



VIGNAN'S INSTITUTE OF MANAGEMENT AND TECHNOLOGY FOR WOMEN

Sponsored by Lavu Educational Society, Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad.
Kondapur (V), Ghatkesar (M), Medchal - Malkajiri (D) - 501 301 Phone: +91 96529 10002/3



Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: MATRICES & CALCULUS (MA101BS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| MA101BS.1 | Student will be able to solve the system of linear equations by representing them in matrix form and analyse its solution which requires in engineering problems | 3 |
| MA101BS.2 | Student will be able to solve the Eigen values and Eigen vectors & reduce the quadratic form to canonical form using orthogonal transformations | 3,4 |
| MA101BS.3 | Mean value theorem, Beta & Gamma functions, its application in Engineering | 3 |
| MA101BS.4 | Extreme values of functions of two variables with/ without constraints | 1 |
| MA101BS.5 | Evaluate the multiple integrals and apply the concept to find areas, volumes | 1,3,6 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|------------|------------|------------|------------|----------|----------|----------|----------|----------|------------|----------|------------|------------|------------|
| MA101BS.1 | 3 | 3 | 3 | 2 | 2 | 1 | - | - | - | 1 | 1 | 1 | 1 | 2 | 1 |
| MA101BS.2 | 3 | 2 | 2 | 2 | 1 | 1 | - | - | - | 1 | 2 | 1 | 2 | 1 | 3 |
| MA101BS.3 | 3 | 3 | 2 | 2 | 1 | 1 | - | - | 1 | 1 | 2 | 1 | 1 | 2 | 3 |
| MA101BS.4 | 3 | 3 | 2 | 2 | 2 | 1 | - | - | 1 | 1 | 1 | 1 | 3 | 3 | 1 |
| MA101BS.5 | 3 | 2 | 3 | 3 | 2 | 1 | - | - | 1 | 1 | 1 | 1 | 2 | 1 | 3 |
| Average | 3 | 2.6 | 2.4 | 2.2 | 1.6 | 1 | 0 | 0 | 1 | 1 | 1.4 | 1 | 1.8 | 1.8 | 2.2 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: APPLIED PHYSICS (PH102BS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| PH102BS.1 | Understand physical world from fundamental point of view by the concepts of Quantum mechanics and visualize the difference between conductor, semiconductor, and an insulator by classification of solids. | 1 |
| PH102BS.2 | Identify the role of semiconductor devices in science and engineering Applications. | 1,3 |
| PH102BS.3 | Explore the fundamental properties of dielectric, magnetic materials and energy for their applications. | 1 |
| PH102BS.4 | Appreciate the features and applications of Nanomaterials. | 2 |
| PH102BS.5 | Understand various aspects of Lasers and Optical fiber and their applications in diverse fields. | 1 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| PH102BS.1 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 2 | 1 |
| PH102BS.2 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | - | 1 | 2 |
| PH102BS.3 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 2 | 1 |
| PH102BS.4 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 3 | - |
| PH102BS.5 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 2 | 1 |
| Average | 3 | 3 | 3 | 3 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 2 | 1.25 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: APPLIED PHYSICS LAB (PH107BS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| PH107BS.1 | Know the determination of the Planck's constant using Photo electric effect and identify the material whether it is n-type or p-type by Hall experiment. | 5 |
| PH107BS.2 | Appreciate quantum physics in semiconductor devices and optoelectronics. | 5 |
