Department of Architecture, School Of Planning & Architecture Vijayawada	Subject experts outside parent university
4	Dr. T. Chandra Sekhar Rao	Professor, HoD of Dept. of CE, Bapatla Engineering College, Bapatla	
5	Mr. N. Dilip Kumar	Deputy Project Manager in Projects DEC infra india private limited	Industrialist
6	Mr. Sk.M.Subhani	Asst. Professor	Faculty Member
7	Mrs.G.Madhavi	Asst. Professor	Faculty Member
8	Mrs. P. Madhuri Swaraj	Government Employee, State Government of A.P	Alumni Member

P.T.O.



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**Term:** The term of the nominated members shall be three years. **Meetings:** The Board of Studies shall meet at least twice a year. **Functions:**

The Board of Studies of a structural design in Civil Department in the college shall:

- Prepare syllabi for various courses keeping in view the objectives of the college, interest of the stakeholders and national requirement for consideration and approval of the Academic Council;
- Suggest methodologies for innovative teaching and evaluation techniques;
- Suggest panel of names to the Academic Council for appointment of examiners;
- Coordinate research, teaching, extension and other academic activities in the Department! College.

HOD  
Dept. Of CE

Copy to:  
1. Principal.  
2. IQAC

HEAD OF THE DEPARTMENT  
CIVIL ENGINEERING  
A.M. REDDY MEMORIAL COLLEGE OF ENGG & TECH  
PETLURIVARIPALEM  
Narasaraopet (Md.), Guntur (Dt.).



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AMR/TE/BOS/2025-26/Circular/1

Date: 03/09/2025

## Meeting Notice

Greetings from A.M. Reddy Memorial College of Engineering and Technology we request you to participate in Structural design in Civil Department Board of Study meeting scheduled on 03<sup>rd</sup> September 2025 at 03.00 PM through online (Google Meeting)

S. No	Name of the Member	Designation/occupation	category
1	Dr. K. Sreekar Chand	Head of the Department	Chairman
2	Dr. B.Krishna Rao	Professor, CIVIL Department, UCEK, JNTUK Kakinada	University Nominee
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## Agenda of the meeting-

- Introducing the members of Board of Studies.
- Finalization of AMR- 24 CBCS (Choice Based Credit System) – Syllabus for II year III Sem & IV Sem which are related to **SD** Department.
- Course structure modifications (If any)
- Discuss on Approval for II-year M.Tech III Sem and IV Sem.
- Any other matters.

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AMR/TE/BOS/2025-26/MOM/1

Date : 05-09-2025

## DEPARTMENT OF STRUCTURAL DESIGN

### MINUTES OF MEETING – BOARD OF STUDIES (BOS)

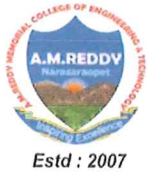
The Meeting of the Board of Studies of Structural design in Civil Department was held on 05<sup>th</sup> September 2025 at 03.00 PM through online (Google Meeting Platform). The following members were attended the online meeting.

S. No	Name of the Member	Designation/occupation	Category	Signature
1	Dr. K. Sreekar Chand	Head of the Department	Chairman	
2	Dr. B.Krishna Rao	Professor, CIVIL Department, UCEK, JNTUK Kakinada	University Nominee	
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The Meeting began with chairman, Board of studies extending a warm welcome to all the members of participating in the meeting.

The following points were discussed and approved during the meeting

1. The following proposed AMR 24 Course Structure and the detailed syllabus of II-I, II-II were presented, discussed and approved.



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<b>COURSES (SD)</b>		
<b>II Year – III SEM</b>		
<b>S.No.</b>	<b>Title</b>	<b>Credits</b>
1	Design of Pre-Stressed Concrete Structures	3
2	Construction Management	3
3	Dissertation Phase-I / Industrial Project	-
<b>II SEM - TOTAL CREDITS</b>		<b>6</b>
<b>COURSES (SD)</b>		
<b>II Year – IV SEM</b>		
<b>S. No.</b>	<b>Title</b>	<b>Marks</b>
1	Dissertation Phase II (Continued from III Semester)	100
<b>IV SEM - TOTAL MARKS</b>		<b>100</b>



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The syllabus for Design of Pre-Stressed Concrete Structures, Construction Management Syllabus (AMR-24), Dissertation Phase-I / Industrial Project, Dissertation Phase II (Continued from III Semester) and has been approved by the Board of Studies.

