

II SEMESTER**SKILL UPGRADATION IN - ENGINEERING MATHEMATICS****ACTIVITY ASSESSMENT Steps**

- 1. Mathematical concepts**
- 2. Procedure**
- 3. Explanation**
- 4. Working with others**
- 5. Mathematical errors**

ACTIVITIES

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

CO / PO - MAPPING OF ACTIVITIES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	1			1	2	2	3
CO2	3	2	2	1			1	2	2	3
CO3	3	2	2	1			1	2	2	3
CO4	3	2	2	1			1	2	2	3
CO5	3	2	2	1			1	2	2	3
CO6	3	2	2	1			1	2	2	3
CO7	3	2	2	1			1	2	2	3

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

PASS SCORE: 2.5

[illegible]

SEMESTER – II**SKILL UPGRATION – APPLIED PHYSICS****TASK****LEVEL 1: Concept, Ethical Data, Materials, Source (Library/internet/others)****LEVEL 2: Methodology/procedure****LEVEL 3: Analysis/experiment****LEVEL 4: Interpretation/ inference/ evaluation.*****Bridge activity: - Visiting your college Library:***

- (A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.*
- (B) Prepare a list of Physics/Science journals, magazines, monographs with details.*
- (C) Prepare a log book of your visits to college library with brief description.*

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.
11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.

Course Outcomes (CO)		Linked Pos	Activity Hours
CO1	Construction of a blowing pipe to detect dangerous gases in mines	PO1, PO2, PO3, PO4, PO5, PO6	3
CO2	Construction of model stethoscope with known materials	PO1, PO2, PO5, PO7	3
CO3	Conduct of awareness program on noise pollution in the college, colony and preparation of a video report.	PO1, PO2, PO5, PO6, PO7, PO8, PO9	3
CO4	Construction of a seconds' pendulum timer	PO1, PO2, PO3, PO4	3
CO5	Preparation of PPT on photosensitive materials with detailed specifications	PO1, PO2	3
CO6	Preparation of report on lasers practically used	PO1, PO2, PO4, PO5, PO10	3
CO7	Preparation of PPT on application of optical fibers in medical and engineering field	PO1, PO2, PO4, PO5, PO6, PO9, PO10	3
CO8	Production of electricity with a magnet –working model, PPT with animation and drawings on a chart.	PO1, PO2, PO3, PO4	3
CO9	Construction of an electric calling bell	PO1, PO2, PO3, PO4	3
CO10	Construction of a circuit on breadboard to verify Kirchhoff's voltage law	PO1, PO2, PO3, PO4	3
CO11	Preparation of PPT on Superconductors and their practical applications with motion pictures.	PO1, PO2, PO3, PO4, PO9, PO10	3
CO12	Collection of various resistors, diodes and LEDs with specifications and installation on a card board	PO1, PO2	3

Rubrics for Task Assessments

General Scale for scoring student performance in Skill Upgradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.

		accomplish this.	feedback.	
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

PASS SCORE: 2.5

STUDENT ASSESSMENT (RUBRICS)

S. N O	PIN	Course Outcomes (Skill Activities)												AVE RA GE
		CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	CO 7	CO 8	CO 9	CO 10	CO 11	CO 12	

Draft committee

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Engineering Chemistry and Environmental Studies

Suggested Skill Upgradation Activities

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

- Step-1: Data collection on the ores and different methods of concentration of ore.
- Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.
- Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation
- Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

- Step-1: Collection of data related to the factors effecting the corrosion.
- Step-2: Summarization of data/ literature collected.
- Step -3: Setting and Execution of experiment under different conditions such as
- i. Metal exposed to air only
 - ii. Metal exposed to dry air
 - iii. Metal partially dipped in salt water
 - iv. Metal completely dipped in water
 - v. Metal partially dipped in pure water
- Note: This experiment may be conducted in other conditions also.
- Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation
- Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

- Step-1: Data collection.
- Step-2: Summarization of data/ literature collected.
- Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions
- Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation
- Step-5: Overall presentation of the activity

Activity – 4**Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5**Study of Prevention of Corrosion of a metal by using different coating materials**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6**Study of plastics, recycling of plastics and their advantages and disadvantages**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7**Study on natural rubber and its uses**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8**Power point presentation on fossil fuels**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9**Study and analysis of environment related air pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10**Study and analysis of environment related water pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11**Study and analysis of college environment**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12**Construction of Galvanic cell**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Mapping of POs to Student activities

S.No	Name of the activity	Linked POs
1	Power point presentation on the different methods of concentration of ore	1,2,4,8,9
2	Corrosion of a metal under different conditions	1,2,3,4, 5,6,8,9,10
3	Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions	1,2,3,4, 5,6,8,9,10
4	Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions	1,2,3,4,5,6,8,9,10
5	Study of Prevention of Corrosion of a metal by using different coating materials	1,2,3,4,5,6,8,9,10
6	Study of plastics, recycling of plastics and their advantages and disadvantages	1,2,4,5,6,7,8,9,10
7	Study on natural rubber and its uses	1,2,4,5,6,7,8,9,10
8	Power point presentation on fossil fuels	1,2,4,5,7,8,9,10
9	Study and analysis of environment related air pollution	1,2,4,5,6,7,8,9,10
10	Study and analysis of environment related water pollution	1,2,4,5,6,7,8,9,10
11	Study and analysis of college environment	1,2,4,5,6,7,8,9,10
12	Construction of Galvanic cell	1,2,3,4,5,8,9

Method of evaluation of the student activities (Rubrics)**Model Rubrics**

S · N o	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

Draft Committee

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3. Smt L. Seetha, Lecturer in Chemistry, SGMGPT, Abdullapurmet.

