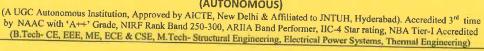


MALLA REDDY ENGINEERING COLLEGE

(AUTONOMOUS)





15th Board of Studies Meetings Academic Year 2021-22 (MR21 Regulations)

Mathematics - BOS





Maisammaguda, Dhulapally (Post Via Kompally), Secunderabad-500100 Ph. No. 040-65864982, 09348161125, e-mail: principal@mrec.ac.in, Website:www.mrec.ac.in





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Date: 17.07.2021

ORDER

Malla Reddy Engineering College (Autonomous) is a self-financed UGC-Autonomous Institution, Approved by AICTE and affiliated to Jawaharlal Nehru Technological University, Hyderabad, recognized under 2(f) &12 (B) of UGC Act 1956, Accredited by NAAC with Board of Studies which is responsible for its overall framing of schema and syllabus for various courses in the keeping the objectives of the department and college, interest of the stakeholders and national requirement for consideration and forwards to Academic Council for approval.

The Board of Studies Mathematics for the Academic Years 2021-22 to 2023-24 have been reconstituted as per the UGC guidelines with the following members.

	Name of the Member	Qualification	Phone no. & e-mail id	Subject Specializati	Position	Cotos
Chai	rman (Head of the Departme	nt concerned)	C-man rd	on	1 osmon	Category
	1	Assoc, Prof. & HOD,				
1	Dr Y Suresh Kumar	Department of Mathematics MREC(A)	Suresh.mscf@gmail.com	Mathematics	Chairman	Chairman
One e	xpert to be nominated by the	Vice-Chancellor of the Affiliatin	e University			
2	Ananatasatya Srinivas	Professor, JNTUH, Hyderabad.	9490745460, massrinivas@jntuh.ac.in,	Mathematics	Member	University Nominee
mee	subject experts from outside	the Parent University to be nomin	nated by the Academia Council			
	Dr.B Ravindra Reddy	Hyderabad,	9949567359, rbollareddy@gmail.com	Mathematics	Member	Subject Expe
	Dr. C Subrahmanya Sastry	Assoc. Professor, IIT, Hyderabad	9963128002, csastry@iith.ac.in	Mathematics	Member	Subject Exper
	Dr D. Srinivasacharya	Professor, NIT warangal	9849187249, dsc@nitw.ac.in	Mathematics	Member	Subject Exper
ne rep	resentative from industry/co	porate sector/allied area relating	to placement.			
	Dr V V Haragopal	Director (AI and ML), Aizant Global Analytics, Kompally, Hyderabad	9849083995, haragopalvajjha@ gmail.com	Statistics	Member	Industry Expert
e facı	alty of specialization.					
	Dr. G Rami Reddy	Professor, Dept_ of Mathematics	9949164505,	Mathematics	Member	Tonohin
		Asst. Professor, Dept of	dr.g.ramireddy76@gmail.com		Member	Teaching staff
_	Dr. P Sarada Devi	Asst. Professor, Dept. of Mathematics	7032693705, sarada.chakireddy@gmail.com	Mathematics	Member	Teaching staff
1	Mr. G Gangadhar	Asst. Professor, Dept. of Mathematics	9948941817, gangadharg001@gmail.com	Mathematics	Member	Teaching staff
posts	graduate meritorious alumnus	to be nominated by the principa				
- 1	As. G Deepika	Jr. Engineer, Hyderabad Road Development	l. 7032996233, deepikagujja01@gmail.com	B.Tech Civil Engineer	Member	Alumni





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Lr.No: MREC (A)/BOS-Mathematics: 2021-22/Invitation/01

12-07-2021

To
Dr. M A Srinivas
Professor & HOD
Department of Mathematics
JNTUH, Hyderabad.

Sir,

Sub: Meeting of the Board of Studies for Mathematics for the academic year 2021-22.

It is my pleasure to invite you to the meeting of the Board of Studies for Mathematics for the academic year 2021-22. The meeting will be conducted on 17^{th} July, 2021(Saturday) at 6.30 PM through online mode. We request you to make it convenient to attend the meeting.

AGENDA:

- 1. Review the syllabus of B.Tech for the academic year 2021-22.
- 2. Proposal/deciding the panel of examiners and valuators.
- 3. Any other issue with the permission of the chair.

Dr A Ramaswamy Reddy Director-MREC(A)

- 1. Registrar, JNTUH
- 2. P.A. to the Vice Chancellor, JNTUH
- 3. Director (AAC), JNTUH.



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Lr.No: MREC (A)/BOS-Mathematics: 2021-22/Invitation/02

12-07-2021

To Dr. C Subrahmanya Sastry Assoc. Professor, Department of Mathematics IIT, Hyderabad.

Sir,

Sub: Meeting of the Board of Studies for Mathematics for the academic year 2021-22.

It is my pleasure to invite you to the meeting of the Board of Studies for Mathematics for the academic year 2021-22. The meeting will be conducted on 17^{th} July, 2021(Saturday) at 6.30 PM through online mode. We request you to make it convenient to attend the meeting.

AGENDA:

- 1. Review the syllabus of B.Tech for the academic year 2021-22.
- 2. Proposal/deciding the panel of examiners and valuators.
- 3. Any other issue with the permission of the chair.

Dr A Ramaswamy Reddy Director-MREC(A)

- 1. Registrar, JNTUH
- 2. P.A. to the Vice Chancellor, JNTUH
- 3. Director (AAC), JNTUH.



(AUTONOMOUS)

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Lr.No: MREC (A)/BOS-Mathematics: 2021-22/Invitation/05

12-07-2021

To
Dr. B Ravindra Reddy
Assoc. Professor,
Department of Mathematics,
JNTUH, Hyderabad.

Sir,

Sub: Meeting of the Board of Studies for Mathematics for the academic year 2021-22.

It is my pleasure to invite you to the meeting of the Board of Studies for Mathematics for the academic year 2021-22. The meeting will be conducted on 17th July, 2021(Saturday) at 6.30 PM through online mode. We request you to make it convenient to attend the meeting.

AGENDA:

- 1. Review the syllabus of B.Tech for the academic year 2021-22.
- 2. Proposal/deciding the panel of examiners and valuators.
- 3. Any other issue with the permission of the chair.

Dr A Ramaswamy Reddy Director-MREC(A)

- 1. Registrar, JNTUH
- 2. P.A. to the Vice Chancellor, JNTUH
- 3. Director (AAC), JNTUH.



(AUTONOMOUS)

(An UGC Autonomous Institution approved by AICTE and affiliated to JNTU Hyderabad, Accredited by NAAC with 'A' Grade (II - cycle) NBA Accredited Programmes - UG (CE, EEE, ME, ECE & CSE) PG (CE - Structural Engg., EEE-Electrical Power Systems, ME - Thermal Engg.).

Lr.No: MREC (A)/BOS-Mathematics: 2021-22/Invitation/04

12-07-2021

To Dr. D Srinivasacharya Professor, Department of Mathematics, NIT Warangal

Sir,

Sub: Meeting of the Board of Studies for Mathematics for the academic year 2021-22.

It is my pleasure to invite you to the meeting of the Board of Studies for Mathematics for the academic year 2021-22. The meeting will be conducted on 17th July, 2021(Saturday) at 6.30 PM through online mode. We request you to make it convenient to attend the meeting.

AGENDA:

- 1. Review the syllabus of B.Tech for the academic year 2021-22.
- 2. Proposal/deciding the panel of examiners and valuators.
- 3. Any other issue with the permission of the chair.

Dr A Ramaswamy Reddy Director-MREC(A)

- 1. Registrar, JNTUH
- 2. P.A. to the Vice Chancellor, JNTUH
- 3. Director (AAC), JNTUH.



(AUTONOMOUS)

(An UGC Autonomous Institution approved by AICTE and affiliated to JNTU Hyderabad, Accredited by NAAC with 'A' Grade (II - cycle) NBA Accredited Programmes - UG (CE, EEE, ME, ECE & CSE) PG (CE - Structural Engg., EEE-Electrical Power Systems, ME - Thermal Engg.).

Lr.No: MREC (A)/BOS-Mathematics: 2021-22/Invitation/03

12-07-2021

To Prof. V V Haragopal Director (AI and ML), Aizant Global Analytics, Kompally, Hyderabad.

Sir,

Sub: Meeting of the Board of Studies for Mathematics for the academic year 2021-22.

