



**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**(Autonomous)**

**Minutes of Meeting**  
**For**  
**I & II B. Tech Subject**  
**Board of Studies: Humanities & Sciences**

- **Mathematics**
- **Physics**
- **Chemistry**
- **Management**
- **English**



# Gokaraju Rangaraju Institute of Engineering and Technology

(Autonomous)

GRIET/HS/BOS/MATHS//21-22

11 April 2022

## Minutes of Meeting

For

I & II B. Tech. Subjects

1. Linear Algebra and Differential Calculus
2. Differential equations and Vector Calculus
3. Computational methods for engineers
4. Probability and Statistics (CSE & IT)
5. Applied Probability and Statistics (AIML & CSDS)
6. Discrete mathematics
7. Introductory Statistics, Probability and Calculus
8. Linear Algebra
9. Statistical methods
10. Statistical methods Lab

(I and II Semesters)

(For students admitted from 2022-23 as per GR22 Regulations)

## Board of Studies: Mathematics

Held on

11 April 2022

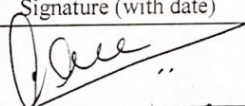
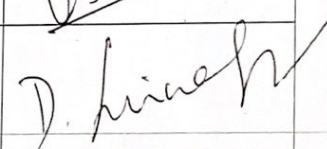
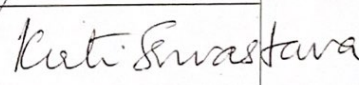

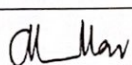
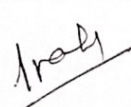
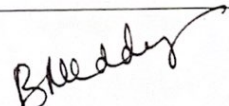




**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous Institute under JNTU Hyderabad)  
Bachupally, Kukatpally, Hyderabad-500090

Minutes of meeting of the BOS for I B. Tech (I and II semesters) Mathematics subjects of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous), Hyderabad, held on 11-04-2022 through online meeting.

Members Present:

Name	Designation	Signature (with date)
Dr. S. Ramamurthy Professor, Dept. of Mathematics GRIET, Hyderabad	Chairperson BOS (Math)	
Dr. D. Sri Nagesh Scientist (Retd.), NGRI Professor of PRACTICE, IIT Madras	Member (External Expert)	
Dr. Kirti Srivastava Scientist (Retd.), NGRI Hyderabad.	Member (External Expert)	
Dr. M.N. Raja Shekar Professor Dept. of Mathematics JNTUH, Jagityal	Member (JNTUH Nominee)	
Mr. G.V.K. Madhav Systems Engineer EG RnD Hewlett Packard Enterprise Bangalore	Member (Industry Expert)	
Dr. G. Patrick Professor and Head of H&S, GRIET, Hyderabad	Chairman BOS	
Dr. B.R.K. Reddy Professor of Mathematics GRIET, Hyderabad.	Member	

Dr. V.N.Rama Devi Professor of Statistics GRIET, Hyderabad.	Member	V.N.Rama Devi
Dr. G. Swapna Associate Prof. of Mathematics GRIET, Hyderabad	Member	G. Swapna

**Item-1** Course structure, Syllabus is confirmed for I B. Tech (I and II Semesters):

1. Linear Algebra and Differential Calculus
2. Differential equations and Vector Calculus
3. Computational methods for engineers
4. Probability and Statistics (CSE & IT)
5. Applied Probability and Statistics (AIML & CSDS) **NEW COURSE**
6. Discrete mathematics
7. Introductory Statistics, Probability and Calculus
8. Linear Algebra
9. Statistical methods
10. Statistical methods Lab

**Item-2** Evaluation Scheme suggested as per GR20 to be adopted.

**Item-3** Panel of Examiners are suggested.

**Item-4** Existing practices to be strengthened and confirmed.

Changes made in GR22 compared to GR20

#### 1. LINEAR ALGEBRA AND DIFFERENTIAL CALCULUS

Unit	INCLUDE: GR 22	EXCLUDE from GR 20
I	NONE	NONE
II	NONE	NONE
III	NONE	NONE
IV	NONE	NONE
V	(a) Approximation of a function using Chebyshev polynomials (b) Least squares approximation using polynomials, exponential and power curves	(a) Rolle's and Lagrange's mean value theorems (b) Evaluation of volume and surface area of revolution



## 2. DIFFERENTIAL EQUATIONS AND VECTOR CALCULUS

UNIT	INCLUDE: GR 22	EXCLUDE from GR 20
I	NONE	NONE
II	NONE	Critically damped, over-damped and under-damped systems
III	NONE	Application of multiple integrals in the evaluation of mass, center of mass and center of gravity
IV	NONE	NONE
V	NONE	NONE

## 3. COMPUTATIONAL METHODS FOR ENGINEERS

UNIT	INCLUDE: GR 22	EXCLUDE from GR 20
I	NONE	NONE
II	Renamed as "Interpolation and Numerical differentiation" Numerical differentiation for uniform data	Newton's bivariate interpolation and Hermite interpolation
III	Renamed as "Numerical integration and Curve approximation" Principle of least squares	NONE
IV	Renamed as "Numerical solution of initial and boundary value problems in ODE"	Moved to Unit-III
V	Renamed as "Numerical solution of PDE"	Numerical solution of initial and boundary value problems shifted to UNIT-IV

## 4. PROBABILITY AND STATISTICS (CSE, IT)

Unit No.	INCLUDE: GR 22	EXCLUDE: GR 22
I	Rearranged the content and added topics of Skewness and Kurtosis	Shifted the topics of correlation and Regression to Unit-III of GR22
II	-	Removed Gamma distribution
III	Renamed as Correlation, Regression and Time Series analysis	This unit is changed as Unit-IV in GR22
IV	Renamed as Testing of Hypothesis-1	This unit is changed as Unit-V in GR22
V	Renamed as Testing of Hypothesis-2	1. This unit is shifted as part of Unit-III in GR22 2. Removed estimation of seasonal indices

**Item-1** Course structure, Syllabus is confirmed for I B. Tech (I and II Semesters)

1. Linear Algebra and Differential Calculus
2. Differential equations and Vector Calculus
3. Computational methods for engineers
4. Probability and Statistics (CSE & IT)
5. Applied Probability and Statistics (AIML & CSDS) **NEW COURSE**
6. Discrete mathematics
7. Introductory Statistics, Probability and Calculus
8. Linear Algebra
9. Statistical methods
10. Statistical methods Lab

**Item-2** Evaluation Scheme suggested as per GR20 to be adopted

**Item-3** Panel of Examiners are suggested

**Item-4** Existing practices to be strengthened and confirmed.

## Changes made in GR22 compared to GR20

### 1. **LINEAR ALGEBRA AND FUNCTION APPROXIMATION**

[Old Title: **LINEAR ALGEBRA AND DIFFERENTIAL CALCULUS**]

Unit	INCLUDE: GR 22	EXCLUDE from GR 20
I	NONE	NONE
II	NONE	NONE
III	NONE	NONE
IV	NONE	NONE
V	(a) Approximation of a function using Chebyshev polynomials (b) Least squares approximation using polynomials, exponential and power curves	(a) Rolle's and Lagrange's mean value theorems (b) Evaluation of volume and surface area of revolution