Diploma in Architectural Assistantship**Skill Upgradation**

Subject related activities:

1. Case study of existing projects
2. Market survey
3. Material survey
4. Data collection
5. Site visits
6. Group Discussions
7. Attending workshops
8. Visiting material and technology exhibitions
9. Seminars
10. Presentations
11. Outdoor sketching
12. Slip tests
13. Surprise tests
14. Time Problems
15. Desktop surveys
16. Model making
17. 3D Renderings
18. Walk through

Extra Curricular:

1. Newspaper reading
2. Debates
3. Elocution
4. Recitation
5. Dumb Charades

Diploma in Automobile Engineering
State Board of Technical Education & Training (TS) – Hyderabad

Course Title :	Skill Up gradation	Course Code:	SKD
Semester:	II	Course Group:	Core
Teaching Scheme in Hrs:	15:90 (Instructions and Activity)	Credits:	2.5
Methodology:	Seminar+ G.D+ Activity	Total Contact Periods:	105 Periods
CIE:	By Rubrics (Pass or Fail)	SEE	Rubrics

Course Content and Blue Print of Marks for SEE

The performance of the candidate is ascertained using rubrics in every skill development activity, No marks are awarded only the Pass or Fail is indicated in the final evaluation.

Pre requisites

This course requires basic communication skills in English and general awareness of all the courses of the discipline.

Course Outcomes

At the end of course student should be able to:

CO1 :	Ability to apply basic and discipline specific knowledge to solve core and/or applied engineering problems.
CO2 :	Understand the impact of the engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
CO3 :	Demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering practice.
CO4:	Understand the impact of the engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
CO5:	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
CO6:	An ability to communicate effectively.
CO7:	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the context of technological changes.
CO8:	Function effectively as an individual, and as a member or leader in diverse/multidisciplinary teams.

Skill Up Gradation in Engineering Mathematics:

ACTIVITY ASSESSMENT Steps

1. **Mathematical concepts**
2. **Procedure**
3. **Explanation**
4. **Working with others**
5. **Mathematical errors**

ACTIVITIES

1. Prepare a presentation to describe various types of Straight lines.
2. Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.

4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

CO / PO - MAPPING OF ACTIVITIES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	1			1	2	2	3
CO2	3	2	2	1			1	2	2	3
CO3	3	2	2	1			1	2	2	3
CO4	3	2	2	1			1	2	2	3
CO5	3	2	2	1			1	2	2	3
CO6	3	2	2	1			1	2	2	3
CO7	3	2	2	1			1	2	2	3

Rubrics for Activity assessment

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

PASS SCORE: 2.5
STUDENT ASSESSMENT by RUBRICS

S.NO	PIN	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	CO 7	AVERAGE

Skill Up Gradation in Applied Physics:

TASK

LEVEL 1: Concept, Ethical Data, Materials, Source (Library/internet/others)

LEVEL 2: Methodology/procedure

LEVEL 3: Analysis/experiment

LEVEL 4: Interpretation/inference/evaluation.

Bridge activity: - Visiting your college Library:

(A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.

(B) Prepare a list of Physics/Science journals, magazines, monographs with details.

(C) Prepare a log book of your visits to college library with brief description.

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.
11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.

Course Outcomes (CO)		Linked Pos	Activity Hours
CO1	Construction of a blowing pipe to detect dangerous gases in mines	1,2,3,4,5,6	3
CO2	Construction of model stethoscope with known materials	1,2,5,7	3
CO3	Conduct of awareness program on noise pollution in the college, colony and preparation of a video report.	1, 2, 5, 6, 7, 8,9	3
CO4	Construction of a seconds' pendulum timer	1, 2, 3, 4	3
CO5	Preparation of PPT on photosensitive materials with detailed specifications	1, 2	3
CO6	Preparation of report on lasers practically used	1, 2, 4, 5, 10	3
CO7	Preparation of PPT on application of optical fibers in medical and engineering field	1, 2,4,5,6,9,10	3
CO8	Production of electricity with a magnet –working model, PPT with animation and drawings on a chart.	1, 2, 3,4	3
CO9	Construction of an electric calling bell	1, 2, 3, 4	3
CO10	Construction of a circuit on breadboard to verify Kirchhoff's voltage law	1, 2, 3, 4	3
CO11	Preparation of PPT on Superconductors and their practical applications with motion pictures.	1, 2, 3, 4, 9, 10	3
CO12	Collection of various resistors, diodes and LEDs with specifications and installation on a card board	1, 2	3

Rubrics for Task Assessments

General Scale for scoring student performance in Skill Up gradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation / summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

PASS SCORE: 2.5
STUDENT ASSESSMENT (RUBRICS)

S. N O	PIN	Course Outcomes (Skill Activities)												AVE RA GE
		CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	CO 7	CO 8	CO 9	CO 10	CO 11	CO 12	

Skill Up Gradation in Engineering Chemistry & Environmental Studies:

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore:

Step-1: Data collection on the ores and different methods of concentration of ore.

Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.

Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation

Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

Step-1: Collection of data related to the factors effecting the corrosion.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment under different conditions such as

- i. Metal exposed to air only
- ii. Metal exposed to dry air
- iii. Metal partially dipped in salt water
- iv. Metal completely dipped in water
- v. Metal partially dipped in pure water

Note: This experiment may be conducted in other conditions also.

Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation

Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 4**Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5**Study of Prevention of Corrosion of a metal by using different coating materials**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6**Study of plastics, recycling of plastics and their advantages and disadvantages**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of Plastics.

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the Measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7**Study on natural rubber and its uses**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8**Power point presentation on fossil fuels**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid, liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9**Study and analysis of environment related air pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10**Study and analysis of environment related water pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11**Study and analysis of college environment**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12**Construction of Galvanic cell**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill up gradation activity related to the course may be taken up.