**The following points were suggested for future possible implementations: Prescribed Textbooks:**

Advised to add recent prescribed textbooks or updated editions for the course.

**References:**

More references are recommended to be added for various topics.

**Information Sharing:**

All the updated information should be shared at least 15 days before the next Board of Studies (BOS) meeting.

The BOS chairman concluded the session and informed that the suggested points will be implemented and mail the same for approval and requested the experts to approve and ended with Vote of Thanks.



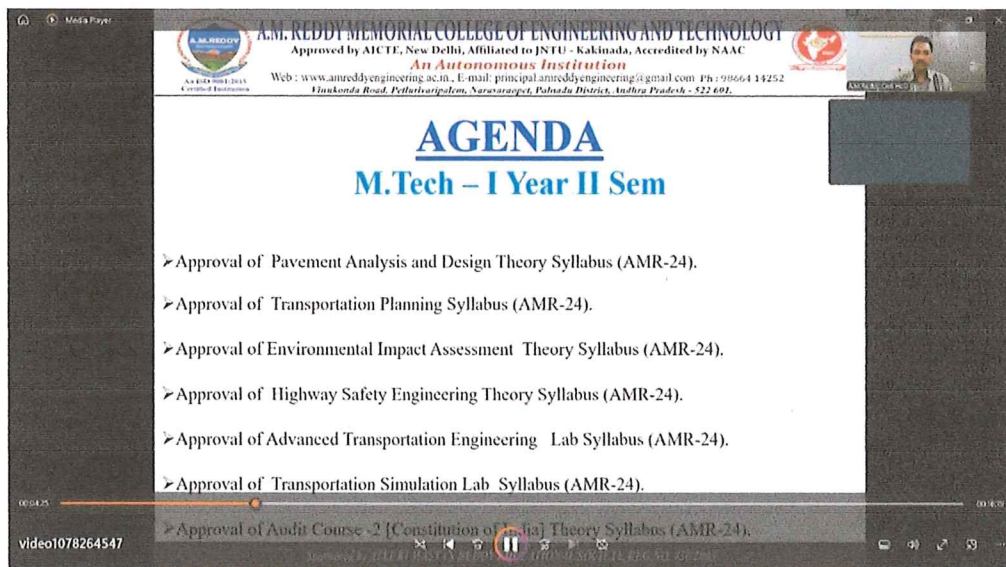
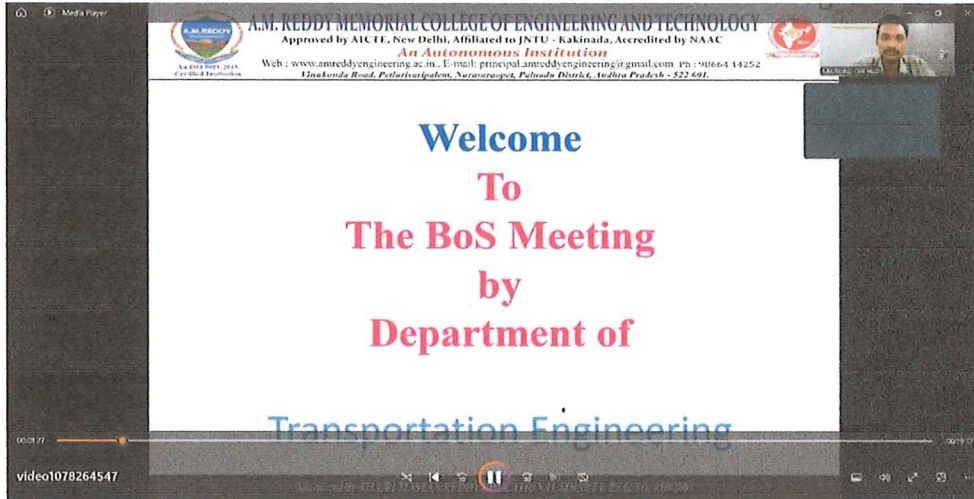
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Chairman

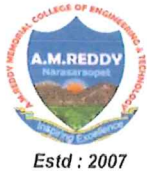
BoS – Dept. of CE

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Narasaraopet (Md.), Guntur (D)



## ANNEXURE -1

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### AMR- 24

## Design of Pre-stressed Concrete structures Theory Syllabus

### UNIT :I

Introduction – Prestressing Systems – Pretensioning Systems – Postensioning Systems – High Strength Steel and Concrete - Analysis of Prestress - Resultant Stresses at a Section – Pressure Line or Thrust Line – Concept of Load Balancing - Losses of Prestress – Loss Due to Elastic Deformation of Concrete – Shrinkage of Concrete – Creep – Relaxation of Stress in Steel – Friction – Anchorage Slip.