It is my pleasure to invite you to the meeting of the Board of Studies for Mathematics for the academic year 2021-22. The meeting will be conducted on 17th July, 2021(Saturday) at 6.30 PM through online mode. We request you to make it convenient to attend the meeting.

AGENDA:

- 1. Review the syllabus of B.Tech for the academic year 2021-22.
- 2. Proposal/deciding the panel of examiners and valuators.
- 3. Any other issue with the permission of the chair.

Dr A Ramaswanry Reddy Director-MREC(A)

- 1. Registrar, JNTUH
- 2. P.A. to the Vice -Chancellor, JNTUH
- 3. Director (AAC), JNTUH.



MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda, Dhullapally, Secunderabad-500100

Department of Mathematics

17.07.2021

Board of Studies meeting held on 17.07.2021 at 06:30 PM

The Board of Studies meeting for the Department of Mathematics is convened on 17.07.2021 at 06:30 PM through online mode.

The Agenda of the meeting is as follows.

AGENDA

- 1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2020-21
- 2. Discussion and review of Mathematics subjects of B. Tech. MR21 regulations syllabus.
- 3. Suggestion and review of panel for Paper setters, and examiners for examinations.
- 4. Suggest methodologies for innovative teaching and evaluation techniques.
- 5. Suggestion of any activity related to research, teaching, extension and other academic activities in the department/college.
- 6. Delegation of power to the Chairman-BOS based on recommendations of the internal committee, for the inclusion and exclusion of any item as per requirements.
- 7. Approval of any other item with the permission of the Chairman.

Chairman – BOS- Mathematics

Department of Mathematics

The Board of Studies meeting for Mathematics is held through online mode on 17.07.2021

The following members have attended to review the B.Tech Mathematics syllabus of MR21 regulations, Mathematics related subjects and other points as per agenda.

S. No	Name of the Member	Designation & Official Address	Category	Signature
1	Dr Y Suresh Kumar	Assoc. Prof. & HOD, Department of Mathematics, MREC(A)	Chairman - BOS	7. Lugh Owas
2	Dr. M A Srinivas	Professor, JNTUH, Hyderabad.	University Nominee	- ON LINE -
3	Dr.B Ravindra Reddy	Assoc. Professor, JNTUH, Hyderabad.	Subject Expert	- ONLINE
4	Dr. C Subrahmanya Sastry	Assoc. Professor, IIT, Hyderabad.	Subject Expert	- ON LINE
5	Dr D Srinivasacharya	Professor, NIT Warangal	Subject Expert	-ONLINE-
6	Dr. V V Haragopal	Professor, BITS, Hyderabad	Industry Nominee	- ONLINE-
7	Dr.G Rami reddy	Professor, Dept. of Mathematics	Faculty Member	G. Muddy
8	Dr. P Sarada Devi	Asst. Professor, Dept. of Mathematics	Faculty Member	p.K
9	Mr. G Gangadhar	Asst. Professor, Dept. of Mathematics	Faculty Member	4. Loup
10	Ms. G Deepika	Jr. Engineer, Hyderabad Road Development Corporation	Alumni	-ONLINE

Department of Mathematics

20th July 2021.

Minutes of Meeting Mathematics BOS

The 15th Board of Studies meeting for Mathematics is held on 17th July 2021 through online.

Formally Head of the Department and Chairman BOS Dr Y Suresh Kumar welcomed the members of the BOS to the meeting.

The following members have attended to review Syllabus of MR21 regulations Mathematics related subjects, Quantitative aptitude and Reasoning for III B.Tech of MR21 regulations and other points as per agenda.

Dr Y Suresh Kumar -	Chairman BOS
Dr. M A Srinivas	Member - Subject Expert (University Nominee)
Dr. C S Sastry	Member - Subject Expert (External Member)
Dr. B Ravindra Reddy	Member – Subject Expert (External Member)
Prof. V V Haragopal -	Member - Subject Expert (Industry Nominee)
Dr. D Srinivasacharya -	Member - Subject Expert (External Member)
Dr. G Rami Reddy -	Member - Subject Expert (Internal Member)
Dr. P Sarada Devi	Member - Subject Expert (Internal Member)
Mr. G Gangadhar	Member – Subject Expert (Internal Member)
Ms. G Deepika	Member = Alumni (Internal Member)

The following resolutions are made after careful discussion and observations for the implementation in the MR21Regulations

- 1. It has decided to introduce new topic Exact Differential Equations, Non Exact Differential Equations in Module IV of Linear Algebra and Applied Calculus.
- After an elaborated discussion, the order of Modules III, IV, V in Linear Algebra and Applied Calculus of MR20 are changed as follows: Module III: Differential Calculus, Module IV: Ordinary Differential Equations Module V: Series Solutions to the Differential Equations
- 3. It has decided to introduce new topic Exact Differential Equations, Non Exact Differential Equations in Module IV of Linear Algebra and Differential Equations.
- 4. It is decided to keep "Richard Bellman, Introduction to matrix Analysis, Siam, second Edition as text book" in First year First semester of three papers.
- 5. It has decided to introduce new topic "Test of significance for standard deviations" in Module III of Probability and Statistics.
- 6. It has decided to introduce new topic "Exponential distribution" in Module II of Probability and Statistics

- It has decided to introduce new topic "Scatterplot" in Module V of Probability and Statistics.
- 8. It has decided to introduce new topics "Finding Areas using double integrals and Volumes using double and triple integrals" in Module III of Advanced
- 9. It is decided to keep Quantitative Aptitude and Reasoning –I in III B.Tech I Sem for MR21 regulations.

 It is decided to keep Quantitative Aptitude and Reasoning -II in III B.Tech II Sem for MR21 regulations.

na karang pangal pakhil salawa

Chairman – BOS Mathematic



e- approval for MR21 Mathematics syllabus and Mathematics BOS Minutes of the meeting

Dr B Ravindra Reddy br B Ravindra Reddy <a href="mailto:com/breaking-nations-na

Mon, Aug 23, 2021 at 4:35 PM

Dear Sir/Madam,

The Syllubus is Approved.

Regards, Dr. B. Ravindra Reddy [Quoted text hidden]



e- approval for MR21 Mathematics syllabus and Mathematics BOS Minutes of the meeting

V V HaraGopal <haragopalvajjha@gmail.com>

Mon, Aug 23, 2021 at 5:17 PM

To: Mrec Mathematics Department <mathshod@mrec.ac.in>

Cc: rbollareddy@gmail.com, massrinivas@jntuh.ac.in, Mantripragada Srinivas <massrinivas@gmail.com>, C S Sastry <csastry@iith.ac.in>, C S Sastry <csastry@math.iith.ac.in>, dsc@nitw.ac.in

Dear Dr. Suresh

The appended syllabus MR21 is approved.

Haragopal

Dr V V HaraGopal,

Professor of Statistics,

Department of Mathematics.

Birla Institute of Technology & Science, Pilani

Hyderabad Campus, Jawahar Nagar, Shameerpet Mandal, Hyderabad 500 078, Telangana, India.

Formerly Professor, Department of Statistics

Osmania University, Hyd.

Mobile +919849083995

Email: haragopal_vajjha@hyderabad.bits-pilani.ac.in

Web: http://www.bits-pilani.ac.in/hyderabad/HaraGopal/Profile

Sent from my iPhone.

On 23-Aug-2021, at 12:11 PM, Mrec Mathematics Department <mathshod@mrec.ac.in> wrote:

[Quoted text hidden]

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<CSE IT II SEM,docx>

<CE,ME, MINING III SEM.docx>

<CSE IT I SEM.docx>

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<CSE IT IV SEM.docx>

<ECE, EEE III SEM.docx>

<ECE, EEE I sem.docx>

<ECE, EEE II SEM.docx>

<Minutes BOS MATHEMATICS of meeting 2020-21 on 06.02.2021.docx>

<MR21 MathematicsOpen electives.docx>

<NUMBER THEORY.docx>

<Statistics for Data Science.docx>



e- approval for MR21 Mathematics syllabus and Mathematics BOS Minutes of the meeting

Mon, Aug 23, 2021 at 8:29 PM

C S Sastry <csastry@math.iith.ac.in>
To: V V HaraGopal <haragopalvajjha@gmail.com>

Cc: Mrec Mathematics Department <mathshod@mrec.ac.in>, "rbollareddy@gmail.com" <rbollareddy@gmail.com>, "massrinivas@jntuh.ac.in" <massriniv@s@jntuh.ac.in>, Mantripragada Srinivas <massrinivas@gmail.com>, C S Sastry <csastry@lith.ac.in>, "dsc@nitw.ac.in" <dsc@nitw_ac.in>

Dear Dr. Suresh,

Approved.