Mapping of POs to Student activities

S.No	Name of the activity	Linked POs
1	Power point presentation on the different methods of concentration of ore	1,2,4,8,9
2	Corrosion of a metal under different conditions	1,2,3,4, 5,6,8,9,10
3	Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions	1,2,3,4, 5,6,8,9,10
4	Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions	1,2,3,4,5,6,8,9,10
5	Study of Prevention of Corrosion of a metal by using different coating materials	1,2,3,4,5,6,8,9,10
6	Study of plastics, recycling of plastics and their advantages and disadvantages	1,2,4,5,6,7,8,9,10
7	Study on natural rubber and its uses	1,2,4,5,6,7,8,9,10
8	Power point presentation on fossil fuels	1,2,4,5,7,8,9,10
9	Study and analysis of environment related air pollution	1,2,4,5,6,7,8,9,10
10	Study and analysis of environment related water pollution	1,2,4,5,6,7,8,9,10
11	Study and analysis of college environment	1,2,4,5,6,7,8,9,10
12	Construction of Galvanic cell	1,2,3,4,5,8,9

Method of evaluation of the student activities (Rubrics)**Model Rubrics**

S. No	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

Skill Up Gradation in Basic Automobile Engineering:

1. Visit library to refer manuals / browse on internet to collect the data of various two wheelers and compare data on like parameters and submit a report.
2. Visit your institutional laboratory and list the tools and available equipment, note the purpose of each and submit a report.
3. Visit nearby workshop / service station and submit the report on the various activities taken up there.
4. Browse on internet to collect the data of various cars and compare data on like parameters and submit a report.

5. Give a seminar on the need of energy conservation for the future generations.
6. Prepare a chart indicating the complete constructional details, general description and working of an automobile component or system.
7. Quiz before Mid Sem-1 and Mod Sem-2.
8. Group discussion any topic relevant to the course with the approval of Head of section.
9. Surprise test-1(Descriptive type)
10. Surprise test (Objective type)

Suggested E-Learning references in Basic Automobile Engineering:

1. www.learnengineering.org
2. www.sae.org
3. www.nptel.ac.in

4. HEAT ENGINES:

<https://www.youtube.com/watch?v=e5h4sIZlmUo>
<https://www.youtube.com/watch?v=IHnTKsHuJQw>
<https://www.youtube.com/watch?v=ASJmVNcJqk4>
<https://www.youtube.com/watch?v=vIJ50aUiBgM>

5. ENGINE CONSTRUCTION:

<https://www.youtube.com/watch?v=BJYSyA-u61U>
https://www.youtube.com/watch?v=zA_19bHxEYg
<https://www.youtube.com/watch?v=dfFvtpbjdow>

6. BASIC FUEL SYSTEM:

https://www.youtube.com/watch?v=4O3nC9l_1F0
https://www.youtube.com/watch?v=Z5_vfZhMWOg
<https://www.youtube.com/watch?v=m6-KZS19H DU>
<https://www.youtube.com/watch?v=l6qMhwyLUHA>
<https://www.youtube.com/watch?v=mhPP6pnisL4>
<https://www.youtube.com/watch?v=6YzIki62ga8>
<https://www.youtube.com/watch?v=U6XGjYuX8ys>

7. TRANSMISSION BASICS:

<https://www.youtube.com/watch?v=G04Fthmue1A>
<https://www.youtube.com/watch?v=kTSBwYvm7u8>
<https://www.youtube.com/watch?v=6BaECAbapRg>
<https://www.youtube.com/watch?v=pqF-aBtTBnY>
<https://www.youtube.com/watch?v=devo3kdSPQY>
<https://www.youtube.com/watch?v=SQvFg4WbdZ4>
https://www.youtube.com/watch?v=_7K3q9Qd1QM
<https://www.youtube.com/watch?v=TcYsV063lk8>

8. CHASSIS AND BODY BASICS:

<https://www.youtube.com/watch?v=tRojSOBUWgQ>
<https://www.youtube.com/watch?v=PjenO8nihaM>
https://www.youtube.com/watch?v=hY_Nuchmaw

<https://www.youtube.com/watch?v=IhbXPzPlzNI>
<https://www.youtube.com/watch?v=gTnhRiMQSME>
<https://www.youtube.com/watch?v=aptBwDKSPFg>

9. COOLING AND LUBRICATING SYSTEMS:

https://www.youtube.com/watch?v=y5p31F_dVJU
<https://www.youtube.com/watch?v=V7inC4lOpGs>
<https://www.youtube.com/watch?v=D9dYx9lF5uw>
<https://www.youtube.com/watch?v=mmmcj53TNic>
https://www.youtube.com/watch?v=Rt_AWy4tsN0
<https://www.youtube.com/watch?v=1oY8-tgl8q4>
<https://www.youtube.com/watch?v=V6x19pFplJw>

DIPLOMA IN COMMERCIAL AND COMPUTER PRACTICE**STUDENTS ACTIVITIES FOR SKILL UPGRADATION FOR SECOND SEMESTER**

Periods per week	07	Grade Points	2.5
Total periods per semester	105		

I SWATCH BHARATH**METHODOLOGY FOR CONDUCTING SWATCH BHARATH**

1. The teacher will allot any premises (lab/classrooms etc.) of the Institute for a group of five students.
2. The teacher should given an introductory talk on ways and rules to carry out Swatch Bharath.
3. The students should ask to show interest with others and work effectively with them to meet common objective.
4. The teacher should fix up the time duration for initiating and conducting the activity.

II HARITHA HARAM**METHODOLOGY FOR CONDUCTING SWATCH BHARATH**

1. The teacher will allot any premises (trimming of plants, planting saplings and taking care of the existing plants) of the Institute for a group of five students.
2. The teacher should given an introductory talk on ways and rules to carry out Haritha haram.
3. The students should ask to show interest with others and work effectively with them to meet common objective.
4. The teacher should fix up the time duration for initiating and conducting the activity.

III NSS/NCC ACTIVITIES**METHODOLOGY FOR CONDUCTING NSS/NCC activities**

1. The teacher will conduct programmes like (Blood Donation Camp, Health Check up or eye camp) in the nearby villages of the Institute for a group of five students.
2. The teacher should given an introductory talk on ways and rules to carry out NSS/NCC activities.
3. The students should ask to show interest with others and work effectively with them to meet common objective.
4. The teacher should fix up the time duration for initiating and conducting the activity.
5. The teacher should provide tips to accept feedback in a constructive and considerate way.