### 8. LINEAR ALGEBRA

UNIT	INCLUDE: GR 22	EXCLUDE from GR 20
I	Introduced Generalized inverse of a matrix	Cramer's rule to solve $AX=b$
II	Introduced Linear transformation, Rank and Nullity	NONE
III	Renamed as "Matrix eigenvalue problem and Matrix decomposition"	Symmetric, skew-symmetric and other structured square matrices moved to Unit-I
IV	Renamed as "Solution of linear algebraic system of equations"	Moved to Unit-III
V	PCA for dimension reduction and Facial recognition	PCA for image processing and Machine learning

### 9. STATISTICAL METHODS

Unit No.	INCLUDE IN GR22	EXCLUDE IN GR22
I	Restructured the content and shifted the topics of Sampling of Unit-II of GR 20 to this unit.	
II	Shifted Anova 1-way and 2-way of Unit-IV of GR20 to Unit-II	Removed Neyman Pearson lemma for GR 22
III		Removed tolerance region and Spearman's test for GR22
IV	It is a mixture of Unit-IV and Unit-V of GR20	Removed Testing of Regression model
V		This unit is shifted as part of Unit-IV of GR22

### 10. STATISTICAL METHODS LAB

NO CHANGES MADE

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### 5. APPLIED PROBABILITY AND STATISTICS (AIML & CSDS) NEW COURSE

[Old P&S course with minor modifications]

Unit No.	INCLUDE IN GR22	EXCLUDE IN GR20
I	Rearranged the content and added topics of Skewness and Kurtosis	Shifted the topics of correlation and Regression to Unit III of GR22
II	-	Removed Gamma distribution
III	Renamed as Correlation, Regression and Time Series analysis	This unit is changed as Unit-IV and shifted topic of Chi square test to unit-V of GR22
IV	Renamed as Testing of Hypothesis-1	This unit is changed as Unit-V of GR22
V	Renamed as Testing of Hypothesis-2 and added non-Parametric tests	1. This unit is shifted as part of Unit-III in GR22 2. Removed estimation of seasonal indices

### 6. DISCRETE MATHEMATICS

NO CHANGES MADE

### 7. INTRODUCTORY STATISTICS, PROBABILITY AND CALCULUS

UNIT	INCLUDE: GR 22	EXCLUDE from GR 20
I	NONE	NONE
II	NONE	Removed Moment Generating function for GR22
III	NONE	Removed Exact Sampling distributions for GR22
IV	NONE	NONE
V	NONE	NONE



**Gokaraju Rangaraju Institute of Engineering and Technology**

(Autonomous)

GRIET/H&S/BOS/PHY/22-23

13 April 2022

Minutes of Meeting

For

**I B. Tech. Subjects:**

1. Applied Physics
2. Engineering Physics
3. Physics for Computing Science
4. Applied Physics Lab
5. Engineering Physics Lab
6. Physics for Computing Science Lab

(I and II Semesters)

*(For students admitted from 2022-23 as per GR22 Regulations)*

**Board of Studies: Physics**

Held on

13 April 2022



**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous Institute under JNTU Hyderabad)  
Bachupally, Kukatpally, Hyderabad-500090


Minutes of meeting of the BOS for I B. Tech (I and II semesters) Physics subjects of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous), Hyderabad, held on 13-04-2022 in Room No.3212, Block 3, GRIET.

Members Present:

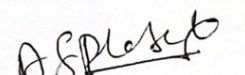
Dr. M. Sridhar,  
Professor, Dept. of Physics.  
GRIET, Hyderabad

  
Chairman

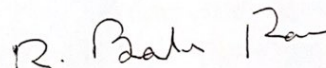
Dr. S. Venkateswara Rao,  
Professor & HOD,  
Dept. of Physics.  
JNTUH, Hyderabad.

  
Member (JNTUH Nominee)

Dr. A. S. Sai Prasad,  
Professor and Head,  
Vasavi College of Engineering,  
Hyderabad.

  
Member (External Expert)

Dr. R. Balaji Rao,  
Professor and Head,  
GITAM University, Hyderabad.

  
Member (External Expert)

Mr. Sree Harsha Koneru,  
Associate Business Manager,  
Accenture, Hyderabad

  
Member (Industry Expert)

Dr. G. Patrick,  
Professor and Head of H&S.  
GRIET, Hyderabad.

  
Member



Ms. D. Naga Tejaswini.  
Alumni of CSE.  
GRIET, Hyderabad.

*Tejaswini*

Member

Dr. J. Kishore Babu.  
Associate. Prof. of Physics.  
GRIET, Hyderabad.

*Kishore*

Member

Dr. P. Ramesh Babu.  
Associate. Prof. of Physics.  
GRIET, Hyderabad.

*P. Ramesh Babu*

Member

Dr. P. Satya Gopal Rao  
Associate. Prof. of Physics.  
GRIET, Hyderabad.

*Satya Gopal Rao*

Member

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**Item 1:** Course structure. Syllabus is confirmed for I B. Tech (I and II Semesters):

Applied Physics and Applied Physics Lab for CSE (AIML), CSE (DS), CSE, ECE, EEE & IT;  
Engineering Physics and Engineering Physics Lab for CE & ME;  
Physics for Computing Science and Physics for Computing Science Lab for CSE (CSBS).

**Item 2:** Evaluation Scheme suggested as per GR22 to be adopted.

**Item 3:** Panel of Examiners is suggested.

**Item 4:** Existing practices to be strengthened and confirmed.

# GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Changes made in GR22 compared to GR20:

## 1. Applied Physics: GR22A1003

Unit	INCLUDED: GR 22	EXCLUDED from GR 20
1. Quantum Mechanics	No change	No change
2. Semiconductor Physics	Hall Effect and its applications	BJT construction and principle of Operation
3. Optoelectronic Devices		Semiconductor laser
4. Lasers and Fiber Optics	Principles of lasing action, Semiconductor laser	Resonating cavity, Active medium-Meta stable state, Pumping, Population inversion Einstein coefficients
5. Dielectric and Magnetic materials	Applications of dielectric materials, Internal fields in solids, Clausius-Mossotti equation	Superconducting materials: Introduction to superconductors, General properties, Meissner effect, Type I and Type II superconductors, Applications of superconducting materials.

## 2. Applied Physics Lab: GR22A1012

Experiment	INCLUDED: GR 22	EXCLUDED from GR 20
1. Energy gap of P-N junction diode	No change	No change
2. Solar Cell	No change	No change
3. Light emitting diode		P-I Characteristics
4. Stewart – Gee's experiment	No change	No change
5. Hall effect	No change	No change
6. Photoelectric effect	No change	No change
7. LASER	No change	P-I Characteristics
8. Optical fiber	No change	No change
9. R-C Circuit	No change	No change
10. LCR Circuit	No change	No change



### 3. Engineering Physics: GR22A1004

UNIT	INCLUDE: GR 22	EXCLUDE from GR 20
1. Wave Optics		resolving power
2. Lasers and Fiber Optics	Lasing action, Semiconductor Laser	Interaction of radiation with matter, Einstein coefficients
3. Introduction to solids		Fermi Energy level, Fermi distribution function, Origin of energy bands
4. Nanomaterials	Top-Down technique: Ball milling method	Examples of quantum wells, wires and dots, Top-Down technique-CVD
5. Acoustics and Ultrasonics	No change	No change

### 4. Engineering Physics Lab: GR22A1013

Experiment	INCLUDED: GR 22	EXCLUDED from GR 20
1. Melde's experiment	No change	No change
2. Torsional pendulum	No change	No change
3. Newton's rings	No change	No change
4. Diffraction grating	No change	No change
5. Dispersive power	No change	No change
6. Determination of wavelength of light by Laser diffraction method	Determination of wavelength of light by Laser diffraction method	Coupled Oscillator
7. LCR Circuit	No change	No change
8. LASER	No change	No change
9. Optical fiber	No change	No change
10. Energy gap of P-N junction diode	No change	No change