Thanks Sastry. [Quoted text hidden]

Sent from mobile

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e- approval for MR21 Mathematics syllabus and Mathematics BOS Minutes of the meeting

Prof. SRIN VAS MANTRIPRAGADA <massrinivas@gmail.com>
To: Mrec Mathematics Department <mathshod@mrec.ac.in>

Mon, Aug 23, 2021 at 8:39 PM

The syllatous is approved

Dr..M.A.Srinivas, Professor & Head, Department of Mathematics, College of Engineering, J N T U Hyderabad, Hyderabaid-500085 Mobile:091-9490745460

[Quoted text hidden]



e- approval for MR21 Mathematics syllabus and Mathematics BOS Minutes of the meeting

Prof. SRINIVASACHARYA D <dsc@nitw.ac.in> To: Mrec Mathematics Department <mathshod@mrec.ac.in> Mon, Aug 23, 2021 at 10:41 PM

Dear Suresh

The syllabus MR21 is approved.

Thanks Dr. D. SRINIVASACHARYA/इंग. डी. श्रीनिवासाचार्या Professor/ प्रोफेसर DEPARTMENT OF MATHEMATICS/गणित विमान NATIONAL INSTITUTE OF TECHNOLOGY /राष्ट्रीय प्रौद्योगिकी संस्यान WARANGAL-506 004, Telangana, India /वारांगल-506004, तेलंगाना, भारत Phone: +91 870 246 2821 (0), Mobile +91 984 918 7249 Email: dsrlnivasacharya@gmail.com,

[Quoted text hidden]



Invitation for BOS mathematics on 17.07.2021

Prof. SRINIVAS MANTRIPRAGADA <massrinivas@gmail.com>
To: Mrec Mathematics Department <mathshod@mrec.ac.in>
Cc: massrinivas@intuh.ac.in

Wed, Jul 14, 2021 at 1:41 PM

DEAR Dr. Suresh
Thank you for your email inviting me to participate in the BOS MEETING on 17th July 2021.
I confirm my participation in the meeting at the scheduled time.
With regards
[Quoted text hidden]

Dr..M.A.Srinivas, Professor & Head, Department of Mathematics, College of Engineering, J N T U Hyderabad, Hyderabad-500085 Mobile:091-9490745460



Invitation for Mathematics BOS on 17.07.2021

C S Sastry <csastry@math.iith.ac.in> To: Mrec Mathematics Department <mathshod@mrec.ac.in> Tue, Jul 13, 2021 at 4:05 PM

Dear Dr. Suresh Garu,

While thanking you for the invitation, I hereby accept it and agree to serve on the BoS.

With thanks and regards

Sastry

[Quoted text hidden]

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Invitation for Mathematics BOS on 17.07.2021

Prof. SRINIVASACHARYA D <dsc@nitw.ac.in> To: Mrec Mathematics Department <mathshod@mrec.ac.in> Tue, Jul 13, 2021 at 4:05 PM

Sir

Thank you very much for the invitation

I accept to be the member of BoS of MREC and attend the meeting on 17/07/2021

Dr. D. SRINIVASACHARYA/ डॉ. डी. श्रीनिवासाचार्या

Professor/ प्रोफेसर

DEPARTMENT OF MATHEMATICS/गणित विभाग

NATIONAL INSTITUTE OF TECHNOLOGY /राष्ट्रीय प्रौद्योगिकी संस्थान

WARANGAL-506 004, Telangana, India /वारांगल-506004, तेलंगाना, भारत

Phone: +91 870 246 2821 (0), Mobile +91 984 918 7249

Email: dsrinivasacharya@gmail.com,

[Quoted text hidden]



Invitation for BOS Mathematics on 17.07.2021

V V HaraGopal <haragopalvajjha@gmail.com> To: Mrec Mathematics Department <mathshod@mrec.ac.in>

Tue, Jul 13, 2021 at 2:02 PM

Yes I will attend the meeting on the schedule date and time.

Haragopal

Dr V V HaraGopal, Director(Al and ML) **Aizant Global Analytics** Kompally Hyderabad

Former Professor of Statistics, Department of Mathematics,

Birla Institute of Technology & Science, Pilani Hyderabad Campus, Jawahar Nagar, Shameerpet Mandal, Hyderabad 500 078, Telangana, India. Formerly Professor, Department of Statistics Osmania University, Hyd. Mobile +919849083995

Email: haragopal_vajjha@hyderabad.bits-pilani.ac.in

Web: http://www.bits-pilani.ac.in/hyderabad/HaraGopal/Profile

Sent from my iPhone.

On 13-Jul-2021, at 1:52 PM, Mrec Mathematics Department <mathshod@mrec.ac.in> wrote:

[Quoted text hidden] <Dr V V Haragopal.jpg>



MALLA REDDY ENGINEERING COLLEGE

(Autonomous)
Maisammaguda, Dhullapally, Secunderabad-500100

Department of Mathematics

20-07-2021

Board of Studies meeting held on 17.07.2021 at 06:30 PM

The Board of Studies meeting for the Department of Mathematics is convened on 17.07.2021 at 06:30 PM through online.

Action Taken Report (ATR) on BoS Meeting in AY 2021-22

Resolution 1: It has decided to introduce new topic Exact Differential Equations, Non Exact Differential Equations in Module IV of Linear Algebra and Applied Calculus.

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 2: After an elaborated discussion, the order of Modules III, IV, V in Linear Algebra and Applied Calculus of MR20 are changed as follows:

Module III: Differential Calculus, Module IV: Ordinary Differential Equations

Module V: Series Solutions to the Differential Equations

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 3: It has decided to introduce new topic Exact Differential Equations, Non Exact Differential Equations in Module IV of Linear Algebra and Differential Equations.

Action Taken: Action taken accordingly as recommended by the BOS

Resolution 4: It is decided to keep "Richard Bellman, Introduction to matrix Analysis, Siam, second Edition as text book" in First year First semester of three papers.

Action Taken: Action taken accordingly as recommended by the BOS.

Resolution 5: It has decided to introduce new topic "Test of significance for standard deviations" in Module III of Probability and Statistics.

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 6: It has decided to introduce new topic "Exponential distribution" in Module II of Probability and Statistics.

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 7: It has decided to introduce new topic "Scatterplot" in Module V of Probability and Statistics.

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 8: It has decided to introduce new topics "Finding Areas using double integrals and Volumes using double and triple integrals" in Module III of Advanced Calculus.

Action Taken: The revised syllabus is implemented as MR21 regulation B.Tech course syllabus is implementing from the academic year 2021-22 onwards.

Resolution 9: It is decided to keep Quantitative Aptitude and Reasoning –I in III B.Tech I Sem for MR21 regulations.

Action Taken: Approved the Paper titled 'Quantitative Aptitude and Reasoning –I 'is prescribed in the III Year I semester for all branches. The proposed syllabus as such is approved by the members without any modifications.

Resolution 10: It is decided to keep Quantitative Aptitude and Reasoning –II in III B.Tech II Sem for MR21 regulations.

Action Taken: Approved the Paper titled 'Quantitative Aptitude and Reasoning –II ' is prescribed in the III Year II semester for all branches. The proposed syllabus as such is approved by the members without any modifications.

Suggest Methodologies for innovative teaching and evaluation techniques

- 1. Adoption of Bloom's taxonomy:
- 2. 30% of classes teaching by Power Point Presentations
- 3. Model presentations
- 4. Conducting Group Discussions among students
- 5. Comprehensive analytical teaching through Journal Interpretations.
- 6. NPTEL/MOOC Registrations
- 7. Remedial Classes

Dr Y Suresh Kumar Chairman - Mathematics BOS



(An UGC Autonomous Institution approved by AICTE and affiliated to JNTU Hyderabad, Accredited by NAAC with 'A' Grade (II - cycle)
NBA Accredited Programmes - UG (CE, EEE, ME, ECE & CSE) PG (CE - Structural Engg., EEE-Electrical Power Systems, ME - Thermal Engg.).

Date: 02.06.2022

ORDER

The Board-of-Studies Physics for the academic year 2021-22 to 2023-24 have been reconstituted as some of the previous members relieved from the institute.