IV ROLE PLAY

METHODOLOGY FOR CONDUCTING ROLE PLAY:

1. The teacher will provide guidance to the students on the topic of the role play given of the Institute for a group of five students.
2. The teacher should given an introductory talk on ways and rules to carry out Role Play.
3. The students should ask to show interest with others and work effectively with them to involve in their respective roles.
4. The teacher should fix up the time duration for initiating and conducting the activity.
5. The Placement Officer and any other senior faculty of the Institute/HOD of other department should be invited and they should act as observing members, apart from teacher.

V Debate – the following are few topics given and the teacher can select any other current and relevant topic of her/his choice

1. Analytically evaluate the solutions to traffic problems
2. Global warming is caused more by developed countries
3. Women are good Managers.
4. Computer viruses are good.
5. E- Learning is good for the education system and society.

METHODOLOGY FOR CONDUCTING DEBATE

1. The teacher will allot a topic for a group of five students.
2. The teacher should given an introductory talk on ways and rules to carry out group discussion.
3. The teacher should provide tips to accept feedback in a constructive and considerate way and how to handle frustrations in group, while debating.
4. The Placement Officer and any other senior faculty of the Institute/HOD of other department should be invited and they should act as observing members, apart from teacher.
5. The teacher should fix up the time duration for initiating and conducting the activity.

VI QUIZ

METHODOLOGY FOR CONDUCTING QUIZ

1. The teacher will conduct quiz programmes dividing the students into groups on concerned subjects.
2. The teacher should give instructions and rules on conduct of quiz.
3. The students should ask to show interest and compete with other groups enthusiastically.

4. The teacher should fix up the time duration for initiating and conducting the activity.
5. The teacher will act as Quiz Master.

VII TEAM BUILDING/GROUP DISCUSSION/SEMINARS– the following are few topics given and the teacher can select any other current and relevant topic of her/his choice

1. Developing Countries need trade, not Aid?
2. Business and Ethics do not go together.
3. Share Markets and Mutual funds – Is it a good Investment?
4. Cursing the weather is bad farming.
5. The medium of teaching in schools should be in English?

METHODOLOGY FOR CONDUCTING GROUP DISCUSSION/TEAM BUILDING/SEMINARS

1. The teacher will allot a topic for a group of five students.
2. The teacher should give an introductory talk on ways and rules to carry out group discussion.
3. The students should ask to show interest with others and work effectively with them to meet common objective.
4. The teacher should provide tips to accept feedback in a constructive and considerate way and how to handle frustrations in group, while discussion.
5. The Placement Officer and any other senior faculty of the Institute/HOD of other department should be invited and they should act as observing members, apart from teacher.
6. The teacher should fix up the time duration for initiating and conducting the activity.
7. Documentation to be produced for validation-hand written documents on minutes of discussion, description of the topic discussed – record the few minutes of the discussion by small device.

VIII Guest Lecturers:

To be organized from any two of the following areas Experts/ Professionals from different field/industries are invited to deliver lectures at least TWO sessions in a semester. The topics may be selected by the teacher /industry expert to develop required skills.

1. Pollution control
2. Fire fighting/ Safety Precautions and First aids
3. Computer opportunities
4. Career opportunities
5. Yoga Meditation
6. Aids awareness and health awareness
7. Office Environment
8. Interview Techniques

9. Environmental pollution and control
10. Total Quality Management

Method for conducting Guest Lectures

1. The teacher should fix up the date for guest lecture
2. The HOD of the department should chair the event
3. The students of class allowed to participate in the session
4. Watch the talk and make the brief hand written report on the guest lecture delivered by each student as a part of Team work
5. Make Audio/visual record of the guest lecture by using any smart devices
6. Opportunity should be provided for students for live interaction with experts and record it on any one smart device.

IX Industrial Visits

Structured industrial visits be arranged and report of the same shall be submitted by the individual student, to form a part of the term work. Following are the suggested types of Industries/ fields.

- a. Public sector enterprises
- b. State government undertaking
- c. Public limited companies
- d. Private limited companies
- e. Individual ownership organisations
- f. Local Garment industries
- g. Paper mills
- h. Sugar mills
- i. Dairy Industry
- j. Agriculture
- k. Education and Training Institutions
- l. Banks
- m. IT companies
- n. MNCs
- o. State and Central Government Offices
- p. Any small and Medium Enterprises

METHODOLOGY FOR CONDUCTING FOR INDUSTRIAL VISITS

1. The subject teacher has liberty to visit nearby Organisation/Industry of local vicinity with prior approval of Higher Authorities.
2. Arrange the nearby visit and prepare a report of the visit including details of observations made, details of visit should be mentioned with date, place etc.

X Individual Assignments

The students will perform ANY ONE of the following activities individually

1. Collecting data relating to Banking and financial Institutions
2. Study of stock market functioning
3. Packing materials-Packing material analysis
4. Advertisement and its impact
5. Advertisement Media
6. Training methods for new employees
7. Training methods for existing employees
8. Supply chain management
9. Distribution channels
10. Collection and drafting of Import documents
11. Collection and drafting of Export Documents
12. Logistics services

Methodology for conducting Individual Assignments:

1. The teacher will assign a topic for individual student; give sufficient time to complete the task. Ask the student to submit an hand written report
2. The teacher should conduct any one specified life skill activity with local placement cell of the institute.
3. The student should present his /her experiences in a class and make report.

XI Life skills

1. Conduct aptitude , general knowledge test, IQ test, Solve Puzzles
2. Set the goal for personal development
3. Develop good habits to overcome stress

Methodology for conducting activity

1. The teacher will assign a topic for individual student; give sufficient time to complete the task. Ask the student to submit an hand written report
2. The teacher should conduct any one specified life skill activity with local placement cell of the institute.
3. The student should present his /her experiences in a class and make report.

