Bhujbal Knowledge City
MET's Institute of Technology, Polytechnic, Nashik
Department of Civil Engineering

Course Outcomes
MSBTE prescribed syllabus, as per the Scheme 'K'

Semester-I (K scheme)	
Course Title- Basic Mathematics (311302)	
311302.a	Apply the concepts of algebra to solve engineering (discipline) related problems.
311302.b	Utilize trigonometry to solve branch specific engineering problems.
311302.c	Solve area specific engineering problems under given conditions of straight lines.
311302.d	Apply differential calculus to solve discipline specific problems.
311302.e	Use technique and methods of statistics to crack discipline specific problems.
Course Title- Basic Science (311305)	
311305.a	Use basic instruments to measure the physical quantities in various engineering situations.
311305.b	Apply the basic principles of electromagnetics to solve given engineering problem.
311305.c	Apply basic principles of thermometry and fibre optics to solve engineering problems.
311305.d	Predict the structure, properties and behaviors of molecules and compounds based on the types of chemical bond.
311305.e	Apply the concept of electrochemistry and corrosion preventive measures in industry.
311305.f	Use the appropriate engineering material and catalyst appropriately.
Course Title- Communication Skills - English (311303)	
311303.a	Construct grammatically correct sentences in English.
311303.b	Compose paragraphs and dialogues on situation.
311303.c	Comprehend passages correctly.
311303.d	Use contextual words in English appropriately.
311303.e	Deliver effective presentation in English Using appropriate body language
Course Title- Engineering Graphics (311006)	
311006.a	Draw geometrical figures and engineering curves.
311006.b	Apply principles of orthographic projections for drawing giving pictorial views.
311006.c	Draw isometric views of given component or from orthographic projections.
311006.d	Use various drawing codes, conventions and symbols as per IS SP -46 in engineering drawing.
311006.e	Draw free hand sketches of given engineering elements.
Course Title- Fundamental of ICT (311001)	
311001.a	Use computer system and its peripherals for given purpose.
311001.b	Prepare business document using word processing tool.
311001.c	Analyze data and represent it graphically using spreadsheet
311001.d	Prepare professional slide show presentations.
311001.e	Use different types of web browsers and apps.
311001.f	Explain concept and application of emerging technologies.
Course Title- Yoga and Meditation (311003)	
311003.a	Practice basic yoga and pranayama in daily life to maintain physical and mental fitness.
311003.b	Practice meditation regularly for improving concentration and better handling of stress and anxiety.
311003.c	Follow healthy diet and hygienic practice for maintaining good health.
Course title Civil Engineering workshop (311010)	
311010.a	Use the relevant type of firefighting equipment in the given situation.
311010.b	Undertake the various construction activities at site
311010.c	Perform the masonry work for the given situation

311010.d	Carry out the specified plumbing work in the given situation
311010.e	Prepare the simple job using relevant sheet metal tools
311010.f	Use the relevant tools for the specified carpentry work.

Semester- II (K scheme)