### 5. Physics for Computing Science: GR22A1026

Unit	INCLUDED: GR 22	EXCLUDED from GR 20
1. Oscillations	No change	Forced mechanical and electrical oscillator
2. Interference and Polarization of Light	No change	Fresnel's half period zone and zone plate, Plane diffraction grating
3. Basic Idea of Electromagnetism and Thermodynamics	No change	No change
4. Quantum Mechanics, Crystallography and Semiconductor Physics	No change	Time dependent Schrödinger's wave equation, Heisenberg picture, APF-HCP
5. Laser and Fiber optics	No change	Laser Speckles, Neodymium laser

### 6. Physics for Computing Science Lab: GR22A1029

Experiment	INCLUDED: GR 22	EXCLUDED from GR 20
1. Magnetic field along the axis of current carrying coil – Stewart and Gee's apparatus	No change	No change
2. Determination of Hall coefficient of semiconductor	No change	No change
3. Determination of Planck's constant	No change	No change
4. Determination of wavelength of light by Laser diffraction method.	No change	No change
5. Determination of wavelength of light by Newton's Rings method	No change	No change
6. Determination of laser parameters	No change	No change
7. Determination of optical fiber parameters	No change	No change
8. Determination of rigidity modulus of wire using Torsional pendulum	No change	No change
9. Determination of energy gap of a semiconductor	No change	No change
10. Determination of time constant of R-C circuit	No change	No change

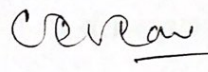
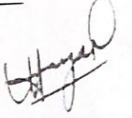
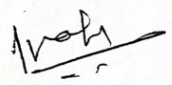




**GokarajuRangaraju Institute of Engineering and Technology  
(Autonomous)**

Minutes of meeting of the BoS for Engineering Chemistry and Engineering Chemistry Lab for I B.Tech (CE, EEE, ME, ECE, CSE, IT, AIML & DS) and Environmental Science for I year B.Tech (CSBS) and II Year B.Tech (All Branches except CSBS) of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous), Hyderabad held on 11<sup>th</sup> Apr 2022 at 11:00AM in GRIET.

**Members Present:**

- |  |   |
|--|---|
| 1. Dr. C. R. VenkateswaraRao<br>Professor, Chemistry<br>GRIET, Hyderabad       | Chairman               |
| 2. Dr. A. Jayashree<br>Director, IST, JNTUH<br>Hyderabad                       | Member (JNTU Nominee)  |
| 3. Dr. P. Leelavathi<br>Professor<br>Osmania University, Hyderabad             | Member (External Expert) P. Leela   |
| 4. Dr. Jyotsna Cherukuri<br>Professor<br>VNR VJIET, Hyderabad                  | Member (External Expert) C. Jyotsna   |
| 5. Dr. S. Venkata Mohan<br>Principal Scientist<br>IICT, Hyderabad              | Member (Industry Expert) S. Venkata Mohan   |
| 6. Dr. G. Patrick<br>Professor, HOD - Dept. of H & S<br>GRIET, Hyderabad       | Member               |
| 7. Dr. B. Jyothirmai<br>Associate Professor<br>GRIET, Hyderabad                | Member (Internal) B. Jyothirmai   |
| 8. Dr. J. Saranya<br>Associate Professor<br>GRIET, Hyderabad                   | Member (Internal) J. Saranya  |
| 9. Ms. K. Sree Amrutha Valli<br>EEE Branch, 2018-22 batch<br>GRIET, Hyderabad, | Member (Alumni) Amrutha Valli KS  |

Item 1: Syllabi of Engineering Chemistry, Engineering Chemistry Lab and Environmental Science for I & II year B.Tech are verified and discussed. Suggestions are made by the experts and incorporated in the syllabi of GR22. The changes are approved by all the members.

Item 2: For Environmental Science course, it is suggested to offer single, activity-based environmental science, for all the branches, instead of two different ES courses.




The following points are discussed in the meeting:

S. No.	Item	Action
1	<p><b>Engineering Chemistry:</b></p> <p><b>Unit I:</b> Atomic and Molecular orbitals - Definition, examples and comparison, Molecular orbital theory- postulates. Valence Bond Theory – Postulates and Limitations, Bonding in <math>[\text{Ni}(\text{CO})_4]</math>, <math>[\text{Ni}(\text{Cl})_4]^{2-}</math>, <math>[\text{Ni}(\text{CN})_4]^{2-}</math>, <math>[\text{Co}(\text{NH}_3)_6]^{3+}</math>, and <math>[\text{CoF}_6]^{3-}</math></p> <p><b>Unit II:</b> Shielding and Deshielding</p> <p><b>Unit III:</b> Batteries: Primary and Secondary types, Lithium ion and Lead acid batteries. Fuel cells: Definition, Hydrogen-Oxygen fuel cell and Microbial Fuel cell – working principle and applications. Differential metal corrosion - Galvanic corrosion, Differential aeration corrosion - pitting corrosion, Factors affecting corrosion – Nature of metal (Position of metal, Relative areas, Purity and Passivity), Nature of Environment (pH, Temperature and Humidity),</p> <p><b>Unit IV:</b> Doping – Epitaxy, Diffusion and Ion implantation Comparison between thermoplastics and thermosets Water purification: Demineralization by Ion-exchange process</p>	Suggested content is added in the syllabus
	<p><b>Unit V:</b> Elements of symmetry-plane of symmetry, centre of symmetry, alternating axis of symmetry. Chirality, Enantiomers – tartaric acid, Diastereomers- 2,3-dichloropentane Cracking – Definition, Fluid bed catalytic cracking Hydrogen gas generation by Electrolysis process.</p> <p>To Include following Reference book</p> <ul style="list-style-type: none"> <li>Engineering Chemistry by O.G.Palanna, Tata McGraw Hill Education Private Limited.</li> </ul>	
2	<p><b>Engineering Chemistry Lab (ECL):</b> <b>Topics to be deleted:</b></p> <ol style="list-style-type: none"> <li>1. Estimation of Acetic acid by Conductometric titrations</li> <li>2. Determination of acid value of coconut oil.</li> </ol>	Suggested content is deleted in the syllabus

C. Jyotirmay S. Celan P. Leena



3	<b>ES for CSBS: No changes</b>	Syllabus is continued as it is (GR20)
4	<b>Environmental Science</b> <b>II B.TECH (Common to ALL branches)</b> GR20 (GR20A2001) syllabus was replaced with GR20 (GR20A1040) Environmental Science. GR22 Environmental Science is now common to I Year B.Tech Semester II (CSBS) and II B.Tech (Common to ALL branches).	GR20A2001 is replaced with GR20A1040

C. Syatsoe  J. Sule in P. leca

## Changes made in GR22 compared to GR20

### 1. Engineering Chemistry

Unit	Included in GR22	Excluded from GR20
1	None	None
2	Shielding and deshielding	None
3	None	Electrochemistry, electroplating and electroless plating
4	Demineralization by ion-exchange process	None
5	Fluid bed catalytic cracking, Hydrogen gas generation by electrolysis	Fischer Tropsch method, natural gas, biodiesel, biogas

### 2. Engineering Chemistry Lab

No changes were made in G20 to make it GR22.