S. No.	Name of the Member	Designation & Official Address	Subject Specializati on	Contact Number	Category
1	Dr. A. GuruSampath Kumar	Assoc. Prof. & HOD, Department of Physics, MREC(A)	Physics	9985102547	Chairman- BOS
2	Dr.Suresh Sripada	Asst. Professor, Department of Physics, JNTUH CEJ.	Physics	9182433694	University Nominee (Nominated by the Vice Chancellor, JNTUH, Hyderabad)
3	Dr. I. V. Subba Reddy	Assoc. Professor of Physics, Coordinator, Academic and Sponsored Research, GITAM University, Hyderabad campus.	Physics	9618177690	Subject Expert (outside the Parent University)
4	Dr. Venkataiah Gorige	Asst. Prof., School of Physics, University of Hyderabad, Hyderabad.	Physics	98661 41602	Subject Expert (outside the Parent
5	Dr.M. Sree Ramana,	Scientist – F, RCI Hyderabad.	Physics	9491243896	University) Industry Expert
6	Dr. P. Siva Kumar	Assoc., Prof., MREC(A)	Physics	9703104679	
7	Mr. Kesava Vamsi Krishna V.	Assoc. Prof., MREC(A)	Physics	90302 34705	Member
8	Dr. L.V.N.S Soma Sundar	Asst. Prof., MREC(A)	Physics	9246069772	Member
9	Ms.Nagole Mamatha	Software Engineer,Capgemini	Alumni	9100744536	Member



Principal

Malla Reddy Engineering College

(Autonomous)

Principal

Malla Reddy Engineering College Malsammaguda, Dhukapatly, (Post Via Kompally), Sec'bad-500100.

MALLA REDDY ENGINEERING COLLEGE



(Autonomous)

Maisammaguda, Dhullapally, Secunderabad-500100

Department of Physics

04-06-2022

Board of Studies meeting held on 04.06.2022 at 11:00 AM

The Board of Studies meeting for the Department of Physics is convened on 04.06.2022 at 11:00 AM in online mode on zoom platform.

The agenda of the meeting is as follows.

AGENDA

- 1. Action Taken Report (ATR) on previous BoS Meeting.
- 2. Review of Physics syllabus (both theory and lab) for MR21 Regulations.
- 3. Suggestion and review of panel of Paper setters, and examiners for both theory and practical examinations that will be submitted for the approval of Academic council.
- 4. Approval of any other item with the permission of the Chairman.

(Dr.A. GuruSampath Kumar)



(An UGC Autonomous Institution approved by AICTE and affiliated to JNTU Hyderabad, Accredited by NAAC with 'A' Grade (II - cycle)
NBA Accredited Programmes - UG (CE, EEE, ME, ECE & CSE) PG (CE - Structural Engg., EEE-Electrical Power Systems, ME - Thermal Engg.).

Lr.No:MREC (A)/ 2021-22/BOS-Physics (UG)-2/Invitation/02

02-06-2022

To

Dr. I. V. Subba Reddy, Assoc. Professor of Physics, Coordinator, Academic and Sponsored Research, GITAM University, Hyderabad campus..

Sir,

Sub: Meeting of the Board of Studies for Physics(UG) for the academic year 2021-22.

We are glad to inform you that, you have been a member of Board of studies in Department of Physics at Malla Reddy Engineering College (Autonomous), Secunderabad. The BoS – Physics (UG) meeting is scheduled at 11:00 AM on 04th JUNE 2022 in the online mode. The Zoom link for the meeting will be shared separately. You are kindly requested to make it convenient to attend the meeting.

The agenda of the meeting is as follows:

AGENDA

- 1. Action Taken Report (ATR) on previous BoS Meeting.
- 2. Review of Physics syllabus (both theory and lab) of MR21 Regulations.
- 3. Suggestion and review of panel of Paper setters, and examiners for both theory and practical examinations that will be submitted for the approval of Academic council.
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Copy to:

- 1. Registrar, JNTUH
- 2. P.A. to the Vice Chancellor, JNTUH
- 3. Director (AAC), JNTUH
- 4. IQAC

Principal
(Dr. A. Ramaswamy Reddy)

Principal
Malla Reddy Engineering College
Maisammaguda, Dhulapally,
(Post Via Kompally), Sec'bad-500100.



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Lr.No:MREC (A)/ 2021-22/BOS-Physics (UG)-2/Invitation/01

02-06-2022

To
Dr. Suresh Sripada,
Asst. Professor,
Department of Physics,
JNTUH CEJ.
Sir.

Sub: Meeting of the Board of Studies for Physics(UG) for the academic year 2021-22.

We are glad to inform you that, you have been a member of Board of studies in Department of Physics at Malla Reddy Engineering College (Autonomous), Secunderabad. The BoS – Physics (UG) meeting is scheduled at 11:00 AM on 04th JUNE 2022 in the online mode. The Zoom link for the meeting will be shared separately. You are kindly requested to make it convenient to attend the meeting.

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(Dr. A. Ramaswamy Reddy) Principal

Malla Reddy Engineering College Maisammaguda, Dhulapally, (Post Via Kompally), Sec'bad-500100.



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Lr.No:MREC (A)/ 2021-22/BOS-Physics (UG)-2/Invitation/03

02-06-2022

To Dr. Venkataiah Gorige Assistant Professor, School of Physics, University of Hyderabad, Hyderabad.

Sir.

Sub: Meeting of the Board of Studies for Physics(UG) for the academic year 2021-22.

We are glad to inform you that, you have been a member of Board of studies in Department of Physics at Malla Reddy Engineering College (Autonomous), Secunderabad. The BoS – Physics (UG) meeting is scheduled at 11:00 AM on 04th JUNE 2022 in the online mode. The Zoom link for the meeting will be shared separately. You are kindly requested to make it convenient to attend the meeting.

The agenda of the meeting is as follows:

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(Dr. A. Ramaswamy Reddy)

Malla Reddy Engineering College Malsammaguda, Dhulapally, (Post Via Kompally), Sec'bad-500100.



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Lr.No:MREC (A)/ 2021-22/BOS-Physics (UG)-2/Invitation/04

02-06-2022

Dr.M. Sree Ramana Scientist – F, RCI Hyderabad Sir,

Sub: Meeting of the Board of Studies for Physics(UG) for the academic year 2021-22.

We are glad to inform you that, you have been a member of Board of studies in Department of Physics at Malla Reddy Engineering College (Autonomous), Secunderabad. The BoS – Physics (UG) meeting is scheduled at 11:00 AM on 04th JUNE 2022 in the online mode. The Zoom link for the meeting will be shared separately. You are kindly requested to make it convenient to attend the meeting.

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4. IQAC

Principal

(Dr. A. Ramaswamy Reddy) Principal

Malla Reddy Engineering College Malsammaguda, Dhulapally, (Post Via Kompally), Sec'bad-500100.

Action Taken Report (ATR) on previous BoS Meeting-I in AY 2021-22

The following are the resolutions made in the meeting and corresponding actions taken are as follows:

1. Semiconductor Physics

- Resolution 1: Heisenberg's Uncertainty Principle topic should be rephrased
- Action Taken: As per the BoS committee member's instruction, the topic is rephrased as 'Heisenberg's Uncertainty Principle and its application (Electron cannot exist inside the nucleus)'.
- Resolution 2: The initial topics in Module II: Band Theory of Solids should be reframed
- Action Taken: According to BOS resolution, the initial topics are reframed as 'Introduction,
 Postulates and drawbacks of Classical Free electron Theory, Fermi Dirac distribution function,
 Postulates and drawbacks of Sommerfeld Theory'.
- Resolution 3: Qualitative treatment of Fermi energy level in intrinsic and extrinsic semiconductors should be replaced with 'Variation of Fermi level with respect to temperature and doping concentration'.
- Action Taken: The changes recommended by BOS committee members had been implemented.
- Resolution 4: The topics on PN junction diode, LED and Solar cell should be rephrased
- Action Taken: As per the recommendations of the members of BoS, these topics are rephrased as 'PN junction diode, Energy diagram, V-I characteristics; Construction and working of Photo diode, LED & Solar cell and their applications'.
- Resolution 5: Course objectives that map with the course outcomes should be written using Bloom's taxonomy.
- Action Taken: Yes the Course objectives and outcomes are revised in tune with the Bloom's taxonomy.

2. Applied Physics

- Resolution 6: The corrections as advised for the first four modules in Semiconductor physics should be adopted as such in Applied Physics.
- Action Taken: Action taken accordingly as per the recommendations by the BOS members.

