# R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

R.S.M Nagar, Kavaraipettai, Gummidipoondi Taluk, Thiruvallur Dt- 601206.
Affiliated to Anna University, Chennai/Approved by AICTE, New Delhi / ISO 21001:2018 Certified Institution/
Accredited by NAAC with A+ Grade/ All the eligible UG Programs are accredited by NBA, New Delhi

## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Civil Engineering – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH103 | Physics for Civil Engineering (Lab Integrated) |
| 5 | 1 | 24CE101 | Applied Mechanics |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

# First Semester B.E., / CE

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH103 - Physics for Civil Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | comprehend the elastic properties of materials. |
| **CO2** | explain sound absorption coefficient, factors affecting acoustics of buildings. |
| **CO3** | describe the thermal concepts and its applications. |
| **CO4** | analyze the crystalline structure and properties of materials. |
| **CO5** | interpret the properties of various nano and novel engineering materials and their applications. |
| **CO6** | explain the various properties and applications of materials in engineering and technology. |

| 24CE101 - Applied Mechanics | |
|---|---|
| **COs** | **Course Outcomes:** After the completion of the course, students should be able to: |
| **CO1** | Apply basic laws of mechanics to solve problems involving forces and equilibrium. |
| **CO2** | Calculate centroids and moments of inertia for various shapes and sections. |
| **CO3** | Analyze stresses and strains in materials under different loads using Hooke's Law. |
| **CO4** | Calculate deformation due to self-weight and ensure factor of safety in designs. |
| **CO5** | Analyze stresses in composite bars and use Mohr's circle for principal stresses. |
| **CO6** | Classify and analyze pin-jointed plane trusses using methods of joints and tension coefficients. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Computer Science & Engineering – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24CH101 | Engineering Chemistry (Lab Integrated) |
| 5 | 1 | 24EC102 | Digital Principles and System Design (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 9 | 1 | | Induction Program (Non Credit) |

# First Semester B.E., / CSE

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24CH101 - Engineering Chemistry (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | To examine the role of polymers in different industrial sectors. |
| **CO2** | To identify the suitability of batteries for various fields. |
| **CO3** | To apply the fundamental principles of chemical sensors, cheminformatics and their applications across various industries. |
| **CO4** | To analyze the types of smart materials used in various engineering fields. |
| **CO5** | To explore the applications of nanomaterials in various fields, considering their advantages and limitations. |
| **CO6** | To integrate the concepts of chemistry for various engineering applications. |

| 24EC102 - Digital Principles and System Design (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Apply Boolean algebra to simplify and implement digital circuits. |
| **CO2** | Design combinational circuits to meet specific functional requirements using logic gates. |
| **CO3** | Demonstrate the operation of counters and shift registers using flip-flops in sequential circuits. |
| **CO4** | Analyze synchronous sequential circuits to determine their behavior and performance characteristics. |
| **CO5** | Evaluate various types of memory devices, discussing their roles and functionalities in digital systems. |
| **CO6** | Construct combinational circuits using Programmable Logic Devices (PLDs) to solve complex digital design problems. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Electrical and Electronics Engineering – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH101 | Physics for Electrical and Electronics Engineering (Lab Integrated) |
| 5 | 1 | 24EE101 | Electrical Measurements and Electromagnetic Fields. |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

# First Semester B.E., / EEE

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH101 - Physics for Electrical and Electronics Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | derive electrical and thermal conductivities using classical free electron theory. |
| **CO2** | use Fermi Dirac distribution function to determine the density of energy states. |
| **CO3** | distinguish between the types of semiconductors using the hall effect experiment. |
| **CO4** | associate the basic principles of working of laser and their applications in opto-electronic devices. |
| **CO5** | calculate the energy eigen value and eigen function for a particle in a one- dimensional and three-dimensional box using Schrodinger wave equations. |
| **CO6** | relate the quantum properties of nanoscale materials with their applications. |

| 24EE101 - Electrical Measurements and Electromagnetic Fields | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Explain the concepts of errors and the working of various types of instruments. |
| **CO2** | Demonstrate the working of DC, AC bridges, power and energy measurements. |
| **CO3** | Understand the representation of any point/vector in cartesian and curvilinear co-ordinate system. |
| **CO4** | Apply Coulombs law and Gauss's law to estimate E - filed and D-field. |
| **CO5** | Apply Biot-Savarts law and Ampere's circuital law to estimate H - filed and B field. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
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| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Electronics and Communication Engineering – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH101 | Physics for Electrical and Electronics Engineering (Lab Integrated) |
| 5 | 1 | 24EC101 | Electronic Devices and Circuit theory (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