### 3. Environmental Science

Environmental Sciences (GR22A1040) has been made common to all I B.Tech programs where Environmental Science (GR20A2001) was taught. Originally Environmental Sciences (GR22A1040) was taught to CSBS only.





**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)**

**DEPARTMENT OF HUMANITIES AND SCIENCES (English)**

Minutes of meeting of the BOS for English B.Tech. (I Year 1&2 Semesters) and M.Tech. (I Year 1 Semester) of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous) Hyderabad held on 11 April 2022 at 10:30 A.M.

**Members Present:**

Dr.R.Sucharan Reddy  
Associate Professor of English  
GRIET, Nizampet, Hyderabad

BOS - Chairman

Dr. N V S N Lakshmi  
Associate Professor of English, JNTUH  
Hyderabad

Member (JNTUH Nominee)

Dr. P. Aparna  
Professor & HOD of Humanities  
GNITS, Shaikpet, Hyderabad

Member (External Expert)

Dr.Krishna Chaitanya  
Associate Professor of English  
MGIT  
Hyderabad.

Member (External Expert)

Mr. Kiran Chander  
CEO. Confidemy & Corporate Trainer  
Hyderabad.

Member (Industry)

Dr. V. Lakshmi Prasanna  
Professor of English  
Dept. of H&S  
GRIET,Nizampet, Hyderabad.

Member

Dr. S. Rajeswari  
Associate Professor in English  
Dept. of H&S  
GRIET,Nizampet, Hyderabad.

Member

Dr. G. Patrick  
Professor & HOD of HC's  
GRIET, Hyderabad

Chairperson



**Gokaraju Rangaraju Institute of Engineering and Technology**  
(Autonomous)

DEPARTMENT OF HUMANITIES AND SCIENCES (English)



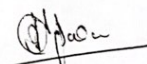




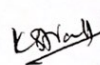

Minutes of Meeting for reviewing and emending the changes suggested by the BOS of English for B. Tech. (I Year 1&2 Semesters) and M.Tech. (I Year 1 Semester) of the GR22 Regulations on 11 April 2022.

GRIET/H&S – English /15A/G/22-23

11 April 2022

The following members are present to discuss the BOS of English and other allied courses in B. Tech. (I Year 1&2 Semesters) and M.Tech. (I Year) of the GR22 Regulations on 11 April 2022 and suggested some modifications and the same is implemented.

**The following members were presented:**

1. Dr. R.Sucharan Reddy, BOS Chairman, Associate Professor of English, GRIET, Nizampet, Hyderabad 
2. Dr. N.V.S.N. Lakshmi, Associate Professor of English, Dept. of H&S, JNTUH, Hyderabad 
3. Prof. P.Aparna, Professor and HOD of Humanities, GNITS, Hyderabad 
4. Dr.Krishna Chaitanya, Associate Professor of English, MGIT, Hyderabad 
5. Mr. Kiran Chander, CEO. Confidemy & Corporate Trainer, Hyderabad 
6. Dr. V. Lakshmi Prasanna, Professor of English, GRIET, Nizampet, Hyderabad 
7. Dr. S.Rajeswari, Associate Professor of English, GRIET, Nizampet, Hyderabad. 
8. Ms. K.S. Amruthavalli, Student – IV B.Tech. EEE, GRIET, Nizampet, Hyderabad. 
9. Dr. G. Patrick, Professor & HOD of H&S, GRIET, Hyderabad 



The following points are discussed in the meeting:

#### English

Sl. No	Item	Action
1.	<b>UNIT I</b> Under 'Writing' – 'Types', 'Structures', and 'Features of a Paragraph' are replaced with 'Dos and Don'ts of Paragraph Writing'	Implemented
2.	<b>UNIT II</b> Under 'Writing' – 'Note Making', 'Writing an Abstract' are removed.	Implemented
3.	<b>UNIT III</b> Under 'Writing' – 'Letter of Permission' and 'Email etiquette' are added.	Implemented
4.	<b>UNIT IV</b> Under 'Writing' – 'Types of Essays' is removed and only 'Argumentative' and 'Discursive essay' are included.	Implemented
5.	<b>UNIT V</b> Under 'Writing' – 'Technical Reports', 'Introduction, 'Characteristics of a Report', 'Categories of Reports Formats', 'Structure of Reports (Manuscript Format)', 'Type of Reports' and 'Writing a Report' are deleted, and the following topics are included instead. 'What is Report Writing', 'Technical Reports vs General Reports', 'Importance of Report Writing', 'Structure and characteristics of Report Writing' and 'Relevance of Reports to Engineers'	Implemented

#### ELCS LAB

Sl. No	Item	Action
1.	<b>Exercise IV</b> Under 'CALL LAB Understand:' the following are deleted -'Listening Skills and its importance', 'Purpose', 'Process', 'Types', and 'Barriers of Listening' and the following are added instead – 'Presentation Skills', 'Elements of Presentation', 'Organizing Content', 'Use of Power Point' and 'Slides Presentation' Under 'CALL LAB Practice:' 'Listening Comprehension Tests' is replaced with 'Presentation Skills'	Implemented
2.	<b>Exercise V</b> Under 'CALL LAB Understand:' the following are added -'Listening Skills and its importance', 'Purpose', 'Process', 'Types', and 'Barriers of Listening' and the following are added instead – 'Presentation Skills', 'Elements of Presentation', 'Organizing Content', 'Use of Power Point' and 'Slides Presentation' Under 'ICS LAB Understand:' 'Mind Map' along with 'Narrating a story using mind maps' is included in place of 'Narrating a story using appropriate language elements'	Implemented

**ERPW**

Sl. No	Item	Action
1.	<b>UNIT 2</b> 'Clarifying Who Did What, Highlighting Your Findings, Abstracts and writing an Introduction' are deleted.	Implemented
2.	<b>UNIT 3</b> Under A: 'Abstracts and writing an Introduction', and 'Conclusions' are added whereas 'the Final Check' is removed. In addition Unit 3 is numbered with alphabet 'A' i.e. 3A. Under B: 'Key skills that are needed when writing a Title, an Abstract, an Introduction, and Review of the Literature' are a new addition under the chronological order '3B'.	Implemented
3.	<b>UNIT 4</b> Under A: 'Methods, the Results, Discussion, Conclusions, the Final Check, Clarifying Who Did What, Highlighting Your Findings' are added in place of 'Key Skills that are needed when writing a Title, an Abstract, an Introduction, and Review of the Literature' Under B: Word 'Key' is added before 'Skills'	Implemented

**In the following mentioned papers, there are no changes and modifications.**

1. Business Communication and Value Science I
2. Business Communication and Value Science II

## ENGLISH Subject changes made in GR22 compared to GR20

### 1. ENGLISH

UNIT	INCLUDED in GR22	EXCLUDED from GR20
I	Dos and Don'ts of Paragraph Writing	Types, Structures, and Features of a Paragraph
II	NONE	Note Making, Writing an Abstract
III	Letter of Permission, Email etiquette	NONE
IV	Argumentative Essay and Discursive Essay	Types of Essays
V	What is Report Writing, Technical Reports vs General Reports, Importance of Report Writing, Structure and characteristics of Report Writing and Relevance of Reports to Engineers	Technical Report, Introduction, Characteristics of a Report, Categories of Reports Formats, Structure of Reports (Manuscript Format), Type of Reports and Writing a Report