3. Engineering Physics:

Resolution 8: The topic 'Electrical and Mechanical analogy for a simple oscillator' should be replaced with 'Electrical and Mechanical analogy for a Simple oscillator and Forced oscillator' in Module – I.

- Action Taken: As per the recommendations of the members of BoS, the topic is rephrased.
- Resolution 9: The topic 'Acoustic quieting' should be appended in Acoustics chapter in Module

 II: Acoustics and Ultrasonics.
- Action Taken: Yes the topic is appended.
- Resolution 10: Synthesis of nano materials should be modified as 'Synthesis of nano materials: Top - down and Bottom - up approach'
- Action Taken: Action taken accordingly as per the recommendations by the BOS members.
- Resolution 7: Module IV LASER and Optical fibers and Module V Electromagnetic theory should be swapped and accordingly necessary corrections should be made in Course objectives and course outcomes.
- Action Taken: Yes, Updated as per the BOS Committee recommendations.

1. Applied Physics Lab

The proposed syllabus for the Applied Physics lab is approved by the BOS members.

2. Engineering Physics Lab

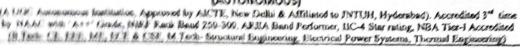
The proposed syllabus for the Engineering Physics lab is approved by the BOS members.

Chairman-BoS, Physics
(Dr. GuruSampath Kumar A.)



MALLA REDDY ENGINEERING COLLEGE

(autonomous)





15th Board of Studies Meetings Academic Year 2021-22 (MR21 Regulations)

Chemistry - BOS









(AUTONOMOUS)

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Department of chemistry

Date: 20/07/2021

ORDER

The Board-of-Studies members Chemistry for the academic year 2021-22 have been reconstituted as some

2		Designation & Official Address	Subject Specialization	Contact No.	Status
-	, was toda briaskar Roddy	Assoc. Professor & HOD	Organic Chemistry	\$297194349	Chairman- BOS
2	Dr. K. Vidya	Assistant Professor, Department of chemistry, Student's Advisor, JNTUHCEJ, JNTUH College of Engineering Jagtial,	Organic Chemistry	9849924120	University Nominee (Nominated by the Vice Chancellor, JNTUH, Hyderabad)
3	Dr. P. Veerasomaiah	Professor., O.U, Hyderabad.	Physical Chemistry	9247562742	Subject Expert Member (External) (Nominuted by Academic Council)
4	Dr.Srinivasarao Yaragorla	Assistant Professor School of Chemistry, University of Hyderabad	Organic chemistry	9866286259	Subject Expert Member (External) (Nominated by Academic
5	Dr. P. Samba Siva Reddy	M.D, Alta Vista Phyto Chemicals Pvt Ltd, Hyd	Bio-Organic	9849601776	Council) Industry Expert
_	Dr. Ch. Mahender	Asst. Professor	Organic Chomistry	9908127749	
	Dr. T. Susmitha	Asst. Professor	Organic Chemistry	8919317230	Faculty Member (Internal) Faculty Member (Internal)
	7 1	Asst. Professor	Inorganic Chemistry	8106993872	
-		Asst. Professor	Organic Chemistry	9502570894	Faculty Member (Internal) Faculty Member (Internal)
	M.V.Shruthi	Asst Professor., SCETW	EEE	9951018521	Alumni Member



Principal

Malla Reddy Engineering College



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Department of Chemistry

Board of Studies meeting held on 21.07.2021 at 3:00 PM

The Board of studies meeting for the Chemistry is conducted on 21-07-2021 at 3:00 PMthrough online modein the conference hall, Malla Reddy Engineering College (Autonomous), Hyderabad

The following members have attended to review on contents such as Course Schema and Syllabus of MR21 regulations and other points as per agenda.

S.No	Name of the Member	Designation & Official Address	Category	Signature
1	Dr. M. VijayaBhaskar Reddy	Assoc. Professor & HOD	Chairman - BOS	Juse 14
2	Dr. K. Vidya	Assistant Professor, Department of chemistry, Student's Advisor, JNTUHCEJ, JNTUH College of Engineering Jagtial,	University Nominee	ON LINE
3	Dr. P. Veerasomaiah	Professor., O.U, Hyderabad.	Subject Expert	ONLINE
4	Dr. Y. Srinivasarao	Asst Professor., School of Chemistry, University of Hyderabad	Subject Expert	ONLINE
5	Dr. P. Samba Siva Reddy	M.D, Alta Vista Phyto Chemicals Pvt Ltd, Hyd	Industry Nominee	ONLINE
6	Dr. C. Mahender	Asst. Professor Dept. of Chemistry	Faculty Member	Chalende Significa
7	Dr. T. Susmitha Asst. Professor Dept. of Chemistry Faculty M		Faculty Member	Signiffer
8	D.Venkat Ramulu	Asst. Professor Dept. of Chemistry	Faculty Member	lower
9	T. Ramesh	Asst. Professor Dept. of Chemistry	Faculty Member	Tp.
10	M.V.Shruthi	Asst. Professor Dept. of EEE,SCETW	Alumni	ONLINE



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Date: 21-07-2021

Department of Chemistry

Board of Studies meetingheld on 21.07.2021 at 3:00 PM

The Board of Studies meeting for the Department of Chemistry is convened on 21.07.2021 at 3:00 PM through online mode in the conference hall, Malla Reddy Engineering College (Autonomous), Hyderabad.

The Agenda of the meeting is as follows.

AGENDA

- 1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2020-21
- 2. Discussion and review of Chemistry subjects of B. Tech. MR21 regulations syllabus.
- 3. Suggestion and review of panel for Paper setters, and examiners for examinations.
- 4. Suggest methodologies for innovative teaching and evaluation techniques.
- Suggestion of any activity related to research, teaching, extension and other academic activities in the department/college.
- 6. Delegation of power to the Chairman-BOS based on recommendations of the internal committee, for the inclusion and exclusion of any item as per requirements.
- 7. Approval of any other item with the permission of the Chairman.

(Dr. M. VijayaBhaskar Reddy)

Chairman – BOS- Chemistry



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Minutes of Meeting Chemistry BOS

21st July, 2021

The Board of studies meeting for the Chemistry is conducted on 21-07-2021 at 3:00 PM in the conference hall, Malla Reddy Engineering College (Autonomous), through online mode by Zoom meet, Hyderabad

The following BOS Members have attended the Meeting:

S. No	Name of the Member	Designation & Official Address	Category	
1	Dr. M. VijayaBhaskar Reddy	Assoc. Prof. & HOD, Department of Chemistry, MREC(A)	Chairman - BOS University Nominee	
2	Dr. K. Vidya	Assistant Professor, Department of chemistry, Student's Advisor, JNTUHCEJ, JNTUH College of Engineering Jagtial,		
3	Dr. P. Veerasomaiah	Professor of Chemistry, O.U, Hyderabad.	Subject Expert (outside the Parent University)	
4	Dr.Srinivasarao Yaragorla Assistant Professor School of Chemistry, University of Hyderabad		Subject Expert (outside the Parent University)	
5	Dr. P. Samba Siva Reddy	M.D, Alta Vista Phyto Chemicals Pvt Ltd, Hyd.	Industry Expert	
6	Dr. Ch. Mahender	Asst. Prof., MREC(A)	Faculty Member	
7	Dr. T. Susmitha	Asst. Prof., MREC(A)	Faculty Member	
8	Mr. D.VenkatRamulu	Asst. Prof., MREC(A)	Faculty Member	
9	Mr. T. Ramesh	Asst. Prof., MREC(A)	Faculty Member	
10	M.V.Shruthi	Asst. Prof.,SCETW	Alumni	

The following is the agenda of the meeting:

- 1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2020-21
- 2. Discussion and review of Chemistry subjects of B. Tech. MR21 regulations syllabus.
- 3. Suggestion and review of panel for Paper setters, and examiners for examinations.

- 4. Suggest methodologies for innovative teaching and evaluation techniques.
- 5. Suggestion of any activity related to research, teaching, extension and other academic activities in the department/college.
- 6. Delegation of power to the Chairman-BOS based on recommendations of the internal committee, for the inclusion and exclusion of any item as per requirements.
- 7. Approval of any other item with the permission of the Chairman.

At the outset, Dr. M. Vijaya Bhaskar Reddy, HOD and Chairman of the Chemistry - Board of Studies, welcomed the members to the BOS meeting and informed the purpose of the meeting. He also briefed about the previous BOS meeting resolutions and placed on record the existing syllabus of MR21 regulations and also proposed modifications in the syllabus. Later Board of studies Members have in detailed discussion, reviewed each item of the proposed agenda and finally the following items have been resolved unanimously by all the members of BOS.