| PH107BS.3 | Gain the knowledge of applications of dielectric constant. | 1 |
| PH107BS.4 | Understand the variation of magnetic field and behaviour of hysteresis curve. | 2 |
| PH107BS.5 | Carried out data analysis. | 1 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|----------|
| PH107BS.1 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 3 | 1 |
| PH107BS.2 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 2 | 2 | 2 |
| PH107BS.3 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 1 | 1 | - |
| PH107BS.4 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 2 | 1 |
| PH107BS.5 | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 3 | 2 | 1 |
| Average | 3 | 3 | 3 | 3 | 2 | - | 2 | 1 | - | - | - | 1 | 2.4 | 2 | 1 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: PROGRAMMING FOR PROBLEM SOLVING (CS103ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| CS103ES.1 | To write algorithms and to draw flowcharts for solving problems. | 6 |
| CS103ES.2 | To code and test, a given logic in the C programming language. | 5,6 |
| CS103ES.3 | To decompose a problem into functions and to develop modular reusable code. | 6 |
| CS103ES.4 | To use arrays, pointers, strings and structures to write C programs. | 6 |
| CS103ES.5 | Searching and sorting problems. | 1 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|------------|------------|
| CS103ES.1 | 3 | 3 | 3 | 3 | 1 | 2 | 1 | - | 1 | 3 | 1 | 1 | 2 | 3 | - |
| CS103ES.2 | 2 | 3 | 2 | 3 | 1 | - | 1 | 1 | - | 2 | - | 1 | 2 | 2 | 1 |
| CS103ES.3 | 2 | 3 | 2 | 3 | - | 1 | - | - | 1 | 2 | - | - | 2 | 2 | - |
| CS103ES.4 | 3 | 3 | 3 | 3 | 1 | 2 | 1 | 1 | - | 3 | 1 | 1 | 2 | 3 | 1 |
| CS103ES.5 | 3 | 2 | 3 | 2 | 1 | 2 | 1 | - | - | 3 | 1 | 1 | 2 | 3 | - |
| Average | 2.6 | 2.8 | 2.6 | 2.8 | 0.8 | 1.4 | 0.8 | 0.2 | 0.2 | 2.6 | 0.6 | 0.8 | 2 | 2.6 | 0.4 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: PROGRAMMING FOR PROBLEM SOLVING LAB (CS108ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| CS108ES.1 | Formulate the algorithms for simple problems | 6 |
| CS108ES.2 | Correct syntax errors as reported by the compilers | 1 |
| CS108ES.3 | Represent and manipulate data with arrays, strings and structures | 4 |
| CS108ES.4 | Create, read and write to and from simple text and binary files | 6 |
| CS108ES.5 | Modularize the code with functions so that they can be reused | 3 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------|------------|------|----------|------------|------|------------|------|------|-------|------------|------------|------------|------------|------------|
| CS108ES.1 | 1 | - | - | 3 | - | - | - | - | 3 | - | - | - | - | 2 | 1 |
| CS108ES.2 | 1 | 1 | - | 3 | 1 | - | 2 | - | 2 | - | 1 | 2 | 2 | 3 | 1 |
| CS108ES.3 | 2 | - | - | 3 | - | - | 2 | - | 2 | - | - | - | 3 | 2 | 2 |
| CS108ES.4 | - | 3 | - | 3 | 1 | - | 3 | - | - | - | 1 | 1 | 1 | - | - |
| CS108ES.5 | - | - | - | 3 | - | - | - | - | - | - | - | - | - | 2 | 3 |
| Average | 0.8 | 0.8 | - | 3 | 0.4 | - | 1.4 | - | 1.4 | - | 0.4 | 0.6 | 1.2 | 1.8 | 1.4 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: COMPUTER AIDED ENGINEERING GRAPHICS (ME105ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| ME105ES.1 | Apply computer aided drafting tools to create 2D and 3D objects | 3 |
| ME105ES.2 | sketch conics and different types of solids | 3 |