### 2. ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB

UNIT	INCLUDED in GR22	EXCLUDED from GR20
I	NONE	NONE
II	NONE	NONE
III	NONE	NONE
IV	Presentation Skills, Elements of Presentation, Organizing Content, Use of Power Point and Slides Presentation, Presentation Skills	Listening Skills and its importance, Purpose, Process, Types, and Barriers of Listening, Listening Comprehension Tests
V	Listening Skills and its importance, Purpose, Process, Types, and Barriers of Listening Mind Map, Narrating a story using mind maps	Presentation Skills, Elements of Presentation, Organizing Content, Use of Power Point and Slides Presentation Narrating a story using appropriate language elements

### 3. ENGLISH FOR RESEARCH PAPER WRITING

UNIT	INCLUDED in GR22	EXCLUDED from GR20
I	NONE	
II	NONE	Clarifying Who Did What, Highlighting Your Findings, Abstracts and writing an Introduction
III	'Abstracts and writing an Introduction', and 'Conclusions' Unit 3 is numbered with alphabet 'A' i.e. 3A. Under B: 'Key skills that are needed when writing a Title, an Abstract, an Introduction, and Review of the	the Final Check



	Literature' are a new addition under the chronological order '3B'	
IV	Methods, the Results, Discussion, Conclusions, the Final Check, Clarifying Who Did What, Highlighting Your Findings  Under B: Word 'Key' is added before 'Skills'	Key Skills that are needed when writing a Title, an Abstract, an Introduction, and Review of the Literature
V	NONE	NONE

#### 4. SOFT SKILLS AND INTERPERSONAL SKILLS

UNIT	INCLUDED in GR22	EXCLUDED from GR20
I	NONE	NONE
II	NONE	NONE
III	NONE	NONE
IV	NONE	NONE
V	NONE	NONE

The following papers were added for B.Tech III year as per GR20 Regulations

5. Business Communication and Value Science I
6. Business Communication and Value Science II
7. Business Communication and Value Science III
8. Business Communication and Value Science III

The following paper was added for B.Tech II year as per GR22 Regulations

9. Effective Technical Communication



00A

**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)**

GRIET/Management /BOS/1E/G/22-23

02 May 2022

**Minutes of Meeting  
For**

**BOS – MANAGEMENT**

**[Management and Allied Courses in B. Tech I – IV Year  
(CE, CSB, CSM, CSE, CSD, ECE, EEE, ME, IT ) & M. Tech I & II  
Years and B. Tech. with Minor program]**

*(For students admitted from 2022-23 as per GR 22 Regulations)*

**Board of Studies**

**Held on  
02 May 2022**



**Gokaraju Rangaraju Institute of Engineering and Technology  
(Autonomous)**

Minutes of meeting of the BoS for Management and other allied courses in B. Tech (I – IV Year) – all branches and M.Tech (I & II Years) and B. Tech. with Minor program all branches of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous) Hyderabad held on 02<sup>nd</sup> May 2022 in GRIET Campus, at 1:00 PM.

**Members Present:**

Dr.Y. Rama Krishna Prasad  
Professor, DMS  
GRIET, Bachupally, Hyderabad

Bos - Chairman

*Y. Prasad*  
02/5/22

Dr. Sindhu  
Professor & Director, SMS- JNTUH  
Hyderabad

Member (JNTU Nominee)

*Sindhu*

Dr. K. Veeraiah  
HOD, Department of Management Studies  
MLRITM -Hyderabad

Member (External Expert)

*K. Veeraiah*

Dr S Kalyan  
BVRIT Hyderabad College of Engineering for Women  
Bachupally, Hyderabad

Member (External Expert)

*S. Kalyan*  
02/05/2022

Mr. D.V.T. Prasad  
General Manager – Technical.  
Foshan Lisun Machinery Co, Ltd., Hyderabad

Member (Industry)

*D.V.T. Prasad*

Dr. G. Patrick  
Professor, HOD - Dept. of S&H  
GRIET, Bachupally, Hyderabad

Member

*G. Patrick*

Dr. D. Indira  
Professor and Assoc. Dean EDC  
DMS- GRIET, Bachupally, Hyderabad

Member

*D. Indira*

Mr. S. Ravendra Chary  
Associate Professor, DMS  
GRIET, Bachupally, Hyderabad

Member

*S. Ravendra Chary*

Mr. K K Sunil Kumar  
Associate Professor, Dept. Humanities  
GRIET, Bachupally, Hyderabad

Member

*K. K. Sunil Kumar*

Ms. Y Gayathri  
Assistant Professor, Dept. Humanities  
GRIET, Bachupally, Hyderabad

Member

*Y. Gayathri*

Ms. K Latha  
Assistant Professor, Dept. Humanities  
GRIET, Bachupally, Hyderabad

Member

*K. Latha*

- Item 1: Course structure, Syllabus subject to the approved by Academic Council is confirmed for B. Tech (I – IV Year) of all branches and M. Tech (Audit Courses) of all branches with Minor program all branches for the \*subjects of Management as confirmed by BOS of respective subjects are accepted (copy enclosed)
- Item 2: Evaluation scheme suggested as per GR22 to be adopted
- Item 3: Panel of examiners are suggested
- Item 4: Existing practices to be strengthened and confirmed.





# Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)

## DEPARTMENT OF HUMANITIES AND SCIENCES (Management)

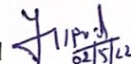

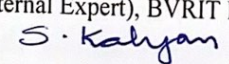
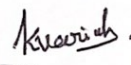
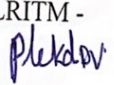
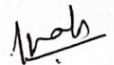
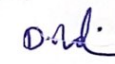


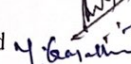
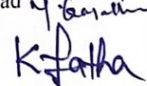
Minutes of Meeting for reviewing and emending the changes suggested by the BoS of Management and other allied courses in B. Tech (I – IV Year), M.Tech (I & II Years), B. Tech. with Minor program of the GR22 Regulations on 27<sup>th</sup> April 2022

GRIET/H&S – Humanities /15A/G/22-23

02<sup>nd</sup> May 2022

The following members are present to discuss the BoS of Management and other allied courses in B. Tech (I – IV Year) and M.Tech (I & II Years) and B.Tech with minor program of the GR22 Regulations on 02May 2022 and suggested some modifications and the same is implemented.

### The following faculty members were presented:

1. Dr.Y. Rama Krishna Prasad , Bos – Chairman, Professor, DMS,GRIET, Bachupally, Hyderabad 
2. Dr. Sindhu , Member (JNTU Nominee), Professor, SMS, JNTUH, Hyderabad 
3. Dr S Kalyan, Member (External Expert), BVRIT Hyderabad College of Engineering for Women Bachupally, Hyderabad 
4. Dr. K. Veeraiah, Member (External Expert), HOD, Department of Management Studies, MLRITM - Hyderabad   

5. Mr. D.V.T. Prasad, Member (Industry), General Manager – Technical, Foshan Lisun Machinery Co, Ltd.,Hyderabad
6. Dr. G. Partick, Member, Professor, HOD - Dept. of S&H, GRIET, Bachupally, Hyderabad 
7. Dr. D. Indira, Member, Professor and Assoc. Dean EDC, DMS- GRIET, Bachupally, Hyderabad 
8. Mr. S. Ravendra Chary , Member, Associate Professor, DMS, GRIET, Bachupally, Hyderabad 
9. Mr. K K Sunil Kumar, Member, Associate Professor, Dept. Humanities, GRIET, Bachupally, Hyderabad 
10. Ms. Y Gayathri, Member, Assistant Professor, Dept. Humanities, GRIET, Bachupally, Hyderabad 
11. Ms. K Latha, Member, Assistant Professor, Dept. Humanities, GRIET, Bachupally, Hyderabad 