### UNIT :II

DEFLECTIONS OF PRESTRESSED CONCRETE MEMBERS : Importance of Control of Deflections – Factors Influencing Deflection – Short-term Deflections of Uncracked Members – Prediction of Long-time Deflections – Deflections of Cracked Members – Requirements of IS 1343-2012. Ultimate Flexural Strength of Beams: Introduction, Flexural theory using first principles – Simplified Methods – Ultimate Moment of Resistance of untensioned Steel

### UNIT: III

COMPOSITE CONSTRUCTIONS: Introduction, Advantages, Types of Composite Construction, Analysis of Composite beams- Differential shrinkage- Ultimate Flexural and shear strength of composite sections- Deflection of Composite Beams. Design of Composite sections

### UNIT: IV

PRESTRESSED CONCRETE SLABS: Types Of Prestressed Concrete Floor Slabs- Design of Prestressed Concrete One Way and Two Way Slabs. Prestressed Concrete Pipes and Poles : Circular prestressing- Types of Prestressed Concrete Pipes- Design of Prestressed Concrete Pipes - Prestressed Concrete Poles.

### UNIT :V

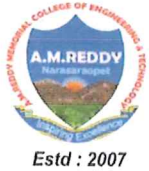
CONTINUOUS BEAMS: Advantage of Continuous Members – Effect of Prestressing Indeterminate Structures – Methods of Achieving Continuity – Methods of Analysis of Secondary Moments – Concordant Cable Profile – Guyon's Theorem. Redistribution of moments in a continuous beam. Anchorage Zone Stresses in Beams : Introduction, Stress distribution in End Block – Anchorage zone stresses –Magnet's method- Guyon's Method - Anchorage zone Reinforcement

### TEXT BOOKS

1. Prestressed Concrete, 6e by N. Krishna Raju, Mc Graw Hill Publishers
2. Prestressed Concrete by K. U.Muthu, PHI Learning Pvt Limited

### REFERENCES:

1. Prestressed Concrete Analysis and Design, Antone E. Naaman 2e, Techno Press 3000
2. Design of Prestressed Concrete- T. Y. Lin, Ned H. Burns 3e, Wiley Publications
3. Design of prestressed Concrete by E.G. Nawy
4. Prestressed Concrete by N. Rajagopalan, Narosa Publishing
5. IS1343 2012 Prestressed concrete Code of Practice



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## ANNEXURE -2

AMR- 24

### Construction Management Syllabus

L	T	P	C
3	0	0	3

#### UNIT: I

Management process- Roles. Management theories. Social responsibilities. Planning and strategic management. Strategy implementation. Decision making: tools and techniques – Organizational structure. Human resource management- motivation performance- leadership

#### UNIT: II

Classification of Construction projects, Construction stages, Resources- Functions of Construction Management and its Applications. Preliminary Planning- Collection of Data- Contract Planning – Scientific Methods of Management: Network Techniques in construction management - Bar chart, Gant chart, CPM, PERT- Cost & Time optimization

#### UNIT: III

Resource planning - planning for manpower, materials, costs, equipment. Labour -Scheduling - Forms of scheduling - Resource allocation. budget and budgetary control methods

#### UNIT: IV

Contract - types of contract, contract document, and specification, important conditions of contract – tender and tender document - Deposits by the contractor - Arbitration. negotiation - M.Book - Muster roll -stores

#### UNIT: V

Management Information System - Labour Regulations: Social Security - welfare Legislation - Laws relating to Wages, Bonus and Industrial disputes, Labour Administration - Insurance and Safety Regulations - Workmen's Compensation Act -other labour Laws - Safety in construction: legal and financial aspects of accidents in construction. occupational and safety hazard assessment. Human factors in safety. Legal and financial aspects of accidents in construction. Occupational and safety hazard assessment.

#### REFERENCE:

1. Ghalot, P.S., Dhir, D.M., Construction Planning and Management, Wiley Eastern Limited,1992.
2. Chitkara,K.K., Construction Project Management, Tata McGraw Hill Publishing Co, Ltd., New Delhi,998.
3. Punmia,B,C., Project Planning and Control with PERT and CPM, Laxmi Publications, New Delhi,1987.
4. Sengupta, B. &Guha, H, Construction Management and Planning by: Tata McGraw-hill publications.