

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/I

Course Name: Applied Mathematics-I (CBCGS- 2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC101.1	Understand the concepts of complex engineering problems.
FEC101.2	Apply the knowledge of nth order derivatives of standard functions to engineering problems.
FEC101.3	Learn the essential tools of matrices in a comprehensive manner.
FEC101.4	Deal with function of several variables that are essential in most branches of engineering.
FEC101.5	Learn the applications of Partial differentiation like maxima minima, Jacobian, expansion of functions for learning advanced engineering mathematics.
FEC101.6	Apply concepts of SCILAB programming techniques to model problems based on solution of simultaneous linear algebraic equations, which is useful in their disciplines.

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: Applied Mathematics -II (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC201.1	Understand the concepts of First Order and first degree Differential equation.
FEC201.2	Learn the effective mathematical tools for the solution of differential equation that model physical processes.
FEC201.3	Learn mathematical tools like Beta and Gamma function needed in evaluating multiple integrals and their usage.
FEC201.4	Apply concepts of SCILAB programming techniques to solve differential equation to model complex engineering activities.
FEC201.5	Apply concepts of Double integral of different coordinate systems to the engineering problems
FEC201.6	Synthesize the tools of differentiation and integration of functions of a complex variable that are used in various techniques dealing engineering problems.

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/I

Course Name: Applied Physics – I (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC102.1	Apply the concepts of crystallography and to use XRD techniques for analysis of crystal structure.
FEC102.2	Understand the concepts of Quantum mechanics and motion of particle under certain conditions.
FEC102.3	Comprehend the basic concepts of semiconductor physics and their various applications related to electronic devices.
FEC102.4	Apply the concepts of superconductivity to SQUID and Magnetic levitation.
FEC102.5	Identify the Acoustic defects and their appropriate solution for a suitable design of a Hall/ Auditorium.
FEC102.6	Use the knowledge of Piezoelectric and Magnetostriction effect for production of ultrasonic waves and its application in various fields.

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: Applied Physics – II (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC202.1	Comprehend principles of interference & diffraction and their various experimental applications.
FEC202.2	Illustrate the construction and working principle of different types of LASERs and its uses in various fields.
FEC202.3	Understand the concepts of optical fibers and its applications in the field of communication.
FEC202.4	Comprehend the basic mathematical operations of Gradient, Divergence and Curl in a scalar and vector field.
FEC202.5	Understand the motion of electron under electromagnetic field for the measurement of fundamental parameters of various electrical signals.
FEC202.6	Apply the concepts of nanoscience and nanotechnology to synthesize the nanomaterial.

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Department of Applied Sciences & Humanities

Class/Sem: FE/I

Course Name: Applied Chemistry – I (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC103.1	Understand types of hardness of water and its estimation.
FEC103.2	Apply the knowledge of various water softening and disinfecting methods.
FEC103.3	Utilize the knowledge of various polymers, their synthesis, properties and uses along with their fabrication techniques.
FEC103.4	Draw phase diagrams and interpret thermodynamics in studying different chemical systems in equilibrium obeying Gibb's phase rule
FEC103.5	Use correctly and efficiently the knowledge of lubricants, types, properties and mechanisms to avoid frictional resistance.
FEC103.6	Demonstrate the knowledge of Portland cement and carbon nanomaterials.

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: Applied Chemistry -I I (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC203.1	Understand types of corrosion and factors affecting rate of corrosion.
FEC203.2	Analyze and interpret different types of corrosion control methods.
FEC203.3	Apply the knowledge of different types of fuels, including their production and refining methods and combustion mechanisms.
FEC203.4	Illustrate composition and properties of different types of alloys and the process of powder metallurgy.
FEC203.5	Use conceptual knowledge of principles of green chemistry.
FEC203.6	Explain properties and applications of different types of composite materials.

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**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/I

Course Name: Engineering Mechanics (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC104.1	Understand concept of force, moment and apply the same along with the concept of equilibrium in two and three dimensional systems with the help of free body diagram.
FEC104.2	Evaluate geometric parameters of generalized shapes.
FEC104.3	Analyze friction and virtual work in two dimensional systems.
FEC104.4	Establish relation between displacement, velocity and acceleration of a particle and analyze it.
FEC104.5	Synthesis kinematic relations for a rigid body in general plane motion.
FEC104.6	Analyze body in motion using force and acceleration, work-energy, impulse-momentum principle.