# First Semester B.E., / ECE

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH101 - Physics for Electrical and Electronics Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | derive electrical and thermal conductivities using classical free electron theory. |
| **CO2** | use Fermi Dirac distribution function to determine the density of energy states. |
| **CO3** | distinguish between the types of semiconductors using the hall effect experiment. |
| **CO4** | associate the basic principles of working of laser and their applications in opto-electronic devices. |
| **CO5** | calculate the energy eigen value and eigen function for a particle in a one- dimensional and three-dimensional box using Schrodinger wave equations. |
| **CO6** | relate the quantum properties of nanoscale materials with their applications. |

| 24EC101 - Electronic Devices and Circuit theory (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Explain the operating principles of electronic devices. |
| **CO2** | Analyze the V-I characteristics of electronic devices. |
| **CO3** | Design basic electronic circuits using various electron devices. |
| **CO4** | Analyze electric circuits using network theorems. |
| **CO5** | Evaluate the Performance of Electrical and Electronic Circuits Using Simulation Tools. |
| **CO6** | Develop simple circuits for real time applications. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
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| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

# R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Mechanical Engineering – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH104 | Physics for Mechanical Engineering (Lab Integrated) |
| 5 | 1 | 24ME101 | Computer Aided Engineering Graphics |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

## First Semester B.E., / ME

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH103 - Physics for Civil Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | comprehend the elastic properties of materials. |
| **CO2** | explain sound absorption coefficient, factors affecting acoustics of buildings. |
| **CO3** | describe the thermal concepts and its applications. |
| **CO4** | analyze the crystalline structure and properties of materials. |
| **CO5** | interpret the properties of various nano and novel engineering materials and their applications. |
| **CO6** | explain the various properties and applications of materials in engineering and technology. |

| 24ME101 - Computer Aided Engineering Graphics | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Illustrate the principles of engineering drawings, including the exploration of conic sections, and apply the concepts of orthographic projections using drafting software. |
| **CO2** | Develop orthographic projections of plane surfaces. |
| **CO3** | Make use of concepts in projection to draw projections of solids. |
| **CO4** | Create accurate sectional views of solid objects and develop the surfaces effectively representing internal features in technical drawings. |
| **CO5** | Apply the principles of isometric projection to create isometric drawings of simple and truncated solids. |
| **CO6** | Imagine the parametric features of new products. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Computer Science & Design – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24CH101 | Engineering Chemistry (Lab Integrated) |
| 5 | 1 | 24EC102 | Digital Principles and System Design (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 9 | 1 | | Induction Program (Non Credit) |

# First Semester B.E., / CSD

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24CH101 - Engineering Chemistry (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | To examine the role of polymers in different industrial sectors. |
| **CO2** | To identify the suitability of batteries for various fields. |
| **CO3** | To apply the fundamental principles of chemical sensors, cheminformatics and their applications across various industries. |
| **CO4** | To analyze the types of smart materials used in various engineering fields. |
| **CO5** | To explore the applications of nanomaterials in various fields, considering their advantages and limitations. |
| **CO6** | To integrate the concepts of chemistry for various engineering applications. |

| 24EC102 - Digital Principles and System Design (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Apply Boolean algebra to simplify and implement digital circuits. |
| **CO2** | Design combinational circuits to meet specific functional requirements using logic gates. |
| **CO3** | Demonstrate the operation of counters and shift registers using flip-flops in sequential circuits. |
| **CO4** | Analyze synchronous sequential circuits to determine their behavior and performance characteristics. |
| **CO5** | Evaluate various types of memory devices, discussing their roles and functionalities in digital systems. |
| **CO6** | Construct combinational circuits using Programmable Logic Devices (PLDs) to solve complex digital design problems. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Electronics and Communication (Advanced Communication Technology) – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH101 | Physics for Electrical and Electronics Engineering (Lab Integrated) |
| 5 | 1 | 24EC101 | Electronic Devices and Circuit theory (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