| ME105ES.3 | Appreciate the need of Sectional views of solids and Development of surfaces of solids | 6 |
| ME105ES.4 | Read and interpret engineering drawings | 1 |
| ME105ES.5 | Conversion of orthographic projection into isometric view and vice versa manually and by using computer aided drafting | 4 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|------------|----------|------------|------------|------------|------------|------------|----------|------------|------------|----------|----------|----------|
| ME105ES.1 | 1 | 1 | - | 1 | - | - | - | - | - | 1 | - | - | 2 | 1 | 1 |
| ME105ES.2 | 1 | 1 | 1 | 1 | 1 | 1 | - | - | - | 1 | - | - | 2 | 1 | 1 |
| ME105ES.3 | 2 | - | 3 | 1 | 2 | 1 | - | - | 1 | 1 | - | 2 | 2 | 1 | 1 |
| ME105ES.4 | 2 | 1 | 3 | 1 | 2 | 1 | - | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 |
| ME105ES.5 | 2 | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 |
| Average | 1.6 | 0.8 | 1.8 | 1 | 1.6 | 0.8 | 0.2 | 0.4 | 0.6 | 1 | 0.4 | 1.2 | 2 | 1 | 1 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENGINEERING WORKSHOP (ME104ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| ME104ES.1 | Study and practice on machine tools and their operations | 3 |
| ME104ES.2 | Practice on manufacturing of components using workshop trades including plumbing, fitting. | 3 |
| ME104ES.3 | Practice on manufacturing of components using workshop trades including carpentry, foundry, house wiring and welding. | 3,6 |
| ME104ES.4 | Identify and apply suitable tools for different trades of Engineering processes including drilling, material removing, measuring, chiselling. | 3 |
| ME104ES.5 | Apply basic electrical engineering knowledge for house wiring practice. | 1,3 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|------------|----------|------------|----------|------------|----------|----------|------------|----------|------------|----------|-------------|-------------|
| ME104ES.1 | 3 | 1 | 3 | - | 2 | - | - | - | 2 | 2 | - | 3 | 2 | 1 | 3 |
| ME104ES.2 | 2 | 2 | 3 | - | - | - | - | - | 2 | 2 | - | 2 | 1 | 2 | 1 |
| ME104ES.3 | 2 | 2 | 1 | - | 1 | - | - | - | 2 | 2 | - | 2 | - | 1 | - |
| ME104ES.4 | 3 | 2 | 2 | 2 | - | - | 2 | - | 2 | 3 | - | 2 | 2 | - | 2 |
| ME104ES.5 | 3 | 2 | 3 | - | - | - | 3 | - | 2 | 3 | - | 3 | 3 | 1 | 1 |
| Average | 2.6 | 1.8 | 2.4 | 2 | 1.5 | - | 2.5 | - | 2 | 2.4 | - | 2.4 | 2 | 1.25 | 1.75 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENGINEERING CHEMISTRY (CH102BS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| CH102BS.1 | The students are able to understand the basic properties of water and its usage in domestic and industrial purposes. | 1,2 |
| CH102BS.2 | Students will acquire the basic knowledge of electrochemical procedures related to corrosion and its control | 1,2 |
| CH102BS.3 | They can learn the fundamentals and general properties of polymers and other engineering materials | 3 |
| CH102BS.4 | They can predict potential applications of chemistry and practical utility in order to become good engineers and entrepreneurs. | 1 |
| CH102BS.5 | They can learn the fundamentals and general properties of engineering materials | 3 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|------------|------------|----------|------------|----------|----------|----------|------------|------------|------------|-------------|----------|------------|