The following resolutions are made after careful discussion regarding the observations to be implemented in the next Regulations.

- 1. BOS committee members suggested to include Numerical problems on EDTA in Module I.
- 2. Committee suggested to remove lime soda numerical problems in Module I.
- 3. BOS committee members Suggested to add quinhydrone electrode in module III for the determination of pH.
- 4. BOS Committee members suggested to remove named reactions in module IV (Beckmann rearrangement, Cannizaro reaction and Diels -Alder reaction)
- BOS Committee members suggested to remove coupling constant and spin-spin coupling in Module IV.
- 6. BOS Committee members suggested to include introduction, classification and basic principle of UV,IR, NMR and their applications.
- 7. BOS Committee members suggested to include corrosion related experiments in engineering chemistry lab.
- 8. BOS Committee members suggested to include lab reference books in engineering chemistry lab syllabus.
- 9. BOS Committee members suggested to include BOD and COD in Module III of Environmental science
- 10. BOS Committee members suggested to mention course objectives in point wise.
- 11. BOS Committee members suggested to remove Tg and Tm concept in Module I of open elective POLYMER CHEMISTRY.

BOS-CHAIRMAN (Dr.M.Vijaya Bhaskar Reddy)



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Department of Chemistry

Board of Studies meeting held on 21.07.2021 at 3:00 PM

The Board of Studies meeting for the Department of Chemistry is convened on 21.07.2021 at 3:00 PMthrough online mode by Zoom meet in the conference hall, Malla Reddy Engineering College (Autonomous), Hyderabad

Action Taken Report (ATR) on previous BoS Meeting in AY 2020-21

The previous Board of studies meeting in AY 2020-21 was held on dt: 16thJuly 2020. The following are the resolutions made in the meeting and corresponding action taken are as follows.

Resolution 1:Proposed separate chemistry papers for circuit and non-circuit branches but JNTUH nominee and other subject experts suggested to frame one common paper for all branches.

Action Taken: Committee opposed separate chemistry paper for circuit and non-circuit branches and suggested to prepare common syllabus for all branches.

Resolution 2:CSE & IT departments proposed to remove chemistry course for them.

Action Taken: JNTUH nominee and other subject experts opposed to remove chemistry course for CSE and IT branches.

Resolution 3:BOS members suggested toremovequinhydrone electrode from module-III of engineering chemistry syllabus.

Action Taken:Implemented in MR20 regulations syllabus from 2020-21 onwards.

Resolution 4:BOS members suggested to remove coupling constant from module-IV of engineering chemistry syllabus.

Action Taken: Removed "coupling constant" from module-III in theengineering chemistry syllabus.

Resolution 5:In Engineering Chemistry, module-II (Molecular structure & Theories of Bonding)

[Ni(CN)₄]² is replaced with [Ni(CO)₄].

Action Taken: Implemented in MR20 regulations from 2020-21 onwards.

Resolution 6:Module-IV (Stereochemistry and NMR spectroscopy) and module-V (Reaction mechanism

& synthesis of drug molecules) are merged and studied under module-IV and entitled as

"Stereochemistry, Reaction mechanism & synthesis of drug molecules and NMR spectroscopy"

Action Taken: Committee approved to mergethe module-IV&Vincludingtitle and it is being implemented from the academic year 2020-21 as "Stereochemistry, Reaction mechanism & synthesis of drug molecules and NMR spectroscopy".

Resolution 7: The following topics are removed from Module-IV (i) synthesis of nylon-6 (ii) addition reactions (iii) Coupling constant.

Action Taken: Implemented in MR20 regulations from 2020-21 onwards.

Resolution 8:BOS members suggested to replace synthesis of ibuprofen with aspirin in Module-IV.

Action Taken: Committee approved to replacesynthesis of ibuprofen with aspirin in Module-IV and it is being implemented from the academic year 2020-21.

Resolution 9: NewModule "Fuels and combustion" is introduced as module-V.

Action Taken:Implemented in MR20 regulations 2020-21 onwards.

Resolution 10:In engineering chemistry lab experiment no 3 title has been changed to "Estimation of an acid by P^Rmetry".

Action Taken: The title of experiment no 3in chemistry lab has been changed to "Estimation of an acid by P^Hmetry" and it is being implemented from the academic year 2020-21.

Resolution 11:In Environmental Science the title of module -V has been changed to Sustainable Development.

Action Taken: Implementing in MR20 regulations from the academic year 2020-21 onwards

Resolution 12:Open Elective "Chemistry of Engineering Materials" was replaced with new open elective entitled as "Chemistry in daily life".

Action Taken: Committee approved to replace the "Chemistry of Engineering Materials" with "Chemistry in daily life" and it is being implemented from the academic year 2020-21.

Resolution 13:In nano chemistry open elective module-I, title to be change from "Nanochemistry-I" to "Synthesis of Nano materials"

Action Taken: Implementing in MR20 regulations from the academic year 2020-21 onwards

Resolution 14:In nano chemistry open elective module-II, title to be change from "Nanochemistry-II" to "Properties of nano materials".

Action Taken: Committee approved to changethe module-II title as "Properties of nano materials" and it is being implemented from the academic year 2020-21.

Resolution 15:In nano chemistry open elective module-II, "luminescence" and "fluorescence" has to be removed.

Action Taken: The above mentioned topics removed from module-II and it is being implemented from the academic year 2020-21.

Resolution 16:In nano chemistry open elective module II, Quantum dot has to be removed.

Action Taken: Implementing in MR20 regulations from the academic year 2020-21 onwards.

Resolution 17:In nano chemistry module-III, suggested to add Principle and block diagram for SEM, EDS TEM, DLS and AFM.

Action Taken: The proposed topics are included in the syllabus and it is being implemented from the academic year 2020-21.

Resolution 18:In nano chemistry open elective module-IV, title to be change from "Carbon nano tubes and applications" to "Carbon nano structures and applications".

Action Taken: Committee approved to changethemodule-IV title as "Carbon nano structures and applications" and it is being implemented from the academic year 2020-21.

Resolution 19:Innano chemistry open elective module-IV, (Carbon nano structures and applications) all the contents are reshuffled as "carbon nano structures, carbon clusters, types and preparation of carbon nano tubes-optical and telecommunication applications, nano structured crystals (graphite), graphene, carbon fibers, fullerenes and their applications". Nano solar cells and its applications for the continuity.

Action Taken:Implementing in MR20 regulations from the academic year 2020-21 onwards.

Resolution 20:No changes are made in Polymer chemistry open elective.

Action Taken: Implementing without changes in the open elective "Polymerchemistry".

(Dr. M. Vijaya Bhaskar Reddy)

Chairman - BOS- Chemistry

2021-22 Onwards (MR-21)	MALLA REDDY ENGINEERING COLLEGE (Autonomous)	B.Tech II Semester		
Code:	Engineering Chemistry	L	T	P
B0B17	Engineering Chemistry (Common for ALL)	3	1	(154
Credits: 4	(Common for ALL)		1	

Course objectives:

The purpose of this course is to emphasize the relevance of fundamentals of chemical sciences in the field of engineering and to provide basic knowledge on atomic-molecular orbital's, electrochemistry, batteries, corrosion and the role of water as an engineering material in domestic-industrial use. They will also impart the knowledge of stereochemistry, understanding the chemical reaction pathway mechanisms and synthesis of drugs. Listing out various types of fuels and understanding the concept of calorific value and combustion.

Module I: Water and its treatment

[10 Periods]

Introduction to water, hardness of water, causes of hardness, expression of hardness, units and types of hardness-Numerical Problems. Alkalinity of water, specifications of potable water (BIS); Estimation of temporary & permanent hardness of water by EDTA method. Boiler troubles - Scale &Sludge, Priming and foaming, caustic embrittlement and boiler corrosion; Treatment of boiler feed water - Internal treatment (colloidal, phosphate, carbonate and calgon conditioning). External treatment - Lime Soda process (cold & hot) and ion exchange process, Numerical Problems. Disinfection of water by chlorination and ozonization. Desalination by Reverse osmosis and its significance.