## First Semester B.E., / EC-ACT

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH101 - Physics for Electrical and Electronics Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | derive electrical and thermal conductivities using classical free electron theory. |
| **CO2** | use Fermi Dirac distribution function to determine the density of energy states. |
| **CO3** | distinguish between the types of semiconductors using the hall effect experiment. |
| **CO4** | associate the basic principles of working of laser and their applications in opto-electronic devices. |
| **CO5** | calculate the energy eigen value and eigen function for a particle in a one- dimensional and three-dimensional box using Schrodinger wave equations. |
| **CO6** | relate the quantum properties of nanoscale materials with their applications. |

| 24EC101 - Electronic Devices and Circuit theory (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Explain the operating principles of electronic devices. |
| **CO2** | Analyze the V-I characteristics of electronic devices. |
| **CO3** | Design basic electronic circuits using various electron devices. |
| **CO4** | Analyze electric circuits using network theorems. |
| **CO5** | Evaluate the Performance of Electrical and Electronic Circuits Using Simulation Tools |
| **CO6** | Develop simple circuits for real time applications. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.E., - Electronics Engineering (VLSI Design and Technology) – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH101 | Physics for Electrical and Electronics Engineering (Lab Integrated) |
| 5 | 1 | 24EC101 | Electronic Devices and Circuit theory (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Sciences and Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

## First Semester B.E., / EE-VLSI

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH101 - Physics for Electrical and Electronics Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | derive electrical and thermal conductivities using classical free electron theory |
| **CO2** | use Fermi Dirac distribution function to determine the density of energy states. |
| **CO3** | distinguish between the types of semiconductors using the hall effect experiment. |
| **CO4** | associate the basic principles of working of laser and their applications in opto-electronic devices. |
| **CO5** | calculate the energy eigen value and eigen function for a particle in a one- dimensional and three-dimensional box using Schrodinger wave equations. |
| **CO6** | relate the quantum properties of nanoscale materials with their applications. |

| 24EC101 - Electronic Devices and Circuit theory (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Explain the operating principles of electronic devices |
| **CO2** | Analyze the V-I characteristics of electronic devices. |
| **CO3** | Design basic electronic circuits using various electron devices. |
| **CO4** | Analyze electric circuits using network theorems. |
| **CO5** | Evaluate the Performance of Electrical and Electronic Circuits Using Simulation Tools. |
| **CO6** | Develop simple circuits for real time applications. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

# R.M.K. ENGINEERING COLLEGE

(An Autonomous Institution)

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.Tech – Artificial Intelligence & Data Science – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24CH101 | Engineering Chemistry (Lab Integrated) |
| 5 | 1 | 24EC102 | Digital Principles and System Design (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 9 | 1 | | Induction Program (Non Credit) |

## First Semester B.Tech. / ADS

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24CH101 - Engineering Chemistry (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | To examine the role of polymers in different industrial sectors. |
| **CO2** | To identify the suitability of batteries for various fields. |
| **CO3** | To apply the fundamental principles of chemical sensors, cheminformatics and their applications across various industries. |
| **CO4** | To analyze the types of smart materials used in various engineering fields. |
| **CO5** | To explore the applications of nanomaterials in various fields, considering their advantages and limitations. |
| **CO6** | To integrate the concepts of chemistry for various engineering applications. |

| 24EC102 - Digital Principles and System Design (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Apply Boolean algebra to simplify and implement digital circuits. |
| **CO2** | Design combinational circuits to meet specific functional requirements using logic gates. |
| **CO3** | Demonstrate the operation of counters and shift registers using flip-flops in sequential circuits. |
| **CO4** | Analyze synchronous sequential circuits to determine their behavior and performance characteristics. |
| **CO5** | Evaluate various types of memory devices, discussing their roles and functionalities in digital systems. |
| **CO6** | Construct combinational circuits using Programmable Logic Devices (PLDs) to solve complex digital design problems. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |

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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.Tech – Computer Science & Business Systems – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA102 | Introduction to Statistics, Probability and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24PH102 | Fundamentals of Physics |
| 5 | 1 | 24EE102 | Principles of Electrical Engineering (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24CH105 | Environmental Science & Sustainability (Non Credit) |
| 9 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 10 | 1 | | Induction Program (Non Credit) |

## First Semester B.Tech. / CSBS

| 24MA102 - Introduction to Statistics, Probability and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | evaluate the differentiation and integration problems using concepts of calculus. |
| **CO2** | compute the expected values, moments, variance and interpret their significance. |
| **CO3** | analyze the discrete probability distributions for countable outcomes. |
| **CO4** | analyze the continuous probability distributions to continuous variables. |
| **CO5** | develop proficiency in gathering, analyzing, and interpreting data from diverse sources. |
| **CO6** | apply probability concepts to solve problems involving uncertainty. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24PH102 - Fundamentals of Physics | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | obtain solution of the forced and damped oscillator using differential equation. |
| **CO2** | apply the concept of interference to form Newton's rings and calculate the wavelength of light. |
| **CO3** | derive the Schrodinger wave equation and determine the solution for a particle in a one-dimensional box. |
| **CO4** | calculate the atomic packing factor and d spacing of crystals. |
| **CO5** | analyze and determine the properties of laser and optical fiber and its applications. |
| **CO6** | calculate the packing factor for various crystal structure. |

| 24EE102 - Principles of Electrical Engineering (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Summarize the behavior electrical circuits. |
| **CO2** | Solve the DC circuits using network theorems. |
| **CO3** | Interpret the concepts of AC circuits. |
| **CO4** | Discuss the electrostatic and magnetic fields with circuit laws and analyze the performance. of transformers. |
| **CO5** | Explain the various sensors and demonstrate electric wiring. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24CH105 - Environmental Sciences and Sustainability | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able |
| **CO1** | To investigate and use conservational practices to protect natural resources. |
| **CO2** | To identify the causes of pollutants and illustrate suitable methods for pollution abatement. |
| **CO3** | To analyze the values of biodiversity and its conservational methods. |
| **CO4** | To classify suitable sustainable development practices and apply it in day-to-day life. |
| **CO5** | To assess the impacts of human population and suggest suitable solutions. |
| **CO6** | To develop innovative solutions and strategies to address sustainability challenges. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
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## Department of Science & Humanities

## Course Outcomes – First semester - 2024 -25

## B.Tech – Information Technology – Odd semester

| THEORY COURSES | | | |
|---|---|---|---|
| **S.No** | **Semester** | **Course code** | **Course Name** |
| 1 | 1 | 24MA101 | Matrices and Calculus |
| 2 | 1 | 24CS101 | Programming in C++ (Lab Integrated) |
| 3 | 1 | 24CS102 | Software Development Practices (Lab Integrated) |
| 4 | 1 | 24CH101 | Engineering Chemistry (Lab Integrated) |
| 5 | 1 | 24EC102 | Digital Principles and System Design (Lab Integrated) |
| **LABORATORY COURSES** | | | |
| 6 | 1 | 24ME111 | Idea Lab I (Non Credit) |
| **MANDATORY COURSES** | | | |
| 7 | 1 | 24GE101 | Heritage of Tamils |
| 8 | 1 | 24HS111 | Interpersonal skills, Psychometric Analysis and Career Development |
| 9 | 1 | | Induction Program (Non Credit) |

## First Semester B.Tech. / IT

| 24MA101 - Matrices and Calculus | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | compute the matrix inverse and their higher powers. |
| **CO2** | solve second and higher order differential equations. |
| **CO3** | determine the maxima and minima of functions of two variables. |
| **CO4** | determine the volume and surface area using multiple integrals. |
| **CO5** | evaluate integrals using the concept of vector calculus. |
| **CO6** | apply matrix algebra techniques to diagonalize the matrix. |