The following points are discussed in the meeting:

S. No.	Item	Action
1	After review of the Economics and Accounting for Engineers course, it was suggested to remove or reduce some content in the unit- iv capital budgeting and all new national income components in unit -3 and finally after clarification same subject will be continued.	Suggested modifications done by JNUTH nominee



2	Received the suggestion on Value Ethics and Gender Culture to include the case lets for the better understanding the content in applied orientation.	Suggested modifications done
3	Acknowledged the Constitution of India syllabus and refereed to add some content on Judiciary content in the last unit (if possible and time into consideration).	Suggested content added in the course
4	Based on the University nominee and other experts 'suggestions the content of Fundamentals of Management and Entrepreneurship is modified based on the learning requirement of engineers	Suggested modifications done
5	For the open elective courses of Thread 1 they appreciated the courses proposed by the BOS and suggested to continue the same for the subjects of HRD & OB, but they suggested some modifications in the Cyber Law and Ethics in the title of the course as IPR & Cyber law as 60+40 ration and in Economic Policies in India the content to be added the current topics such as budgets, GDP, NITI Aayog and some current aspects.	Suggested content added in the course
6	Cleared the courses of Fundamentals of Economics, Design Thinking without any changes and suggested some changes i.e precise the content in the course LSPD-Life Skills and Personality Development, with reference textbooks.	The same syllabus continued
7	For the M. Tech audit courses, they recommended to add the judiciary aspects in the Indian Constitution, emphasized to change the title of Stress Management by Yoga as "Stress Management and Yoga" and for other courses they approved.	Suggested content added in the course
8	Finally, they emphasized on the reference books to be new additions and titles to be given to all courses and suggested to continue with modern case studies for all the subjects as per the need of syllabus and student requirements.	Suggested content added in the course
9	Courses proposed for the CSB program to be re-evaluated for the feasibility for completion and complexity for the UG programme	Informed to DAA for further actions.
10	JNUTH nominee suggested that B Tech Minors program syllabus to be as per the university pattern	Informed to DAA and proposed as per JNTUH

*Handwritten signature*

BOS – Humanities (Management)

## Changes made in GR 22 compared to GR 20 syllabus Under BOS of Management

**Subject Name: Value Ethics and Gender Culture**

Unit	Include: GR22	Exclude from GR 20
Unit :1	Case Study added on values and self-development	NONE
Unit: 2	Case Study added on Personality	NONE
Unit: 3	Case Study added on professional ethics	NONE
Unit: 4	Case Study added on attitudes towards gender	NONE
Unit: 5	Case Study added on gender-based violence in view of human rights	NONE

**Subject Name: Economics and Accounting for Engineers**

Unit	Include: GR22	Exclude from GR 20
Unit :1	NONE	NONE
Unit: 2	NONE	NONE
Unit: 3	National Income and its Components are added	NONE
Unit: 4	NONE	NONE
Unit: 5	NONE	NONE

**Subject Name: Constitution of India**

Unit	Include: GR22	Exclude from GR 20
Unit :1	NONE	NONE
Unit: 2	NONE	NONE
Unit: 3	NONE	NONE
Unit: 4	NONE	NONE
Unit: 5	Composition of Indian Judiciary added	NONE

**Subject Name: Design Thinking**

Unit	Include: GR22	Exclude from GR 20
Unit :1	NONE	NONE
Unit: 2	NONE	NONE
Unit: 3	NONE	NONE
Unit: 4	NONE	NONE
Unit: 5	End of the syllabus Case Studies to be done	NONE

**Subject Name: LSPD-Life Skills and Personality Development (Removed the course)**

Unit	Include: GR22	Exclude from GR 20
Unit :1	NONE	NONE
Unit: 2	NONE	NONE
Unit: 3	NONE	NONE
Unit: 4	NONE	NONE
Unit: 5	NONE	NONE





**Gokaraju Rangaraju Institute of Engineering and Technology**  
**(Autonomous)**

GRIET/CE/BOS/IE/G/21-22

9<sup>th</sup> April 2022

Minutes of Meeting

For

**I & II B.Tech Civil Engineering**

(For Students admitted from 2022-23 as per GR22 Regulations)

**Board of Studies**

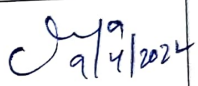
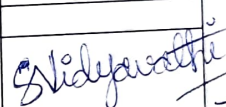

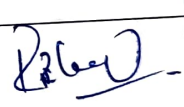
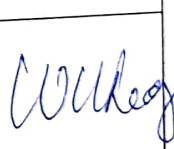
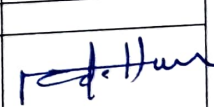

Held on 9<sup>th</sup> April 2022



**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
(Autonomous)

Minutes of meeting of the BOS for B. Tech Civil Engineering, Course Structure and Syllabus approval for I & II year GR22 Regulation of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous) held on 9<sup>th</sup> April 2022 in the Department of Civil Engineering, GRIET at 11:30 AM.

Venue: Room No:4212, Seminar Hall, Civil Engineering Department.

S.No.	Name of the member	Position in the Current Engagements	Position in the BOS	Signature
<b>Chairperson</b>				
1	Dr C Lavanya	Professor & HOD, Department of Civil Engineering, GRIET, Hyderabad	Chairman	
<b>University Nominee</b>				
2	Dr S Vidyavathi	Professor, Department of Civil Engineering, JNTUH, Kukatpally	JNTUH Nominee	
<b>Educationist or Industrialist</b>				
3	Dr M V Seshagiri Rao	Professor, Department of Civil Engineering, CVR College of Engineering	External Expert (Academics)	
4	Dr. R. Prasanna Kumar	Professor & HOD, Department of Civil Engineering, Geetanjali College of Engineering & Technology.	External Expert (Academics)	
5	Dr V V Krishna Reddy	Chief Consultant & Proprietor, M/S Continental Designers Project Consultant	External Expert (Industry)	
<b>Members</b>				
6	Dr Mohammad Hussain	Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	
7	Dr G V V Satyanarayana	Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	

8	Dr V Srinivasa Reddy	Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	<i>VSR</i> 09/07
9	Dr T Srinivas	Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	<i>T</i> 09/04/22
10	Dr O S D Hima Bindu	Associate Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	<i>Bidoo</i> 9/4/22
11	Mr T Srikanth	Associate Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	<i>T</i> 9/4/22
12	Mr A Prakash	Assistant Professor, Department of Civil Engineering, GRIET, Hyderabad	Internal Member	<i>A</i> 9/4/22
13	Dr R Raman Goud	Professor, Department of Mechanical Engineering, GRIET, Hyderabad	Internal Member	<i>Raman</i>
14	Ms K Ramya	System Support Engineer, Tata Consultancy Services, Hyderabad	Alumni	<i>Ramya</i>

**Item 1:** Syllabus subject to approval by Academic council is confirmed for B. Tech Civil Engineering I & II Year.

**Item 2:** Subjects of BS, ES, HS and MC are confirmed by BOS of respective Departments.

**Item 3:** Evaluation Scheme suggested as per GR22 to be adopted.

**Item 4:** Panel of Examiners are suggested.

**Item 5:** Existing Practices to be strengthened and continued.





# **GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**

**(Autonomous)**

## **ACTION TO BE TAKEN IN B. TECH COURSE STRUCTURE AND II YEAR SYLLABUS**

Minutes of meeting of the BOS for B. Tech Civil Engineering, Course Structure and Syllabus approval for I & II year GR22 Regulation of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous) held on 9<sup>th</sup> April 2022 in the Department of Civil Engineering, GRIET at 11:30 AM.