XII Information search and Data Collection: – the following are few suggested topics given and the teacher can select any other current and relevant topic of her/his choice

1. Company Registration Procedure

2. Registration of Business Organisation
3. E-Business
4. Distribution channels for consumer goods in India
5. Availability of Industrial and Business Finance
6. State of Employment in India

Methodology for conducting Graded activities.

1. The student should individually select the topic, and search the information related to topic.
2. The report is strictly hand written document to have knowledge of precise writing and report making based on data collection
3. Carry out class room presentation.

EVALUATION CRITERIA FOR SKILL UPGRADATION (RUBRICS)

Dimension	Excellent	Good	Satisfactory	Improving	unsatisfactory
	5	4	3	2	1
Collection of data	Collects all information relevant to the topic	Collects basic information relevant to the topic	Collects limited information relevant to the topic	Collects very little information	Does not collect any information
Team spirit	Performs all duties assigned very enthusiastically	Performs his duties	Performs very little	Performs but unreliable	Does not perform anything
Sharing views	Confidently taking the responsibility in completing the task	Takes the responsibility	Performs very little	Unable to express his views	No response
Overall presentation & Attentiveness	Always attentive and ready to speak on all points	Attentive and has sufficient points	Trying his/her best to present	Showing interest	Unable to present and shows very little interest

Diploma in Civil Engineering

Course Title:	Skill Upgradation	Course Code :	
Semester:	II Semester	Course Group :	Practical
Teaching Scheme in Periods(L:T:P):	0:0:105	Credits :	2.5
Type of Course :	Practicals	Total Contact Periods :	105 Periods

SKILL UPGRADATION(SUGGESTED STUDENT ACTIVITIES)

ACTIVITIES IN ENGINEERING MATHEMATICS

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

Rubrics for Activity assessment-MATHEMATICS

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.

Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

ACTIVITIES IN APPLIED PHYSICS

Bridge activity: - Visiting your college Library:

- (A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.
- (B) Prepare a list of Physics/Science journals, magazines, monographs with details.
- (C) Prepare a log book of your visits to college library with brief description.

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.

11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.

Rubrics for Activity assessment (in Applied Physics)

General Scale for scoring student performance in Skill Upgradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

ACTIVITIES IN ENGINEERING CHEMISTRY AND ENVIRONMENTAL STUDIES

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

Step-1: Data collection on the ores and different methods of concentration of ore.

Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.

Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation

Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

Step-1: Collection of data related to the factors effecting the corrosion.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment under different conditions such as

- i. Metal exposed to air only
- ii. Metal exposed to dry air
- iii. Metal partially dipped in salt water
- iv. Metal completely dipped in water
- v. Metal partially dipped in pure water

Note: This experiment may be conducted in other conditions also.

Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation

Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 4

Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5

Study of Prevention of Corrosion of a metal by using different coating materials

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6

Study of plastics, recycling of plastics and their advantages and disadvantages

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7

Study on natural rubber and its uses

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8

Power point presentation on fossil fuels

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9

Study and analysis of environment related air pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10

Study and analysis of environment related water pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11

Study and analysis of college environment

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12

Construction of Galvanic cell

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Rubrics for Activity assessment(in Engineering Chemistry and Environmental Studies)

Model Rubrics

S . N o	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

SKILL UPGRADATION ACTIVITIES IN ALL SUBJECTS

1. Conduct a survey around the college campus and plot the Contour map and give Power Point Presentation.
2. Prepare action plan for construction of internal roads in college campus based on measured data.
3. Prepare 3D models of different exercises given in isometric drawings using AUTOCAD.
4. Prepare a 3D view of the college campus using AUTO CAD with animation.
5. Calculate the volume of the nearby pond/reservoir using contours interpreted from respective survey maps and topo sheets using Trapezoidal/Simpson's rule.
6. Prepare 3D models of different exercises given in isometric drawings using Fibre board.
7. Prepare a perspective view of entire college campus using AUTOCAD and demonstrate with animation.
8. Prepare a presentation formulating an action plan to control air pollution in the city
9. Give a presentation describing the detailed action plan to minimize water pollution in the city.
10. Listen to given passages/conversations/dialogues/speeches and answer the questions to improve the listening skills.
11. Conduct JAM on topics such as environment, pollution, ethics, morals, responsibilities of citizens.
12. Speak about incidents/events/memories/dreams/role model to enhance public speaking skills.
13. Conduct Interviews with famous personalities and prepare a report to cover its essence.

14. Compare and contrast two people/pictures/news items/ideas and give presentation
15. Student visits Library to refer Text books, reference books and manuals to find their specifications.
16. Student inspects the available equipment in the Chemistry Lab to familiarize with them.
17. Create a spreadsheet for the data pertaining to students bio-data.
18. Create a power point presentation on the performance of the students in Games and Sports meet.

Note:

1. The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.
2. Rubrics for student activities can be generated by subject teacher
3. The above student activities will be assessed using rubrics. A sample rubrics template is given below. The subject teacher can assess students using rubrics with atleast four relevant aspects.

RUBRICS MODEL (For assessing Presentation skills)

Aspects	Needs improvement	Satisfactory	Good	Exemplary
Collection of data	Collects very limited information	Collect much Information with very limited relevance to the topic	Collects some basic information with little bit of irrelevance	Collects a great deal of information with relevance
Presentation of data	Clumsy presentation of data	Presents data well; but presentation needs to be more meaningful	Presents data well but need to improve clarity	Presents data in an understandable yet concise manner
Fulfill team's roles & duties	Performs very little duties but Unreliable.	Performs very little duties and is inactive	Performs nearly all duties	Performs all duties of assigned team roles
Shares	Rarely does	Usually does	Normally	Always does

work equally	the assigned work; often needs reminding	the assigned work; rarely needs reminding	does the assigned work	the assigned work without having to be reminded
Interaction with other team mates	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening to others	Listens, but sometimes talks too much	Listens and speaks a fair amount
Audibility and clarity in speech	Hardly audible and unclear	Very little audibility and clarity	Audible most of the time with clarity	Audible and clear
Understanding content	Lacks content understanding and is clearly a work in progress	Little depth of content understanding	Some depth of content understanding is evident but needs improvement	Insight and depth of content understanding are evident
Content Presentation	Content is inaccurate and information is not presented in a logical order making it difficult to follow	Content is accurate and information is not presented in a logical order making it difficult to follow	Content is accurate but some information is not presented in a logical order but is still generally easy to follow	Content is accurate and information is presented in a logical order