| 24CS101- Programming in C++ (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Solve problems using basic constructs in C++. |
| **CO2** | Implement C++ programs using pointers and functions. |
| **CO3** | Apply object-oriented concepts and solve real world problems. |
| **CO4** | Develop C++ programs using operator overloading and polymorphism. |
| **CO5** | Implement C++ programs using Files and exceptions. |
| **CO6** | Develop applications using C++ concepts. |

| 24CS102 - Software Development Practices (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Understand basic software engineering practices effectively. |
| **CO2** | Apply version control using Git and GitHub, and manage code repositories proficiently. |
| **CO3** | Design web applications using HTML, CSS, and JavaScript. |
| **CO4** | Analyze problems and create solutions using CSS for better web page presentation and usability. |
| **CO5** | Develop interactive web pages using JavaScript with an event-handling mechanism. |
| **CO6** | Apply the technological changes and improve skills continuously. |

| 24CH101 - Engineering Chemistry (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | To examine the role of polymers in different industrial sectors. |
| **CO2** | To identify the suitability of batteries for various fields. |
| **CO3** | To apply the fundamental principles of chemical sensors, cheminformatics and their applications across various industries. |
| **CO4** | To analyze the types of smart materials used in various engineering fields. |
| **CO5** | To explore the applications of nanomaterials in various fields, considering their advantages and limitations. |
| **CO6** | To integrate the concepts of chemistry for various engineering applications. |

| 24EC102 - Digital Principles and System Design (Lab Integrated) | |
|---|---|
| **COs** | **Course Outcomes:** Upon the completion of this course the students will be able to |
| **CO1** | Apply Boolean algebra to simplify and implement digital circuits. |
| **CO2** | Design combinational circuits to meet specific functional requirements using logic gates. |
| **CO3** | Demonstrate the operation of counters and shift registers using flip-flops in sequential circuits. |
| **CO4** | Analyze synchronous sequential circuits to determine their behavior and performance characteristics. |
| **CO5** | Evaluate various types of memory devices, discussing their roles and functionalities in digital systems. |
| **CO6** | Construct combinational circuits using Programmable Logic Devices (PLDs) to solve complex digital design problems. |

## Laboratory Courses

| 24ME111 - Idea Lab I | |
|---|---|
| **COs** | **Course Outcomes: Upon the completion of this course the students will be able to** |
| **CO1** | Describe the working of the 3D Printer. |
| **CO2** | Explain the operation of the CNC router and laser cutting machines. |
| **CO3** | Explain the basic parts and PCB fabrication process. |
| **CO4** | Develop the ability to handle delicate electronic components carefully, minimizing damage during the soldering process. |
| **CO5** | Describe the process for converting ideas into prototypes. |

# Mandatory Courses

| 24GE101 – Heritage of Tamils | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | State the role of Tamil literature in shaping Tamil Cultural roots. |
| **CO2** | Express the cultural and religious significance of Tamil art and sculptures. |
| **CO3** | Identify and describe the techniques of folk and martial arts. |
| **CO4** | Classify the role of Thinai concept in Tamil culture and literature. |
| **CO5** | Compare the idea of cultural and intellectual contributions of Tamils. |

| 24HS111 - Interpersonal skills, Psychometric Analysis and Career Development | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Assess and improve their English language proficiency using SMART Vox, gaining insights into their communication skills and linguistic competence. |
| **CO2** | Understand future engineering trends, emerging technologies, importance of solving real-time problems, and the process of campus recruitment. |
| **CO3** | Evaluate their behavioral work style, cognitive abilities, emotional intelligence, cultural preferences, and work competencies. |
| **CO4** | Understand the current engineering landscape, placement opportunities, and higher education prospects to develop effective career path plans. |
| **CO5** | Develop a clear and actionable vision for their future career path. |

| Induction Program | |
|---|---|
| **COs** | **Course Outcomes:** Upon completion of the course, the students will be able to: |
| **CO1** | Achieve a smooth transition where students feel comfortable and confident in their new environment. |
| **CO2** | Demonstrate a strong understanding and practice of the institution's ethos and culture within the campus community. |
| **CO3** | Build meaningful and supportive relationships with peers and faculty members. |
| **CO4** | Develop a clear sense of purpose and engage in self-exploration, leading to a deeper understanding of personal goals and aspirations. |