| CH102BS .1 | 2 | 1 | 1 | 1 | 1 | - | - | - | 1 | 1 | 2 | 3 | 2 | 3 | 3 |
| CH102BS .2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | - | 1 | 1 | 1 | 1 | 1 | 2 |
| CH102BS .3 | 1 | 3 | 3 | 1 | 3 | 2 | - | - | 1 | 1 | 1 | 1 | 2 | - | 3 |
| CH102BS .4 | 2 | 1 | 1 | 1 | 2 | 3 | - | - | - | 2 | 1 | 2 | - | 3 | 2 |
| CH102BS .5 | 3 | 3 | 2 | 3 | 3 | 3 | - | - | 1 | 2 | 3 | 2 | 2 | 1 | 3 |
| Average | 1.8 | 1.8 | 1.6 | 1.4 | 2 | 2.7 | 3 | 3 | 1 | 1.4 | 1.6 | 1.8 | 1.75 | 2 | 2.6 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENGINEERING CHEMISTRY LABORATORY (CH107BS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| CH107BS.1 | Determination of parameters like hardness of water. | 5 |
| CH107BS.2 | Determination of rate of corrosion of mild steel in various conditions. | 5 |
| CH107BS.3 | Able to perform methods such as conductometry, potentiometry and pH metry in order to find out the concentrations or equivalence points of acids and bases. | 1 |
| CH107BS.4 | Students are able to prepare polymers like Bakelite and nylon-6. | 2 |
| CH107BS.5 | Estimations saponification value, surface tension and viscosity of lubricant oils | 5 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|----------|----------|------------|------------|----------|----------|----------|------------|----------|------------|------------|------------|------------|
| CH107BS .1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | - | - | 2 |
| CH107BS .2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | - | - | 1 |
| CH107BS .3 | 2 | - | 1 | - | - | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 1 | 2 |
| CH107BS .4 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | - | - | - | 2 |
| CH107BS .5 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | - | - | 2 |
| Average | 1.6 | 0.8 | 1 | 1 | 1.4 | 2.6 | 3 | 2 | 2 | 2.8 | 2 | 2.2 | 0.2 | 0.2 | 1.8 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENGLISH (EN205HS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| EN205HS.1 | Use English Language Effectively in Spoken and Written Forms. | 3 |
| EN205HS.2 | Comprehend the given text and respond appropriately. | 2 |
| EN205HS.3 | Communicate confidently in formal and informal contexts. | 4 |
| EN205HS.4 | Acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills. | 6 |
| EN205HS.5 | The vocabulary skills of the students will be developed to guess the meanings of the words in different contexts and finally in grasping the overall message of the text. | 6 |
| EN205HS.6 | To express themselves fluently and appropriately in social and professional contexts. | 1 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|----------|----------|----------|------------|------------|------------|------------|----------|------------|------------|----------|------------|------------|------------|
| EN205HS.1 | - | 1 | - | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | - | - | 3 |
| EN205HS.2 | - | 1 | - | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | - | - | 3 |
| EN205HS.3 | 3 | 1 | 1 | 1 | - | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 |
| EN205HS.4 | - | - | 1 | - | 2 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | - | - | 2 |
| EN205HS.5 | - | - | - | 1 | 1 | 1 | 1 | 1 | - | 1 | 1 | 1 | 1 | 1 | 2 |
| Average | 3 | 1 | 1 | 1 | 1.2 | 1.8 | 1.4 | 2.2 | 2 | 2.4 | 2.2 | 2 | 1.5 | 1.5 | 2.6 |