Venue: Room No:4212, Seminar Hall, Civil Engineering Department.

The following members constitute the board of studies of Civil Engineering, with effect from the Academic year 2021-22.

1. Dr C Lavanya, Professor & I/C HOD, DCE, GRIET	BOS Chairman
2. Dr S Vidyavathi, Professor, DCE, JNTUH, Kukatpally	JNTU Nominee
3. Dr M V Seshagiri Rao, Professor, DCE, CVR College of Engineering	External Expert (Academics)
4. Dr. R. Prasanna Kumar, Professor & HOD, DCE, Geetanjali College of Engineering & Technology	External Expert (Academics)
5. Dr V V Krishna Reddy, Chief Consultant & Proprietor, M/S Continental Designers Project Consultant	External Expert (Industry)
6. Dr Mohammad Hussain, Professor, DCE, GRIET	Internal Member
7. Dr G V V Satyanarayana, Professor, DCE, GRIET	Internal Member
8. Dr V Srinivasa Reddy, Professor, DCE, GRIET	Internal Member
9. Dr T Srinivas, Professor, DCE, GRIET	Internal Member
10. Dr O S D Hima Bindu, Associate Professor, DCE, GRIET	Internal Member
11. Mr T Srikanth, Associate Professor, DCE, GRIET	Internal Member
12. Mr A Prakash, Assistant professor, DCE, GRIET	Internal Member
13. Dr R Raman Goud, Professor, DME, GRIET	Co-opted Member
14. Ms K Ramya, System Support Engineer, TCS, Hyderabad	Alumni

Head of the department welcomed all members in BOS meeting and discussed the following points to be considered in the syllabus.

S.No	Actionable Items	Action to be Taken by
1	<p>Change in Course Structure:</p> <p>Courses in Professional Elective Threads were rearranged to satisfy the Pre requisites.</p> <ol style="list-style-type: none"> <li>1. In Geotechnical and Transportation Engineering thread – Pavement Design &amp; Urban Transportation and Planning are mutually exchanged.</li> <li>2. Surface Hydrology, Open Channel flow, Ground water, Physico-Chemical Processes for water and wastewater treatment, Design of Hydraulic Structures, Irrigation management are allocated in Environmental and Hydrology Engineering thread.</li> <li>3. Pavement Materials, Green Building Technology, Tall Buildings, Rehabilitation and Retrofitting of Structures, Construction Project Planning and systems, Construction Equipment and Automation are arranged in Construction Technology &amp; Management.</li> </ol>	Mrs K Hemalatha
2	All the subjects must be included with Text Books and Reference Books separately with latest edition and year of Publication in uniform count and Citation.	Mrs K Hemalatha
3	<p>Changes in Syllabus:</p> <p><b>Solid Mechanics I:</b> Shear Force and Bending moment as Unit II, Flexural Stresses and Shear Stresses as Unit III, Compound Stresses and Strains as Unit IV</p>	Mrs K Hemalatha
4	<p>Changes in Syllabus:</p> <p><b>Introduction to Fluid Mechanics:</b> Unit I to V are rearranged as below to avoid repetitions and follow the order of topics covered in syllabus.</p> <ol style="list-style-type: none"> <li>1. Fluid Kinematics Concept is kept in Unit II</li> <li>2. Measurement of discharge and Velocity in Unit III</li> <li>3. Flow Through Pipes as Unit IV and included Reynolds experiment, Laminar, Transition and Turbulent flow. The same topics were removed in Unit V- Boundary Layer Analysis.</li> <li>4. Laminar flow through straight circular pipes- Haigen-Poisuelle equation derivation were introduced in Unit V.</li> </ol>	Mr S Venkatacharyulu
5	<p>Changes in Syllabus:</p> <p><b>Engineering Geology Lab:</b></p> <ol style="list-style-type: none"> <li>1. Study of Geological map of India introduced as new experiment in Task III.</li> <li>2. Simple Structural Geological problems as new experiment in Task V.</li> <li>3. Experiment III and Experiment V are rearranged as Task IV and VI.</li> </ol>	Mrs I Chandana

6	<p>Changes in Syllabus:</p> <p><b>Surveying and Geomatics:</b></p> <p>List of softwares related to Digital photogrammetry is introduced in Unit V- Photogrammetry Surveying.</p>	Mr T Srikanth
7	<p>Changes in Syllabus:</p> <p><b>Hydraulic Engineering:</b></p> <ol style="list-style-type: none"> <li>1. Computation of Uniform flow topic is introduced in Unit I.</li> <li>2. Hydraulic Jump entire concept is assigned in Unit III and removed from Unit IV to maintain continuity as a whole.</li> <li>3. Basics of Turbo Machinery concept is moved to Unit IV after Hydraulic Turbines</li> <li>4. Jet striking at tip of the vane is included in Basics of Turbo Machinery concept.</li> </ol>	Dr Mohammed Hussain
8	<p>Changes in Syllabus:</p> <p><b>Fluid Mechanics and Hydraulic Machinery lab:</b></p> <p>All the experiments are rearranged with few modifications as mentioned below:</p> <ol style="list-style-type: none"> <li>1. Calibration of Venturimeter/ Orificemeter as Experiment 1</li> <li>2. Calibration of Rectangular notch/ Triangular Notch as Experiment 2.</li> <li>3. Major losses as Experiment 3.</li> <li>4. Minor losses in pipe (Hydraulic losses due to sudden enlargement of pipe and sudden contraction of pipe) as Experiment 4</li> <li>5. Verification of Bernoulli's Theorem, Reynold's experiment Laminar Flow and Turbulent flow through pipes, Impacts of jets on vanes, Pelton wheel turbine, Multi stage centrifugal pump, Hydraulic Jump are assigned as Experiment 5,6,7,8,9,10.</li> </ol>	Mr S Venkatacharyulu



BOS - Chairman

PROFESSOR AND HEAD  
Department of Civil Engineering  
Gokaraju Rangaraju Institute of  
Engineering and Technology  
Bachupally, Kukatpally,  
Hyderabad-500 090





**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**  
**(Autonomous)**

Internal Minutes of meeting of the BOS for B. Tech Civil Engineering, Course Structure and Syllabus approval for 1 & II-year GR22 Regulation of Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous) held on 29<sup>th</sup> Jan 2022 through Online mode from 2:30 PM to 4:00 PM.

