

Semester - II

Abbreviation	Subject	Code
AMS -	Applied Mathematics (CE)	(22201)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency "Solve civil engineering related broad-based problems using the principles of applied mathematics".

- 1) Calculate the equation of tangent, maxima, minima, radius of curvature by differentiation
- 2) Solve the given problems of integration using suitable methods
- 3) Apply the concept of ration to find area and volume.
- 4) Solve the differential equation of first order and first degree using suitable methods.
- 5) Apply the concept of numerical integration to investigate the area.

ASM -	Applied Science	(22202)
-------	-----------------	---------

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency "Solve bread-based engineering problems using principles of advanced physics and chemistry".

- 1) Select relevant material in industry by analyzing its physical properties.
- 2) Apply laws of motion in various applications.
- 3) Use LASER X-Rays and photo electric sensors.

- 4) Select the relevant metallurgical process related to industrial applications.
- 5) Use relevant water treatment process to solve industrial problems.
- 6) Use relevant fuel in relevant applications.

AME - Applied Mechanics (CE / ME) (22203)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Use principles of applied mechanics to solve broad-based engineering related problems” .

- 1) Identify the force systems for given conditions by applying the basics of mechanics .
- 2) Identify the force systems for given conditions by applying the basics of mechanics.
- 3) Determine unknown force(s) of different engineering systems.
- 4) Check the stability of various force systems.
- 5) Apply the principles of friction in various conditions for useful purposes.
- 6) Find the centroid and centre of gravity of various components in engineering systems.

CMA - Construction of Materials (CE) (22204)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency” Select relevant building material to fulfill construction requirements”.

- 1) Identify relevant construction materials.
- 2) Identify relevant natural construction materials.
- 3) Select relevant artificial construction materials.
- 4) elect relevant special type of construction materials.
- 5) elect relevant finishing materials for construction.

BSU –

Basic Surveying (CE)

(22205)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Undertake civil engineering surveys”.

- 1) Select the type of survey required for given situation..
- 2) Compute area of open field using chain, tape and cross staff.
- 3) Conduct traversing in the field using chain and compass.
- 4) Draw/interpret contour maps of an area collecting field data. Use digital planimeter to calculate the areas.

CEW –

Civil Engineering Workshop and Practice (CE)

(22208)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Perform basic civil engineering jobs using relevant tools” .

- 1) Identify the various construction activities at site.
- 2) Perform masonry job activities.
- 3) Perform plumbing job activities.
- 4) Identify finishing jobs related to building construction.
- 5) Identify the various components of typical civil structures like road. culvert/bridges .

BCC –

Business Communication Using Computers (CE/CO/EE/IF/ME)

(22009)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Communicate effectively and skillfully at workplace”.

- 1) Communicate effectively by avoiding barriers in various formal and informal.
- 2) Communicate skillfully using non-verbal methods of communication.
- 3) Give presentations by using audio-visual aids.
- 4) Write reports using correct guidelines.
- 5) Compose e-mail and formal business letters.

BSU – Elements of Electrical Engineering (CO/IF) (22215)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Use electrical equipment in industrial applications”.

- 1) Use principles of magnetic circuits.
- 2) Use single phase AC supply for electrical and electronics equipment.
- 3) Use three phase AC supply for industrial equipment and machines.
- 4) Connect transformers and DC motors for specific requirements.
- 5) Use FHP motors for diversified applications.
- 6) Use relevant protective devices/switchgear for different requirements.

AMI – Applied Mathematics (CO/IF) (22224)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Solve computer related broad-based engineering problems using principles of applied mathematics” .

- 1) Calculate the equation of tangent, maxima, minima, radius of curvature by differentiation.
- 2) Solve the given problems of integration using suitable methods.
- 3) Apply the concept of integration to find area and volume.
- 4) Solve the differential equation of first order and first degree using suitable methods.
- 5) Apply the concepts of numerical methods in computer programming languages.

BEC – Basic Electronics (CO/IF) (22225)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COS associated with the competency ‘Use simple electronic circuits of computer system”.

- 1) Identify electronic components in electronic circuits.

- 1) Use block level formatting tags to present content on web page.
- 2) Use text level formatting tags to present content on web page.
- 3) Apply hyper linking on web page.
- 4) Organize the content using table and frames.
- 5) Apply presentation schemes on content using CSS.
- 6) Publish websites on Internet or Intranet .

AME – Applied Mathematics (EE) (22210)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Solve electrical and electronics engineering related broad-based problems using the principles of applied mathematics”.

- 1) Calculate the equation of tangent, maxima minima, radius of curvature by differentiation.
- 2) Solve the given problem(s) of integration using suitable methods.
- 3) Apply the concepts of integration to find the area and volume.
- 4) Solve the differential equation of first order and first degree using suitable methods.
- 5) Use Laplace transform to solve first order first degree differential equations.

ASE – Applied Science (EE) (22211)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COS associated with competency “Apply principles of advanced physics and chemistry to solve broad based engineering problems”.

- 1) Use relevant capacitors in electrical circuits..
- 2) Use equipment/instruments based on radioactive and ultrasonic principles.
- 3) Use equipment instruments based on photoelectric effect, X-Ray and LASER.
- 4) Select relevant water treatment process for various applications.
- 5) Use relevant electrolyte in batteries for different applications.
- 6) Use relevant metals, alloys and insulating materials in various applications.

FEE – Fundamentals of Electrical Engineering (EE) (22212)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COS associated with the competency “Use basic principles of electrical engineering in different applications”.

- 1) Determine various parameters used in electric circuit.
- 2) Use of basic laws of electrical engineering .
- 3) Make use of capacitor in different conditions.
- 4) Use principles of magnetism.
- 5) Use principles of electromagnetism.

EOE – Elements of Electronics (EE) (22213)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented, so that the student demonstrates the following industry oriented COs associated with the competency “Use electronic components and circuits in electrical equipment”.

- 1) Use relevant drade in different electronics circuits, b Use diode in rectrliers and filters.
- 2) Use BIT and FET in electronics circuits.
- 3) Use DC regulated power supply .
- 4) Use Transistor as n oscillator.
- 5) Use of logic gates in electronics circuits .

BME – Basic Mechanical Engineering (EE) (22214)

The theory and practicals should be taught so that the student attains the cognitive, psychomotor and affective domain learning outcomes (LOS) at the respective and relevant taxonomy levels for the student to demonstrate the following COs required by the industry

- 1) Check the broad based working of various types of boilers and steam turbines .
- 2) Check the broad based working of diesel engines and gas turbines.
- 3) Check the broad based working of Pelton replace Francis turbines.
- 4) Check the broad based working of air compressors.
- 5) Check the broad based working of refrigeration and air-conditioning systems.

AMP – Applied Mathematics (ME) (22206)

The theory, practical experiences and relevant soft skills associated with this course are to be taught and implemented so that the student demonstrates the following industry