Suggested additional aspects for assessing Leadership Qualities:

1. Carrying self
2. Punctuality
3. Team work abilities
4. Moral values
5. Communication skills
6. Ensures the work is done in time

Suggested additional aspects for assessing “Participation in social task”

- 1 Interested to know the current situation of society.
- 2 Shows interest to participate in given social task.
- 3 Reliable
- 4 Helping nature
- 5 Inter personal skills
- 6 Ensures task is completed

Suggested additional aspects for assessing “Participation in Technical task”

1. Updated to new technologies
2. Identifies problems in society that can be solved using technology
3. Interested to participate in finding possible technical solutions to identified project
4. Reliable
5. Interpersonal skills

Suggested additional aspects for Carrying Self:

- 1 Stand or sit straight.
- 2 Keep your head level.
- 3 Relax your shoulders.
- 4 Spread your weight evenly on both legs.
- 5 If sitting, keep your elbows on the arms of your chair, rather than tightly against your sides.
- 6 Make appropriate eye contact while communicating.
- 7 Lower the pitch of your voice.
- 8 Speak more clearly.

Diploma in Chemical EngineeringII SEMESTERSKILL UPGRADATION IN - ENGINEERING MATHEMATICSACTIVITY ASSESSMENT Steps

1. Mathematical concepts
2. Procedure
3. Explanation
4. Working with others
5. Mathematical errors

ACTIVITIES

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

CO / PO - MAPPING OF ACTIVITIES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	1			1	2	2	3
CO2	3	2	2	1			1	2	2	3
CO3	3	2	2	1			1	2	2	3
CO4	3	2	2	1			1	2	2	3
CO5	3	2	2	1			1	2	2	3
CO6	3	2	2	1			1	2	2	3
CO7	3	2	2	1			1	2	2	3

Rubrics for Activity assessment

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

PASS SCORE: 2.5

STUDENT ASSESSMENT by RUBRICS

[illegible]

SEMESTER – IISKILL UPGRATION – APPLIED PHYSICSTASK

LEVEL 1: Concept, Ethical Data, Materials, Source (Library/internet/others)

LEVEL 2: Methodology/procedure

LEVEL 3: Analysis/experiment

LEVEL 4: Interpretation/inference/evaluation.

Bridge activity: - Visiting your college Library:

- (A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.
- (B) Prepare a list of Physics/Science journals, magazines, monographs with details.
- (C) Prepare a log book of your visits to college library with brief description.

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.
11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.

12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: The above activities are indicative. The teacher may assign any other activity relevant

to the course based on resources available.

Course Outcomes (CO)		Linked Pos	Activity Hours
CO1	Construction of a blowing pipe to detect dangerous gases in mines	PO1, PO2, PO3, PO4, PO5, PO6	3
CO2	Construction of model stethoscope with known materials	PO1, PO2, PO5, PO7	3
CO3	Conduct of awareness program on noise pollution in the college, colony and preparation of a video report.	PO1, PO2, PO5, PO6, PO7, PO8, PO9	3
CO4	Construction of a seconds' pendulum timer	PO1, PO2, PO3, PO4	3
CO5	Preparation of PPT on photosensitive materials with detailed specifications	PO1, PO2	3
CO6	Preparation of report on lasers practically used	PO1, PO2, PO4, PO5, PO10	3
CO7	Preparation of PPT on application of optical fibers in medical and engineering field	PO1, PO2, PO4, PO5, PO6, PO9, PO10	3
CO8	Production of electricity with a magnet –working model, PPT with animation and drawings on a chart.	PO1, PO2, PO3, PO4	3
CO9	Construction of an electric calling bell	PO1, PO2, PO3, PO4	3
CO10	Construction of a circuit on breadboard to verify Kirchhoff's voltage law	PO1, PO2, PO3, PO4	3
CO11	Preparation of PPT on Superconductors and their practical applications with motion pictures.	PO1, PO2, PO3, PO4, PO9, PO10	3
CO12	Collection of various resistors, diodes and LEDs with specifications and installation on a card board	PO1, PO2	3

Rubrics for Task Assessments

General Scale for scoring student performance in Skill Upgradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

PASS SCORE: 2.5

STUDENT ASSESSMENT (RUBRICS)

[illegible]

Engineering Chemistry and Environmental Studies

Suggested Skill Upgradation Activities

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

Step-1: Data collection on the ores and different methods of concentration of ore.

Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.

Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation

Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

Step-1: Collection of data related to the factors effecting the corrosion.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment under different conditions such as

- i. Metal exposed to air only
- ii. Metal exposed to dry air
- iii. Metal partially dipped in salt water
- iv. Metal completely dipped in water
- v. Metal partially dipped in pure water

Note: This experiment may be conducted in other conditions also.

Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation

Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 4**Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5**Study of Prevention of Corrosion of a metal by using different coating materials**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6**Study of plastics, recycling of plastics and their advantages and disadvantages**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7**Study on natural rubber and its uses**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8**Power point presentation on fossil fuels**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9

Study and analysis of environment related air pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10

Study and analysis of environment related water pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11

Study and analysis of college environment

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12

Construction of Galvanic cell

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Mapping of POs to Student activities

S.No	Name of the activity	Linked POs
1	Power point presentation on the different methods of concentration of ore	1,2,4,8,9
2	Corrosion of a metal under different conditions	1,2,3,4, 5,6,8,9,10
3	Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions	1,2,3,4, 5,6,8,9,10
4	Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions	1,2,3,4,5,6,8,9,10
5	Study of Prevention of Corrosion of a metal by using different coating materials	1,2,3,4,5,6,8,9,10
6	Study of plastics, recycling of plastics and their advantages and disadvantages	1,2,4,5,6,7,8,9,10
7	Study on natural rubber and its uses	1,2,4,5,6,7,8,9,10
8	Power point presentation on fossil fuels	1,2,4,5,7,8,9,10
9	Study and analysis of environment related air pollution	1,2,4,5,6,7,8,9,10
10	Study and analysis of environment related water pollution	1,2,4,5,6,7,8,9,10
11	Study and analysis of college environment	1,2,4,5,6,7,8,9,10
12	Construction of Galvanic cell	1,2,3,4,5,8,9

Method of evaluation of the student activities (Rubrics)**Model Rubrics**

S.No	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

Diploma in Computer Engineering**SKILL Upgradation-II**

Course Title	: Skill Upgradation -II	Course Code	: Common
Semester	: II	Course	: Core
Teaching Scheme in periods (L :	: 0:0:7	Credits	: 2.5
Methodology	: Activities	Total	: 105
CIE	: Rubrics	Contact SEE	: Nil

Rationale: This course is introduced for all semesters with a purpose of providing outside classroom experiences that lead to overall development of the students. One whole day is allocated for activities.

Course Objectives:

1. To create an awareness on Engineering Ethics and Human Values.
2. To instil Moral, Social Values and Loyalty.
3. Create awareness about social responsibilities of Engineers
4. To improve Communication and Participation skills

Course Content and Blue Print of Marks for SEE			
Activity No	Activity	Periods	Frequency
1	Haritha Haram(plantation & Maintenance)	9	3 times in a semester
2	Waste management	12	3 times in a semester
3	Swachh Bharat	28	4 times in a semester
4	Mini projects	7	1 time in a semester
5	Video Clips	9	3 times in a semester
6	Seminar/Quiz/Presentation/Group discussion	18	6 times in a semester
7	Local Visits (also within the campus)	6	2 times
8	Expert Lectures • Engineering ethics- • moral issues • Ethical theories Personality– Self control- Self-interest –Self-respect. • Emerging technologies	16	4 Times
Total Periods		105	

Note: in case Expert faculty are not available English faculty should handle the expert lectures or Video clips on the suggested lectures may be played

Course Outcomes:

CO	Outcome	CO/PO Mapping
CO1	Practice the moral values that ought to guide the Engineering profession.	1,2,5,6,7,8,9,10
CO2	Develop the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them in real life situations	8,10
CO3	Create awareness of saving environment through activities	3,4,5,8,9
CO4	Create awareness of Constitution of India	1,4,7,8,9,10

COURSE CONTENT:

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy – Profession-Definition–Ethical theories-Theories about right action Personality– Self control- Self-interest –Selfrespect.

Evaluation:

The student must maintain a record of all activities conducted on **skill upgradation/ Activities** day and prepare a soft copy of report and submit it to their mentor or upload to the institute website or mail.

The reports shall be evaluated by the mentors through rubrics and accordingly give the eligibility for 2.5 credits . The student must have participated in at least 75% of activities to get eligibility.

CO-PO Mapping Matrix

Course Outcome	Basic knowledge	Discipline Knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & sustainability	Ethics	Individual and Team work	Communication	Lifelong learning	Mapped POs
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	
CO1	✓				✓					✓	5,10
CO2					✓					✓	5,10
CO3						✓	✓		✓	✓	6,7,9,10
CO4					✓		✓			✓	5,7,10

ANNEXURE

PROGRAM OUTCOMES (POs)

1. **Basic knowledge:** An ability to apply knowledge of basic mathematics, science and engineering to solve the engineering problems.
2. **Discipline knowledge:** An ability to apply discipline - specific knowledge to solve core and/or applied engineering problems.
3. **Experiments and practice:** An ability to plan and perform experiments and practices and to use the results to solve engineering problems.
4. **Engineering Tools:** Apply appropriate technologies and tools with an understanding of the limitations.
5. **The engineer and society:** Demonstrate knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to engineering practice.
6. **Environment and sustainability:** Understand the impact of the engineering solutions in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
7. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
8. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse/multidisciplinary teams.
9. **Communication:** An ability to communicate effectively.
10. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the context of technological changes.

Diploma in Electronics & Communication Engineering**SKILL Upgradation-II**

Course Title	: Skill Upgradation -II	Course Code	: Common
Semester	: II	Course	: Core
Teaching Scheme in periods (L :	: 0:0:7	Credits	: 2.5
Methodology	: Activities	Total	: 105
CIE	: Rubrics	Contact SEE	: Nil

Rationale: This course is introduced for all semesters with a purpose of providing outside classroom experiences that lead to overall development of the students. One whole day is allocated for activities.

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CO2	Develop the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them in real life situations	8,10
CO3	Create awareness of saving environment through activities	3,4,5,8,9
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COURSE CONTENT:

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy –Profession-Definition–Ethical theories-Theories about right action Personality– Self control- Self-interest –Selfrespect.

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CO1	✓				✓					✓	5,10
CO2					✓					✓	5,10
CO3						✓	✓		✓	✓	6,7,9,10
CO4					✓		✓			✓	5,7,10

DIPLOMA IN ELECTRICAL AND ELECTRONICS ENGINEERING

SKILL UPGRADATION ACTIVITY SHEET

Course Title	: Skill Upgradation	Credits	:2.5
Semester	: II	Total Contact Periods	: 105
Methodology	: Activities		

Suggested Course Outcomes

CO.1 Address the identified needs of the community collaboratively to facilitate positive social change.