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I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENGLISH LANGUAGE AND COMMUNICATION SKILLS LAB(EN109HS)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| EN109HS.1 | Better understanding of nuances of language through audio visual experience and group activities. | 2 |
| EN109HS.2 | Neutralization of accent for intelligibility. | 1 |
| EN109HS.3 | Speaking with clarity and confidence thereby enhancing employability skills of the students. | 1 |
| EN109HS.4 | Build self –confidence and art of presentations | 3 |
| EN109HS.5 | Overcome stage fear, develop team playing | 6 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|----------|
| EN109HS.1 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | - | 1 | 1 |
| EN109HS.2 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | - | 2 | 1 |
| EN109HS.3 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | - | 1 |
| EN109HS.4 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 2 | 1 |
| EN109HS.5 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | - | 2 | 1 |
| Average | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 1.75 | 1 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: BASIC ELECTRICAL ENGINEERING (EE104ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| EE104ES.1 | Understand and analyze basic Electrical circuits | 2 |
| EE104ES.2 | Study the working principles of Electrical Machines and Transformers | 1 |
| EE104ES.3 | Identify the starting methods of starting synchronous and induction motors and speed control methods for DC motors | 3 |
| EE104ES.4 | Understand the principle of operation of moving coil, moving iron and dynamometer type instruments | 2 |
| EE104ES.5 | Understand the components of Low Voltage Electrical Installations | 2 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|------------|------------|------------|----------|----------|----------|------------|----------|----------|------------|----------|------------|------------|----------|
| EE104ES.1 | 2 | 3 | 3 | 3 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 3 | 2 | 3 | 1 |
| EE104ES.2 | 2 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | - | - |
| EE104ES.3 | 3 | 2 | 2 | 1 | - | - | 1 | - | 1 | - | - | - | 3 | 2 | 1 |
| EE104ES.4 | 3 | 2 | 2 | 1 | - | - | 1 | - | 1 | - | - | - | 1 | 3 | 1 |
| EE104ES.5 | 3 | 2 | 2 | 1 | - | - | 1 | - | 1 | - | - | - | 3 | 2 | 1 |
| Average | 2.6 | 2.4 | 2.4 | 1.8 | 2 | 1 | 1 | 1.5 | 1 | 1 | 1.5 | 3 | 2.4 | 2.5 | 1 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: BASIC ELECTRICAL ENGINEERING LAB (EE109ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| EE109ES.1 | Verify the basic Electrical circuits through different experiments | 6 |
| EE109ES.2 | Evaluate the performance calculations of Electrical Machines and Transformers through various testing methods. | 5,6 |
| EE109ES.3 | Analyse the transient responses of R, L and C circuits for different input conditions | 4 |
| EE109ES.4 | Experimentally verify the basic circuit theorems | 6 |
| EE109ES.5 | Measure power and power factor in ac circuits | 5 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|------------|----------|------------|------------|------------|------------|----------|----------|------------|----------|------------|------------|----------|-------------|-------------|
| EE109ES.1 | 3 | 2 | 1 | - | 1 | - | - | - | 2 | - | 2 | 2 | 2 | 1 | 1 |
| EE109ES.2 | 3 | 2 | 1 | - | 3 | 1 | - | 1 | 1 | 2 | 1 | 2 | 1 | 3 | - |
| EE109ES.3 | 3 | 2 | 1 | 1 | 3 | 2 | - | - | 1 | - | 2 | 2 | 2 | - | 1 |
| EE109ES.4 | 2 | 2 | 2 | 2 | - | 2 | 1 | - | 2 | 2 | 1 | 1 | 3 | 2 | 2 |
| EE109ES.5 | 2 | 2 | 2 | 2 | - | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 |
| Average | 2.6 | 2 | 1.4 | 1.6 | 2.3 | 1.7 | 1 | 1 | 1.6 | 2 | 1.4 | 1.6 | 2 | 1.75 | 1.25 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: ENVIRONMENTAL SCIENCE (MC110)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|---------|---|------------|
| MC110.1 | understand technologies on the basis of ecological principles and environmental regulations | 2 |
| MC110.2 | evaluate technologies on the basis of ecological principles and environmental regulations | 6 |
| MC110.3 | develop technologies on the basis of ecological principles and environmental regulations | 6 |
| MC110.4 | understand the impacts of developmental activities and mitigation measures | 2 |
| MC110.5 | understand the importance of ecological balance for sustainable development | 2 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|----------|----------|------------|------------|------------|----------|----------|----------|------------|----------|------------|----------|----------|------------|
| MC110.1 | 1 | 1 | - | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | - | - | 2 |
| MC110.2 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | - | - | 1 |
| MC110.3 | 1 | - | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 1 | 2 |
| MC110.4 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | - | - | 2 |
| MC110.5 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | - | - | 2 |
| Average | 1 | 1 | 1 | 1.2 | 1.8 | 2.6 | 3 | 2 | 2 | 2.8 | 2 | 2.6 | 1 | 1 | 1.8 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: C PROGRAMMING FOR ENGINEERS (EC103ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|--|------------|
| EC103ES.1 | Draw flowcharts for solving arithmetic and logical problems | 1 |
| EC103ES.2 | Develop modular reusable code by understanding concepts of functions | 2,6 |
| EC103ES.3 | Formulate algorithms and programs using arrays, pointers, strings and structures | 6 |
| EC103ES.4 | Write a program using Searching and sorting algorithms | 6 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|------------|------------|------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| EC103ES.1 | 3 | 2 | 1 | 1 | - | 1 | - | - | 1 | - | - | 1 | 2 | - | - |
| EC103ES.2 | 3 | 2 | 3 | 2 | - | 2 | - | - | 1 | 2 | - | - | 2 | 2 | 1 |
| EC103ES.3 | 3 | 3 | 2 | 1 | 1 | 2 | - | 1 | 1 | - | - | 1 | 2 | 2 | - |
| EC103ES.4 | 3 | 3 | 3 | 2 | 1 | 1 | - | 1 | - | - | 2 | - | - | 2 | 1 |
| Average | 3 | 2.5 | 2.2 | 1.5 | 1 | 1.5 | 0 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 |