S.No	Name of the Member	Position in the current Engagements	Position in the BOS
<b>Chairperson</b>			
1	Dr C Lavanya	Professor, DCE, GRIET	Chairman
<b>Members</b>			
2	Dr V. Mallikarjun Reddy	Professor, DCE, GRIET	Internal Member
3	Dr. Mohammed Hussain	Professor, DCE, GRIET	Internal Member
4	Dr. V. Srinivasa Reddy	Professor, DCE, GRIET	Internal Member
5	Dr. G.V.V. Satyanarayana	Professor, DCE, GRIET	Internal Member
6	Dr. T. Srinivas	Professor, DCE, GRIET	Internal Member
7	Dr K Srikanth	Associate Professor, DCE, GRIET	Internal Member
8	Dr. O.S.D. Hima Bindu	Associate Professor, DCE, GRIET	Internal Member
9	Mr T Srikanth	Associate Professor, DCE, GRIET	Internal Member
10	Mr S. Venkatacharyulu	Assistant Professor, DCE, GRIET	Internal Member
11	Mr Siva Prasad Raju V	Assistant Professor, DCE, GRIET	Internal Member
12	Mr. Y. Kamala Raju	Assistant Professor, DCE, GRIET	Internal Member
13	Ms. K. Hemalatha	Assistant Professor, DCE, GRIET	Internal Member
14	Mr C Vivek Kumar	Assistant Professor, DCE, GRIET	Internal Member
15	Ms I Chandana	Assistant Professor, DCE, GRIET	Internal Member

The members of board of studies during the meeting held on 29<sup>th</sup> January 2022 through Online meeting discussed thoroughly and drew the following recommendations for I and II years of GR22:

1. All the subjects must be included with Pre-Requisites and action verbs in Course objectives, Course outcomes as per Blooms Taxonomy levels.
2. The following recommendations were done in Course Structure:
  - i) Basic Electrical and Electronics Engineering & Surveying and Geomatics courses are mutually exchanged from II year I semester to II-year II Semester and vice versa as Surveying and Geomatics, Surveying lab need to be assigned in Same semester for better understanding in equipment usage.
  - ii) Environmental Science- Mandatory Course is shifted from II year I semester to II-year II Semester to balance total courses.
  - iii) Finite Element Methods is introduced as new Course in Professional Elective IV which is a very versatile numerical technique and is a general tool to solve any type of physical problems
  - iv) Port and Harbour Engineering is introduced as a new course in Professional Elective IV as there are no courses in Transportation Engineering thread related to Port and Harbour.
  - v) Environmental Impact Assessment is introduced as new Course in Open Elective III
3. In Building materials and Construction Planning, Acoustics, Characteristics, Absorption topics are removed as they are not relevant and huge topics in that unit.
4. In Solid Mechanics II, Elliptical Springs topic included in Unit II and Johnsons & Parabolic Formula concept problems are to be added in Unit III.
5. Hydraulic Engineering-
  - i) Course outcomes are revised as per Blooms Taxonomy level
  - ii) In Unit I syllabus, most economical section was specified as Rectangular, Trapezoidal and Circular Channel sections.
  - iii) In Unit I, Critical flow is replaced specifically with Critical flow in rectangular channel.
6. In Surveying lab, three exercises term was removed in Task II and Two methods removed from Task VII as the syllabus is huge.



**BOS-Chairman**

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**GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY**

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**DEPARTMENT OF CIVIL ENGINEERING**

**Comparison of syllabus**

S.No	Name of the Course	GR20 to GR22
1	New Courses	Finite Element Methods, Port and Harbour Engineering and Environmental Impact Assessment are introduced as New courses in Professional Elective IV and Open Elective III.
2	Professional electives and open electives	Six professional electives starting from III yr I sem and three open electives starting from III yr I sem
3	value Added Courses	Six Value Added courses starting from I year I Sem to III year II Semester
4	Structural Engineering thread	Structural Analysis II, Masonry Structures, Bridge Engineering, Finite Element Methods, Prestressed Concrete, Earthquake Engineering
5	Geotechnical and Transportation Engineering thread	Traffic Engineering and Management, Rock Mechanics, Ground Improvement Techniques, Port and Harbour Engineering, Urban Transportation Planning, Pavement Design
6	Environmental and Hydrology Engineering thread	Surface Hydrology, Open Channel flow, Groundwater, Physico-Chemical Processes for Water and Wastewater Treatment, Design of hydraulic structures, Irrigation Management
7	Construction Technology & Management thread	Pavement Materials, Green Building Technology, Tall Buildings, Rehabilitation & Retrofitting of Structures, Construction Project Planning & Systems, Construction Equipment & Automation
8	Solid Mechanics I	Shear Force and Bending moment as Unit II, Flexural Stresses and Shear Stresses as Unit III, Compound Stresses and Strains as Unit IV
9	Solid Mechanics II	Elliptical Springs topic included in Unit II and Johnsons & Parabolic Formula concept problems in Unit III
10	Introduction to Fluid Mechanics	Unit I to V are rearranged to follow the order and repetitions of few topics are removed
11	Engineering Geology Lab	Study of Geological map of India, Simple Structural Geological problems as new experiments in Task III and V
12	Surveying and Geomatics	List of softwares related to Digital photogrammetry is introduced in Unit V
13	Hydraulic Engineering	Computation of Uniform flow topic is introduced in Unit I, Jet striking at tip of the vane is included in Basics of Turbo Machinery concept
14	Fluid Mechanics and Hydraulic Machinery lab	All the experiments are rearranged with few modifications

  
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**DEPARTMENT OF CIVIL ENGINEERING**

**Comparison of syllabus**

S.No	Name of the Course	GR20 to GR22	POs	PSOs
1	New courses in Professional Elective IV and Open Elective III.	Finite Element Methods	a,b,c,d	2
		Port and Harbour Engineering	a,c,d	2
		Environmental Impact Assessment	g	1
2	Professional electives and open electives	Six professional electives starting from III yr I sem and three open electives starting from III yr I sem	-	-
3	Value Added Courses	Six Value Added courses starting from I year I Sem to III year II Semester	-	-
4	Structural Engineering thread	Structural Analysis II	a,b,c,d	2
		Masonry Structures	a,c,j,l	1,2
		Bridge Engineering	a,b,c,d	2
		Finite Element Methods	a,b,c,d	2
		Prestressed Concrete	a,b,c,d	2
		Earthquake Engineering	a,b,c,d	2
5	Geotechnical and Transportation Engineering thread	Traffic Engineering and Management	a,b,c,d	2
		Rock Mechanics	a,g	1
		Ground Improvement Techniques	a,b,c,d	2
		Port and Harbour Engineering	a,c,d	1
		Urban Transportation Planning	a,b,c,d	2
		Pavement Design	a,b	-
6	Environmental and Hydrology Engineering thread	Surface Hydrology	a,c	2
		Open Channel flow	a,c	2
		Groundwater	a,c	2
		Physico-Chemical Processes for Water and Wastewater Treatment	a,c	2
		Design of hydraulic structure	a,b,c,d	2
		Irrigation Management	a,b,c,d	2
7	Construction Technology & Management thread	Pavement Materials	a,l	-
		Green Building Technology	g	1
		Tall Buildings	a,b,c,d	2
		Rehabilitation & Retrofitting of Structures	a,c,d	2
		Construction Project Planning & Systems	a,b,c,d	2
		Construction Equipment & Automation	a,c,d	2
8	Solid Mechanics I	Shear Force and Bending moment as Unit II, Flexural Stresses and Shear Stresses as Unit III, Compound Stresses and Strains as Unit IV	a,b,d	2
9	Solid Mechanics II	Elliptical Springs topic included in Unit II and Johnsons & Parabolic Formula concept problems in Unit III	a	-
10	Introduction to Fluid Mechanics	Unit I to V are rearranged to follow the order and repetitions of few topics are removed	a	-
11	Engineering Geology Lab	Study of Geological map of India, Simple Structural Geological problems as new experiments in Task III and V	a	-
12	Surveying and Geomatics	List of softwares related to Digital photogrammetry is introduced in Unit V	a,b,c	2
13	Hydraulic Engineering	Computation of Uniform flow topic is introduced in Unit I, Jet striking at tip of the vane is included in Basics of Turbo Machinery concept	a,c,d	2
14	Fluid Mechanics and Hydraulic Machinery lab	All the experiments are rearranged with few modifications	a	-

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