

V. V. P. Engineering College, Rajkot
Department of Civil Engineering
Course Outcomes & PO/PSO Mapping

Semester:	1 st year
Subject Name:	Physics
Subject Code:	3110011

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110011.1	Apply basic concepts of matter to engineering applications.	Ap
C3110011.2	Determine important connections between wave, motion and architectural acoustics	Ap
C3110011.3	Explain production and detection method of Ultrasonic waves, concept of NDT and its application	U
C3110011.4	Determine parameters of superconductivity.	Ap
C3110011.5	Explain working principles of LASER and it's applications	U

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Semester:	1 st year
Subject Name:	Workshop Or Manufacturing Practices
Subject Code:	3110012

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110012.1	Practice various manufacturing processes using hand and machine tools.	Ap
C3110012.2	Perform bonds in brick masonry.	Ap
C3110012.3	Articulate operations of Electrical and Electronics appliances.	Ap
C3110012.4	Perform Basic Arduino experiment in Embedded System development.	Ap
C3110012.5	Apply operating system commands and front-end of the website.	Ap

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Semester:	1 st year
Subject Name:	Engineering Graphics & Design
Subject Code:	3110013

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110013.1	Recognize drawing conventions to plot engineering drawing.	U
C3110013.2	Sketch basic and intermediate geometry.	Ap
C3110013.3	Practice concept of projections.	Ap
C3110013.4	Use basic 2D commands of AutoCAD software for engineering drawing.	Ap

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Semester:	1 st year
Subject Name:	Mathematics - 1
Subject Code:	3110014

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110014.1	Solve improper integrals and indeterminate forms.	Ap
C3110014.2	Apply test of convergence for sequence, series and Fourier series.	Ap
C3110014.3	Apply the concept of partial derivatives and vector theory on functions of several variables	Ap
C3110014.4	Calculate Eigen values and Eigen vectors for square matrices.	Ap
C3110014.5	Solve the system of linear equations using matrices.	Ap
C3110014.6	Solve the problems for finding area and volume using integrals.	Ap

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Semester:	1 st year
Subject Name:	Mathematics - 2
Subject Code:	3110015

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110015.1	Apply mathematical tools of vector calculus on Work, Circulation, Flux, Line and Surface Integrals.	Ap
C3110015.2	Solve first and higher order ordinary differential equations.	Ap
C3110015.3	Apply Laplace Transforms techniques for finding the solutions of system of linear differential equations.	Ap
C3110015.4	Use method of series for finding special functions and solutions of differential equations.	Ap
C3110015.5	Apply Fourier integral for representation of non-periodic functions.	Ap

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Semester:	1 st year
Subject Name:	English
Subject Code:	3110002

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110002.1	Classify words and their usages between literal and literary meanings for enriching their vocabulary	U
C3110002.2	Recognize gramatically correct sentence patterns and translate their thoughts using them	U
C3110002.3	Apply rules of sound pronunciations for transcription.	Ap
C3110002.4	Experiment with language for correct, concise, clear and coherent expression.	Ap
C3110002.5	Estimate their own reading and listening skills through the given practice	E

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Semester:	1 st year
Subject Name:	Programming for Problem Solving
Subject Code:	3110003

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110003.1	Explain fundamentals of computer, programming languages, flowchart and algorithms.	U
C3110003.2	Describe Tokens and conditional statements in C language.	U
C3110003.3	Describe concepts of user defined function and recursion to support reusability.	U
C3110003.4	Explain concepts of pointers and dynamic memory allocation in C language.	U
C3110003.5	Explain derived data types, user defined data types and file management system in C language.	U

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Semester:	1 st year
Subject Name:	Basic Civil Engineering
Subject Code:	3110004

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110004.1	Explain disciplines of civil engineering and their role in society.	U
C3110004.2	Illustrate plan and section of building using principles of building planning.	U
C3110004.3	Describe aspects of town planning.	U
C3110004.4	Describe civil engineering materials, components of building, building services and construction methods.	U
C3110004.5	Perform linear, angular and levelling measurement techniques.	Ap
C3110004.6	Describe public transportation system, water conservation techniques, water - waste water quality standards, modern tools & advancement in civil engineering.	U

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Semester:	1 st year
Subject Name:	Basic Electrical Engineering
Subject Code:	3110005

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110005.1	Apply fundamental laws & theorems to DC Circuits.	Ap
C3110005.2	Analyse complex AC Circuits.	An
C3110005.3	Explain construction and working of Electrical machines.	U
C3110005.4	Explain protective devices for Electrical safety.	U
C3110005.5	Explain Accessories and components of Electrical Installations.	U

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Semester:	1 st year
Subject Name:	Basic Mechanical Engineering
Subject Code:	3110006

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110006.1	Describe sources of energy and terminology of thermal systems.	U
C3110006.2	Perform elementary calculations of ideal gases and steam.	Ap
C3110006.3	Practice energy conversion cycles and systems.	Ap
C3110006.4	Discuss power transmission elements and applications of engineering materials.	U
C3110006.5	Illustrate working of pumps, compressors and steam generating devices.	U

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Semester:	1 st year
Subject Name:	Environmental Sciences
Subject Code:	3110007

After learning the course the students will be able to:

CO Number	Course Outcomes	CL
C3110007.1	Describe environmental science and impact of technologies on environment.	U
C3110007.2	Explain types, sources and harmful effects of pollution.	U
C3110007.3	Explain methods for proper management of solid waste, e-waste and bio-medical waste.	U
C3110007.4	Explain carbon footprint, cleaner development mechanism, global environmental problems and international steps for mitigating global change	U
C3110007.5	Explain green buildings, Smart cities and 4R concept.	U

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