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Department of Basic Science & Humanities

I-B.Tech I Semester (R22 Regulation)

SUBJECT: C PROGRAMMING FOR ENGINEERS LABORATORY (EC108ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| EC108ES.1 | Write algorithms and to draw flowcharts for solving problems and translate the algorithms/flowcharts to programs (in C language). | 6 |
| EC108ES.2 | Use functions to develop modular reusable code | 6 |
| EC108ES.3 | Use arrays, pointers, strings and structures to formulate algorithms and programs. | 6 |
| EC108ES.4 | Understand Searching and sorting algorithms | 2 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|------------|------------|------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| EC108ES.1 | 3 | 2 | 1 | 1 | 1 | 1 | - | - | 1 | - | 1 | 1 | 2 | - | - |
| EC108ES.2 | 3 | 2 | 3 | 2 | 1 | 2 | - | - | 1 | - | 1 | 1 | 2 | - | - |
| EC108ES.3 | 3 | 3 | 2 | 1 | 1 | 2 | - | - | 1 | - | 1 | 1 | 2 | - | - |
| EC108ES.4 | 3 | 3 | 3 | 2 | 1 | 1 | - | - | 1 | - | 1 | - | 2 | - | - |
| Average | 3 | 2.5 | 2.2 | 1.5 | 1 | 1.5 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 0 |



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Department of Basic Science & Humanities

AY: 2022-23

I-B.Tech I Semester (R22 Regulation)

SUBJECT: ELEMENTS OF ELECTRONICS & COMMUNICATION ENGINEERING (EC106ES)

After going through this course, the student gets a thorough knowledge on

COURSE OUTCOMES:

| S. No. | COURSE OUTCOMES | B.T. LEVEL |
|-----------|---|------------|
| EC106ES.1 | Identify the different components used for electronics applications | 3 |
| EC106ES.2 | Measure different parameters using various measuring instruments | 5 |
| EC106ES.3 | Distinguish various signal used for analog and digital communications | 4 |

MAPPING:

| CO | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|----------------|----------|------------|----------|------------|----------|------------|----------|----------|----------|----------|----------|----------|----------|----------|-------------|
| EC106ES .1 | 3 | 2 | 1 | 1 | 1 | 1 | - | - | 1 | - | - | 1 | - | - | 2 |
| EC106ES .2 | 3 | 2 | 3 | 2 | 1 | 2 | - | - | 1 | - | - | 1 | - | - | 1 |
| EC106ES .3 | 3 | 3 | 2 | 1 | 1 | 2 | - | - | 1 | - | - | 1 | 1 | 1 | 2 |
| Average | 3 | 2.3 | 2 | 1.3 | 1 | 1.6 | - | - | 1 | - | - | 1 | 1 | 1 | 1.67 |