Mahatma Education Society's

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: Engineering Drawing (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC204.1	Understand the basics of engineering drawing i.e. types of lines, engineering curves, projection of points, lines and planes.
FEC204.2	Identify the object position and location in different quadrants specially, 1st angle method of projection (as per Indian Standards) and 3rd angle method of projection.
FEC204.3	Learn read and draw projection of solids and development of lateral surfaces.
FEC204.4	Draft and read two dimensional & three dimensional machine parts including projection and section of solids.
FEC204.5	Understand how to convert three dimensional into two dimensional objects i.e. Orthographic Projection and vice-versa i.e. Isometric Projection.
FEC204.6	Learn the use of computer assisted drafting tools like AutoCAD to draw three dimensional into two dimensional objects and vice-versa.



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## **Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/I      Course Name: Basic Electrical and Electronics Engineering  
(CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC105.1	Understand the concept of D.C and A.C Circuits
FEC105.2	Synthesize the three phase circuits
FEC105.3	Understand and analyze the transformer and its various tests
FEC105.4	Analyze different types of Network solving Theorems
FEC105.5	Design RL,RC and RLC series and parallel circuits
FEC105.6	Learn the basics of DC Machines

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**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: SPA (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC205.1	Learn various reasons to use C language and concepts of algorithm, flowchart.
FEC205.2	Understand various concepts in C language like variable, data types, loops, operators etc.
FEC205.3	Analyze the complex real world scenario and divide it into various modules.
FEC205.4	Write, compile and execute C programs using various control structures.
FEC205.5	Implement a real world problem using structured approach.
FEC205.6	Apply theoretical knowledge in practice by solving case studies.

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/I Course Name: Environmental Studies (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC106.1	Understand the importance of environmental resources, Causes of Depleting Nature of Environmental Resources, problems arising due to Global Environmental Crisis, and Ecosystem concept.
FEC106.2	Understand the Social and environmental problems and their solutions like Unsustainable to sustainable development like applying and adopting concept of 3R (Reuse, Recovery, Recycle).
FEC106.3	Study and synthesize different control measures related to Environmental Pollutions like Air, water, soil, land, noise, and e- pollutions arise in the environment.
FEC106.4	Evaluate and analyze various Case Studies related to Environmental Legislation
FEC106.5	Analyze global problem arise due to depleting nature of energy, Importance of Renewable Energy, and Demonstrate the working of Renewable energy sources & Equipment's
FEC106.6	Realize causes and effects of Indoor Air pollution in Urban and Rural areas, Green Building and Carbon Credit concept and to illustrate the Techniques of Disaster Management in case of disaster like Earthquake and Flood.

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**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Applied Sciences & Humanities

Class/Sem: FE/II

Course Name: Communication Skills (CBCGS-2016)

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEC 206.1	Understand and evaluate information they listen to and express their ideas with greater clarity.
FEC 206..2	Apply communication skills effectively along the various channels of communication in a business organization.
FEC 206.3	Speak convincingly before an audience with the help of an expanded vocabulary and enhanced digital content.
FEC 206.4	Analyze the text by Reading and summarizing effectively.
FEC 206.5	Communicate through result oriented writing both within and outside the organization.
FEC 206.6	Write a set of effective and easy to understand technical description, instructions and convey the same using global information technology

**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Mechanical Engineering

Class/Sem:I Course Name: **Basic Workshop Practice-I (CBCS) R2016**

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEL101.1	understand basic tools required to carry out fitting job, carpentry job.
FEL101.2	understand precautionary and safety measures are required to carry out various fitting, carpentry job.
FEL101.3	understand fitting , carpentry shop rules and regulations.
FEL101.4	understand and plan to carry out fitting, carpentry jobs individually.
FEL101.5	conversant to know the various parts and operations of lathe machines.
FEL101.6	understand efforts required to carry out fitting , carpentry job.

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**Pillai HOC College of Engineering and Technology, Rasayani**

Department of Mechanical Engineering

Class/Sem: II

Course Name:**Basic Workshop Practice-II (CBCS) R2016**

The students will be able to:

<b>Course Code</b>	<b>Course Outcome Statements</b>
FEL201.1	understand basic tools required to carry out welding job, and sheet metal job.
FEL201.2	understand precautionary and safety measures are required to carry out various welding job and sheet metal jobactivities.
FEL201.3	understand welding and sheet metal shop rules and Regulations.
FEL201.4	understand and plan to carry out welding and sheet metal Job individually.
FEL201.5	conversant to know the various parts and operations of Plumbing job activities.
FEL201.6	understand efforts required to carry out welding and sheet metal job activities.