Module II: Molecular structure and Theories of Bonding:

[10 Periods]

Introduction to Molecular orbital Theory. Linear Combination of Atomic Orbital's (LCAO), significance of bonding and anti-bonding molecular orbital, Conditions for the formation of molecular orbital's. Molecular orbital energy level diagrams of diatomic molecules -, N_2 , O_2 and F_2 . Introduction to coordination compounds-ligand-coordination number (CN) - spectrochemical series. Salient features of crystal field theory, Crystal field splitting of transition metal complexes in octahedral ($[CoF_6]^{3-}$ and $[Co(CN)_6]^{3-}$) and tetrahedral ($[NiCl_4]^{2-}$ and $[Ni(CO)_4]$) fields - magnetic properties of complexes. Band structure of solids and effect of doping on conductance.

Module III: Electrochemistry and Corrosion

[17 Periods]

A. Electrochemistry:

Introduction to Electrochemistry-Conductance(Specific and Equivalent) and units. Types of cells-electrolytic & electrochemical cells (Galvanic Cells)-Electrode potential-cell potential (EMF). Electrochemical series and its applications, Nernst equation its applications and numerical problems. Reference electrodes - Calomel Electrode and Glass electrode-determination of pH using glass electrode. Batteries: Primary (dry cells) and secondary (Lead-Acid cell, Ni-Cd cell) - applications of batteries. Fuel cells: Hydrogen - Oxygen fuel cell and its applications.

B. Corrosion: [7 Periods]

Causes and effects of corrosion: Theories of corrosion - Chemical & Electrochemical corrosion, Pilling-Bedworth rule, Types of corrosion: Galvanic and Water-line corrosion. Factors affecting rate of corrosion-Nature of metal and Nature of Environment, Corrosion control methods - Cathodic protection (Sacrificial anodic and impressed current cathodic methods). Surface coatings: Methods of metallic coatings - hot dipping (Galvanization), Electroplating (Copper) and Electroless plating (Nickel).

Module IV: Stereochemistry, Reaction mechanism& synthesis of drug molecules and NMR spectroscopy: [12 Periods]

Introduction to Isomers - classification of isomers - structural (chain, positional & functional) and stereoisomerism-geometrical (cis-trans & E-Z system) - characteristics of geometrical isomerism, optical isomerism (chirality - optical activity, specific rotation, enantiomers and diastereomers) of tartaric acid and lactic acid. Conformational isomerism ofn-Butane. Introduction to bond cleavage (homo & hetero cleavage) - reaction intermediates and their stability. Types of organic reactions - Mechanism of substitution ($SN^1\& SN^2$) and ($E_1\& E_2$) reactions with suitable example. Ring opening (Beckmann rearrangement), oxidation and reduction (Cannizaro reaction), cyclization (Components of Diels-Alder reaction-Mechanism of Diels-Alder reaction with suitable example) reactions. Synthesis of Paracetamol, Aspirin and their applications.

Introduction to Spectroscopy, Basic concepts of nuclear magnetic resonance spectroscopy, chemical shift and spin-spin splitting.

UNIT-V FUELS AND COMBUSTION

[08 PERIODS]

Fuels: Classification-solid fuels: coal – analysis of coal – proximate and ultimate analysis and their significance. Liquid fuels – petroleum and its refining, cracking – types – moving bed catalytic cracking. Knocking – octane and cetane rating, synthetic petrol - Fischer-Tropsch's process; Gaseous fuels – composition and uses of natural gas, LPG and CNG.

Combustion: Definition, Calorific value of fuel – HCV, LCV; Calculation of air quantity required for combustion of a fuel. Determination of calorific value by Junkers gas calorimeter-Numerical problems on combustion.

Text Books:

1. P.C.Jain and Monica Jain, "A Text Book of Engineering Chemistry", DhanpatRai Publications, New Delhi, 16th Edition 2014.

2. S.S. Dara and S.S. Umare, "A Text Book of Engineering Chemistry", S Chand

Publications, New Delhi, 12th Edition 2010.

3. A.Jaya Shree, "Text book of Engineering Chemistry", Wiley, New Delhi, 2018.



Malla Reddy Engineering College

(AUTONOMOUS)

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Lt.No: MREC (A)/BOS-English: 2021-22/Invitation/01

17-11-1911

To Dr. N.V.S.N.lakshini Associate Professor, Dept. of Humanities and Sciences, JNTU, Hyderabad,

Madam,

Sub: Meeting of the Board of Studies for English for the academic year 21/21/22

It is pleasure to invite you for the meeting of the Board of Studies for English for the watering year 2021-22. It is scheduled at 11-00am on 20^b July, 2021(Online mode only). We translate to make it convenient to attend the meeting.

AGENDA:

- 1. Action Taken Report (ATR) on previous BoS Meeting in A.Y 2020-21
- 2. Review of English subjects of B. Tech & MBA MR20 regulations course schema and syllabus.
- 3. Suggestion and review of panel for Paper setters, and examiners for examinations.
- 4. Suggest methodologies for innovative teaching and evaluation techniques.
- 5. Suggestion of any activity related to research, teaching, extension and other academic activities in the department/college.

Malla Reddy Engineering College (Autonomous)

Copy to:

1. Registrar, JNTUH

2. P.A. to the Vice - Chancellor, JNTUII

3. Director (AAC), JNTUH



MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda, Dhullapally, Secunderabad-500100

Department of English

Board of Studies

20-07-2021

The Board of Studies meeting for the Department of English was convened on 20-07-2021 in the Department(online), Mall Reddy Engineering College (Autonomous), Hyderabad.

The Agenda of the meeting is as follows.

AGENDA

- 1. Review of English subjects of B. Tech & MBA, course schema and syllabus.
- 2. Suggestion and review of panel for Paper setters, and examiners for examinations.
- 3. Suggest methodologies for innovative teaching and evaluation techniques.
- 4. Suggestion of any activity related to research, teaching, extension and other academic activities in the department/college.

(online) University Nominee

(Dr N.V.S.N Lakshmi)

(on line)
Subject Expert

(Prof. T.Vijaykumar)

(on line)
Subject Expert

(Prof. D. Murali Manohar)

Industry Expert

(Mr. Nitesh)

(Dr. P Sreehari)

(Dr.A.Shobha Rani)

(Mr. T.Jeevanandam)

K. W. M. Kning

Alumni

(Mr. K Ajay Kumar)

(Dr. T. Y. Surendrahatha Reddy)



Malla Reddy Engineering College

(AUTONOMOUS)

(An UGC Autonomous Institution approved by AIGTE and adjusted to ACTU Hydriation, proceeding 1984), with it Carda Congress (ASA Accounted Programmus - UG (CE, EEE, MC, ECE & CSC) PO (CE - Etrochest Engy), EKE Electrical Forms Congress (Aug.).

To The Principal, MREC, Secunderabad – 500100.

Sir

Subt Request to approve the constitution of BOS - Dept. of English for the Academic

Year 2021-22 Reg.

The following are the proposed Board-of-Studies members for the Department of English for the AY 2021-22, Request you to approve the same.

S. No	Name of the Member	Designation & Official Address	Subjec t Special ization	Contact No.	Mail ID	Category
-	Dr. TV Surendranatha Reddy	Prof., & Head Dept. of English	English	9440361207	enghod@mrec.ac.in	Chairman-BOS
2	Dr.N.V.S.N. Lakshmi	Asso. Prof., Dept. of H&SS JNTUHCE	English	9652128383	syamala@jntuh.ac. in	University Nominee
3	Prof. T.Vijay Kumar	Professor, Dept. of English, OU	English	9392472934	tvk2k4@gmail.com	Subject Expert Member (External)
4	Prof. D. Murali Manohar	Professor Department of English. HCU	, English	9908569272	dmmpsh@gmail.com	Subject Expert Member (External)
5	Mr.Nitesh	Tech.Mahindra	HR	8978314010	nitesh.ariga@techma hindra.com	Industry Expert
6	Dr.P.Sreehari	Assoc, Prof., Dept. of English, MREC (A)	English	9849750721	Sreeharî125@gmail.c	Faculty Member (Internal)
7	Mr. T.Jeeyanandam	Asst. Professor, Dept. of English, MREC (A)	English	9666402264	jęcya.154@gmail.co m	Faculty Member (Internal)
8	Dr.A.Shobha Rani	Assoc. Professor, Dept. of English, MREC (A)	English	9618194879	nithashobhamni@gm all.com	Faculty Member (Internal)
9	Mr K Ajay Kumar	Technical Engineer ECIL, Hyderabad	EEE	871246312	njaykumarbathini@g mail.com	Alumni (MR12)

My

Dr. TV Surendranaula Reddy Chairman, BoS



MALLA REDDY ENGINEERING COLLEGE

(Autonomous)

Maisammaguda, Dhullapally, Secunderabad-500100

Department of English

Date:20-07-2021.