Course Title- Applied Mathematics (312301)	
312301.a	Solve the broad – based engineering problems of integration using suitable methods.
312301.b	Use definite integration to solve given engineering related problems.
312301.c	Apply the concept of differential equation to find the solutions of given engineering problems
312301.d	Employ numerical methods to solve programme specific problems
312301.e	Use probability distribution to solve elementary engineering problems.
Course Title- Applied Science (312308)	
312308.a	Select relevant material in industry by analyzing its physical properties.
312308.b	Apply the concept of simple harmonic motion, resonance and ultrasonic sound for various engineering applications.
312308.c	Apply the concept of modern physics (X – Rays, Laser, photo sensors and nanotechnology) for various engineering applications.
312308.d	Use the relevant metallurgical processes in different engineering applications.
312308.e	Use relevant water treatment processes to solve industrial problems.
312308.f	Use appropriate fuel and electrolyte for engineering application
Course Title- Applied Mechanics (312312)	
312312.a	Select the suitable machine under given loading condition.
312312.b	Analyze the given force system to calculate resultant force
312312.c	Determine unknown forces of given load combinations in the given situation.
312312.d	Apply the laws of friction in the given situation.
312312.e	Determine the centroid / center of gravity of the given structural element of having specific shape and size
Course Title- Building material and Construction (312338)	
312338.a	Identify relevant type of construction materials for the given type of building
312338.b	Use the relevant type of special purpose construction materials in the given situation
312338.c	Undertake the given type of building construction activity for the given component of building structure
312338.d	Design the relevant means of communication for the given building structure
312338.e	Use the relevant type of material for finishing purpose in the given situation
Course Title- Surveying (312339)	
312339.a	Suggest relevant types of survey required for the given situation
312339.b	Undertake cross staff and compass survey for the given field
312339.c	Undertake survey using theodolite for preparing a plan of the given terrain
312339.d	Determine reduced level to prepare contour maps for the given type of terrain
312339.e	Prepare the plan using plane table surveying to locate relevant details.
Course Title- Professional Communication (312002)	
312002.a	Communicate effectively in various formal and informal situations minimizing the barriers
312002.b	Develop listening skills through active listening and note taking
312002.c	Write circulars , notices and minutes of the meeting
312002.d	Draft inquiry letter , Complaint letter , job application with resume /CV , Compose effective E- mails
312002.e	Write Industrial Reports.
Course Title- Social and life skills (312003)	
312003.a	Enhance the ability to be fully self – aware and take challenges by overcoming all fears and insecurities and grow fully
312003.b	Increase self – knowledge and awareness of emotional skills and emotional intelligence at the place of study /work
312003.c	Provide the opportunity to realizing self – potential through practical experience while working individually or in group

312003.d	Developed interpersonal skills and adopt good leadership behaviors for self-empowerment and empowerment of others.
312003.e	Set appropriate life goals with managing stress and time effectively

Semester- III (K scheme)	
Course Title- Strength of materials (313308)	
313308.a	Calculate the M.I. of the given object using relevant formulae & methods.
313308.b	Analyze the structural behavior of the given structural components under various loading conditions.
313308.c	Draw SFD and BMD for the given structural element under given loading conditions.
313308.d	Determine the bending and shear stresses in beams under different loading conditions
313308.e	Analyze the direct & bending stresses in the structural members under eccentric loading conditions.
Course Title- Advance Surveying (313321)	
313321.a	Use the Tacheometer to obtain relevant details of the terrain in given situation.
313321.b	Set out a Simple Circular curve to finalize the alignment of the given element.
313321.c	Prepare layout plans using relevant surveying instruments.
313321.d	Locate the co-ordinates of a given stations using the relevant technology.
313321.e	Interpret the images of given terrain using Photogrammetry Techniques.
Course Title- Concrete technology (313322)	
313322.a	Suggest relevant types of cement to be used in the given site conditions.
313322.b	Classify the given aggregates based on its shape and size with the importance of their properties.
313322.c	Prepare concrete of required specifications in the given situation.
313322.d	Undertake the necessary procedures to maintain the quality of given type of concrete.
313322.e	Suggest relevant type of admixtures to be used in the given situation.
Course Title- Highway Engineering (313323)	
313323.a	Identify the roads based on recommendations of IRC.
313323.b	Implement geometrical features of different Highways.
313323.c	Observe the various road construction activities.
313323.d	Suggest the traffic control devices and intersections based on traffic flow survey data.
313323.e	Suggest the relevant precautionary measures to control the drainage based on inspection to maintain the given section of roads.
Course Title- Essence of Indian constitution (313002)	
313002.a	List salient features and characteristics of the constitution of India.
313002.b	Follow fundamental rights and duties as responsible citizen of the country.
313002.c	Analyze major constitutional amendments in the constitution.
313002.d	Follow procedure to cast vote using voter-id.
Course Title- Building planning and drawing with cad (313009)	
313009.a	Draw the line plans of given type of buildings considering the Principles of Planning.
313009.b	Use CAD software for drafting and editing of the given type of drawing.
313009.c	Draw the relevant type of plan/drawings for the given type of building.
313009.d	Draw perspective drawing for the given type of objects.
313009.e	Draw the Isometric and 3- Dimensional drawings of the given component of the structure.
Course Title- Construction Mangement (313010)	
313010.a	Conduct the project feasibility analysis of the given project.
313010.b	Apply the relevant scheduling technique in the given situation to decide the ethical element of the project.
313010.c	Manage the inventory using relevant inventory control techniques.
313010.d	Execute the project as per the prevailing safety practices