

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                                   |
|---------------|-----------------------------------|
| Semester:     | 3                                 |
| Subject Name: | Effective Technical Communication |
| Subject Code: | 3130004                           |

After learning the course the students will be able to:

| CO Number  | Course Outcomes   | CL |
|------------|---|----|
| C3130004.1 | Discuss dynamics of verbal and non-verbal communication as per their requirement              | U  |
| C3130004.2 | Design and drafting of various formal documents for technical and professional communication. | C  |
| C3130004.3 | Demonstrate communicative skills in diverse situations taking place in organization.          | U  |
| C3130004.4 | Practice the ethical knowledge of engineering as a profession                                 | Ap |
| C3130004.5 | Demonstrate social and professional etiquettes  | U  |
| C3130004.6 | Practice self-assesment for self-development and professional readiness                       | Ap |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                     |
|---------------|---------------------|
| Semester:     | 3                   |
| Subject Name: | Indian Constitution |
| Subject Code: | 3130007             |

After learning the course the students will be able to:

| CO Number  | Course Outcomes  | CL |
|------------|--|----|
| C3130007.1 | Summarize the need and history of the Constitution of India.   | U  |
| C3130007.2 | Recognize the Fundamental Rights and Fundamental Duties of the Indian Citizen to instill morality, social values, honesty, dignity of life and their social Responsibilities with emphasis on Articles 14, 19 and 21 | U  |
| C3130007.3 | Explain law enactment , directive principles of state policy and importance of the Constitution  | U  |
| C3130007.4 | Recognize the distribution of Legislative, Judicial, Executive and Financial powers between the states, the local self-governments and the union.  | U  |
| C3130007.5 | Describe the process of formation of the parliamentary form of government, status of the president and the guidelines given for Emergency provisions in the Constitution of India.                                   | U  |
| C3130007.6 | Illustrate the process of amendments with emphasis on the history of amendments in the Constitution of India.  | U  |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                       |
|---------------|-----------------------|
| Semester:     | 3                     |
| Subject Code: | 3130008               |
| Subject Name: | Design Engineering 1A |

After learning the course the students will be able to:

| <b>CO Number</b> | <b>Course Outcomes</b>                                   | <b>CL</b> |
|------------------|--|-----------|
| C3130008.1       | Explain Design engineering and its methodology.          | U         |
| C3130008.2       | Determine problems using design engineering methodology. | Ap        |
| C3130008.3       | Deduce the problem using design engineering methodology. | An        |
| C3130008.4       | Evaluate the possible solution using props.              | E         |
| C3130008.5       | Construct rough prototype.                               | C         |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                       |
|---------------|-----------------------|
| Semester:     | 3                     |
| Subject Code: | 3130905               |
| Subject Name: | Control System Theory |

After learning the course the students will be able to:

| <b>CO Number</b> | <b>Course Outcomes</b>  | <b>CL</b> |
|------------------|---|-----------|
| C3130905.1       | Explain open loop and closed-loop control systems.                                      | U         |
| C3130905.2       | Apply standard test signals to investigate stability of first and second-order systems. | Ap        |
| C3130905.3       | Determine transfer function of the system using a block diagram reduction method.       | Ap        |
| C3130905.4       | Determine system stability using frequency-domain Methods.                              | Ap        |
| C3130905.5       | Describe state-space representation and compensators.                                   | U         |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                             |
|---------------|-----------------------------|
| Semester:     | 3                           |
| Subject Code: | 3130906                     |
| Subject Name: | Electrical Circuit Analysis |

After learning the course the students will be able to:

| <b>CO Number</b> | <b>Course Outcomes</b>   | <b>CL</b> |
|------------------|--|-----------|
| C3130906.1       | Explain basic circuit laws.  | U         |
| C3130906.2       | Deduce the electrical networks using reduction techniques.               | An        |
| C3130906.3       | Analyse Network Theorems for solution of Electrical Circuits.            | An        |
| C3130906.4       | Analyse transient response, steady state response and network functions. | An        |
| C3130906.5       | Compute parameters of Two Port Networks.                                 | Ap        |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |                                |
|---------------|--------------------------------|
| Semester:     | 3                              |
| Subject Code: | 3130907                        |
| Subject Name: | Analog and Digital Electronics |

After learning the course the students will be able to:

| <b>CO Number</b> | <b>Course Outcomes</b>   | <b>CL</b> |
|------------------|--|-----------|
| C3130907.1       | Describe working of power amplifiers and operational amplifiers.                             | U         |
| C3130907.2       | Explain opamp for linear and non-linear applications.  | U         |
| C3130907.3       | Apply boolean algebra and logic gates for solution of combinational and sequential circuits. | Ap        |
| C3130907.4       | Explain analog to digital and digital to analog converters.                                  | U         |

**V. V. P. Engineering College, Rajkot**  
**Electrical Engineering Department**  
**Course Outcomes & PO/PSO Mapping**

|               |  |
|---------------|--|
| Semester:     | 3  |
| Subject Name: | Applied Mathematics for Electrical Engineering |
| Subject Code: | 3130908  |

After learning the course the students will be able to:

| <b>CO Number</b> | <b>Course Outcomes</b>   | <b>CL</b> |
|------------------|--|-----------|
| C3130908.1       | Apply basic terminologies of probability and its distribution.                             | Ap        |
| C3130908.2       | Solve the problems of numerical data using statistical tools.                              | Ap        |
| C3130908.3       | Solve algebraic and transcendental equations using numerical methods.                      | Ap        |
| C3130908.4       | Compute the unknown value of tabulated data using interpolation methods and curve fitting. | Ap        |
| C3130908.5       | Solve ordinary differential equations and definite integrals using numerical methods.      | Ap        |