The Board of Studies meeting for English was held in the Department on 20.07.2021 at 11:00 AM, Malla Reddy Engineering College (Autonomous).

The following members attended to review and revise the course structure and syllabus of MR21 regulations.

S. No	Name of the Member	Designation & Official Address	Category	Signature
1	Dr. T. V. Surendranatha Reddy	Prof., & Head Dept. of English	Chairman- BOS	Ly"
.2	Dr.D.V.S.N. Lakshmi	Associate Professor. Dept. of Humanities and Sciences. JNTUHCE, Hyderabad.	University Nominee	online
3	Prof. T. Vijay Kumar	Prof. T. Vijay Kumar Department of English Osmania University, Hyderabad.	Subject Expert	online
4	Prof. D. Murali Manohar	Professor & HOD. Department of English. University of Hyderabad, Hyderabad.	Subject Expert	onlin
5	Mr. Nitesh	HR, TechMahindra	Industry Expert	online
6	Dr. P Sreehari	Assoc. Prof.	Faculty Member-	Harley
7	Dr. A.Shobha Rani	Associate, Prof.	Faculty Member	8
8	Mr. T.Jeevanandam	Asst. Prof.	Faculty Member	(M)
9	Mr. K Ajay Kumar	Technical Engineer ECIL, Hyderabad	Alumni	K. Wagnin

MALLA REDDY ENGINEERING COLLEGE (Autonomous)

Department of English

MINUTES OF BOS MEETING

The Board of Studies (BoS) meeting was held at 11.00 am on 20th July, 2021 (online).

Dr T.V. Surendranatha Reddy, HoD of English chaired the meeting. He welcomed all the members to the BOS meeting.

At the outset, the chairperson briefed the members about the academic activities in the Department of English. Later, the agenda of the meeting was taken up for the discussion. The following points were discussed during the meeting:

Agenda Point 1: Syllabus Review

The meeting reviewed the syllabi of the courses. The members had a detailed discussion on the various aspects. The following key points have emerged from the meeting.

- The members commended the department for designing syllabi in commensurate the changing needs and trends.
- Edit the syllabi for typos, inclusion of topics and rearrangement of topics. The meeting pointed out the specific typos and topics.
- Identify courses and resources in line with the syllabus to support student's communication skills and academic abilities.

Agenda Point 2: Activities Review

The meeting suggested the following points in regard to departmental activities.

- Syllabi, academic and research activities should result in career progression for the faculty.
- Present a summary of the academic and research related activities of the department.
- Keep teacher profiles as the basis for designing the syllabi.

Chairingh (BoS, English)

MALLA REDDY ENGINEERING COLLEGE



(Autonomous) Malsammaguda, Dhullapatly, Secunderstand -500100

Department of English

20th July 2021

The board of studies meeting for the Department of English was held on 20th July, 2021 at 11:00 AM in the Placement Cell (Via Online), Malla Reddy Engineering College (Autonomous), Hyderabad.

Action Taken Report (ATR) on BOS meeting for the AY 2021-2022

The previous Board of studies meeting in AY 2021-2022 was held on 20th July, 2021 at 11:00 AM. The following are the resolutions made in the meeting and corresponding actions taken are as follows:

Resolution 1: The board advised to change the title of first year English language lab into English Language and Communications Lab.

Action Taken: The title of the lab is changed into English Language and Communication Lab as per board advice.

Resolution 2: The committee suggested the cut short the essays of English syllabus to make the students learn it effectively.

Action Taken: The essays are fully revised and trimmed into average length as per the board's recommendation.

Resolution 3: The Board advised to change the syllabus on the basis of faculty's profile. Action Taken: On following the committee recommendation, The English Language Skills paper is been added with review writing.

Resolution 4: The panel invited to change the typos of the syllabus Action Taken: All the papers and arrangement have been revised totally.

BOS, English



syllabus/Minutes of Meeting for E-approval of MREC - English BOS

Mrec English Department <enghod@mrec.ac.in>
To: Mrec English Department <enghod@mrec.ac.in>

Wed, 21 July, 2021 at 08:35 AM

From: Dr.N.V.S.N Lakshml < syamala@jntuh.ac.in>
Date: Wed, July 21, 2021
Subject: syllabus/Minutes of Meeting for E-approval of MREC
To: Mrec English Department < enghod@mrec.ac.in
Please treat this email as my approval of the syllabus

Dr.N.V.S.N Lakshmi

On TUE, 20 JULY 2020, 16:12 Mrec English Department, <enghod@mrec.ac.in> wrote: Sir/Madam,

We conducted BOS-English meeting in the month of July. After making modifications as suggested by the members, the syllabus has been prepared. AS it is not possible to meet the members personally in this pandemic situation, I request you to give E-approval for the syllabus/Minutes of meeting.

Regards

Dr. T. V. Surendranatha Reddy
Head of the Department
Chairman, Board of Studies
Department of English
Malla Reddy Engineering College (Autonomous)
Secunderabad.

Mob: 9440361207

Mail: tvsnreddy27@mrec.ac.in



E-approval for the syllabus/Minutes of Meeting

Mrec English Department <enghed@mrec.ac.in> To: Mrec English Department <enghed@mrec.ac.in> Thr, 22 July, 2021 at 11:01 AM

------ Forwarded message ------

From: Dr.D Murall Manohar < dmmpsh@gmail.com>

Date: Thr, July 22, 2021

Subject: E-approval for the syllabus/Minutes of Meeting-To Mrec English Department <enghod@mrec.ac in>

Approved.

D.Murali Manohar

On TUE, 20 JULY 2020, 16:12 Mrec English Department, <enghod@mrec.ac.in>
wrote: Sir/Madam,

We conducted BOS-English meeting in the month of July. After making modifications as suggested by the members, the syllabus has been prepared. AS it is not possible to meet the members personally in this pandemic situation, I request you to give E-approval for the syllabus/Minutes of meeting.

Regards

Dr. T. V. Surendranatha Reddy
Head of the Department
Chairman, Board of Studies
Department of English
Malla Reddy Engineering College (Autonomous)
Secunderabad.

Mob: 9440361207

Mail: tvsnreddy27@mrec,ac.in

Regards

Dr. T. V. Surendranatha Reddy
Head of the Department
Chairman, Board of Studies
Department of English
Malla Reddy Engineering College (Autonomous)
Secunderabad.

Mob: 9440361207

Mail: tysnreddy27@mrec,ac.in



E-approval for the syllabus/Minutes of Meeting

Mrec English Department <onghod@mroc.oc.in> To: Mrec English Department <onghod@mrec.ac.ln>

Frl, JULY 23, 2021 at 16,01 AM

----- Forwarded message ------

From: Vijay Kumar Tadakamalla <tvk2k15@gmail.com>

Date: Friday, July 23, 2021

Subject: E-approval for the syllabus/Minutes of Meeting To: Mrec English Department <enghod@mrec.ac.ln>

Cc: "Dr Parvathi. V" <parvathivudumula@yahoo.com>, "Dr.D MuraliManohar" <dmmpsh@gmail.com>

Dear Dr Reddy

Thank you for the syllabus and sorry for the delayed response--it just slipped my mind. Please treat this email as my approval of the syllabus. I just have one suggestion. Consider changing 'Periods' to 'Hours' or 'Hrs' in the open electives.

Best wishes Vijay KUMAR

Dr Vijay KUMAR Tadakamalla Director, Hyderabad Literary Festival <tvk2k15@gmail com> Tel: (M) +91 9392472934

On Tue, 20 July 2020 at 16:12, Mrec English Department <enghod@mrec.ac.in> wrote:

> Sir/Madam,

> We conducted BOS-English meeting in July. After making modifications as suggested by the members, the syllabus has been prepared. AS it is not possible to meet the members personally in this pandemic situation, I request you to give E-approval for the syllabus/Minutes of meeting.

> Regards

> Dr. T. V. Surendranatha Reddy

> Head of the Department

> Chairman, Board of Studies

> Department of English

> Malla Reddy Engineering College (Autonomous)

> Secunderabad.

> Mob: 9440361207

> Mail: tvsnreddy27@mrec.ac.in

Regards

Dr. T. V. Surendranatha Reddy Head of the Department Chairman, Board of Studies Department of English Malla Reddy Engineering College (Autonomous) Secunderabad.

Mob: 9440361207

Mail: tvsnreddy27@mrec.ac.in