- a. Prepare a chart related to the topics covered in the present semester.
- b. Listen to expert talk, guest lecture, youtube video and write a summary.
- c. Participate in Haritha Haram and submit a small report about the activities.
- d. Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
- e. Seminar on problems with possible solutions in the campus or nearby places
- f. Group discussions or enacting a play on topics creating awareness about socio-economic problems
- g. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- h. Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.2 Listen attentively to others and respond appropriately

- a. Listen to expert talk, guest lecture, youtube video and write a summary.
- b. Participating in Group discussions or enacting a play on topics creating awareness about socio-economic problems that can be mitigated by technologies.
- c. Participate in quiz on technical aspects or current affairs
- d. Participate in Mock Interview

(PO5, 7, 8, 9, 10)

CO.3 Adapt your style to the occasion, task, and audience

- a. Group discussions or enacting a play on topics creating awareness about socio-economic problems that can be mitigated by technologies.
- b. Seminar on problems with possible solutions in the campus or nearby places
- c. Participate in Mock Interview

(PO5, 6, 7, 8, 9, 10)

CO.4 Articulate ideas in various formats including oral, written, nonverbal, visual, and electronic devices.

- a. Prepare a chart related to the topics covered in the present semester.
- b. Refer to an e-journal and submit a summary report on upcoming technologies.
- c. Visit factory / industry and submit a report/PPT on the observations made.
- d. Prepare a mini project and submit report.
- e. Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
- f. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- g. Seminar on problems with possible solutions in the campus or nearby places
- h. Participate in Mock Interview

(PO5, 6, 7, 8, 9, 10)

CO.5 Demonstrate ability to recognize and effectively manage ambiguous ideas, experiences and situations

- a. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- b. Seminar on problems with possible solutions in the campus or nearby places

(PO5, 6, 7, 8, 9, 10)

CO.6 Analyze the interconnections between individuals and society as well as how individual actions have an impact on others.

- a. Participate in Haritha Haram and submit a small report about the activities.
- b. Participate in Swatch Bharath and write an essay on the importance of the program
- c. Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.7 Utilize others' ideas, strengths, knowledge, and abilities to foster an inclusive environment & Develop and sustain healthy and meaningful relationships with others

- a. Prepare a mini project and submit report.
- b. Participate in Haritha Haram and submit a small report about the activities.
- c. Participate in Swatch Bharath and write an essay on the importance of the program
- d. Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.8 Ability to recognize their strengths and those of others to work towards a shared vision.

- a. Prepare a mini project and submit report.
- b. Participate in Haritha Haram and submit a small report about the activities.
- c. Participate in Swatch Bharath and write an essay on the importance of the program
- d. Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.9 Act in alignment with one's own values to contribute to one's life-long growth and learning.

- a. Physical activities such as sports, yoga, meditation and other relaxation techniques

(PO5, 6, 7, 8, 9, 10)

CO.10 Gain, process, and act upon knowledge regarding the effects of individual, community, national, and international level choices on ecosystems and people.

- a. Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.

- b. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- c. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- d. Seminar on problems with possible solutions in the campus or nearby places

(PO5, 6, 7, 8, 9, 10)

CO	Outcome	CO/PO Mapping
CO1	Address the identified needs of the community collaboratively to facilitate positive social change.	5, 6, 7, 8, 9, 10
CO2	Listen attentively to others and respond appropriately	5, 6, 7, 8, 9, 10
CO3	Adapt your style to the occasion, task, and audience	5, 6, 7, 8, 9, 10
CO4	Articulate ideas in various formats including oral, written, nonverbal, visual, and electronic devices.	5, 6, 7, 8, 9, 10
CO5	Demonstrate ability to recognize and effectively manage ambiguous ideas, experiences and situations	5, 6, 7, 8, 9, 10
CO6	Analyze the interconnections between individuals and society as well as how individual actions have an impact on others.	5, 6, 7, 8, 9, 10
CO7	Utilize others' ideas, strengths, knowledge, and abilities to foster an inclusive environment & Develop and sustain healthy and meaningful relationships with others	5, 6, 7, 8, 9, 10
CO8	Ability to recognize their strengths and those of others to work towards a shared vision	5, 6, 7, 8, 9, 10
CO9	Act in alignment with one's own values to contribute to one's life-long growth and learning.	5, 6, 7, 8, 9, 10
CO10	Gain, process, and act upon knowledge regarding the effects of individual, community, national, and international level choices on ecosystems and people.	5, 6, 7, 8, 9, 10

Note: The above COs may be mapped to other POs from 1 to 4 apart from PO's 5 to 10 depending on the topic

Suggested Student Activities

1. Prepare a chart related to the topics covered in the present semester.
2. Refer to an e-journal and submit a summary report on upcoming technologies.
3. Visit factory / industry and submit a report/PPT on the observations made.
4. Prepare a mini project and submit report.
5. Listen to expert talk, guest lecture, youtube video and write a summary.
6. Participate in Haritha Haram and submit a small report about the activities.
7. Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
8. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster

9. Participate in Swatch Bharath and write an essay on the importance of the program
10. Group discussions or enacting a play on topics creating awareness about socio-economic problems
11. Physical activities such as sports, games, yoga, meditation and other relaxation techniques
12. Participate in quiz on technical aspects or current affairs
13. Seminar on problems with possible solutions in the campus or nearby places
14. Participate in NCC
15. Participate in Mock interviews

Note: The above student activities will be assessed using rubrics. A sample rubrics template is given below. The subject teacher can assess students using rubrics with atleast four relevant aspects.

RUBRICS MODEL (For assessing Presentation skills)

Aspects	Needs improvement	Satisfactory	Good	Exemplary
Collection of data	Collects very limited information	Collect much Information with very limited relevance to the topic	Collects some basic information with little bit of irrelevance	Collects a great deal of information with relevance
Presentation of data	Clumsy presentation of data	Presents data well; but presentation needs to be more meaningful	Presents data well but need to improve clarity	Presents data in an understandable yet concise manner
Fulfill team's roles & duties	Performs very little duties but Unreliable.	Performs very little duties and is inactive	Performs nearly all duties	Performs all duties of assigned team roles
Shares work equally	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Normally does the assigned work	Always does the assigned work without having to be reminded
Interaction with other team mates	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening to others	Listens, but sometimes talks too much	Listens and speaks a fair amount
Audibility and clarity in speech	Hardly audible and unclear	Very little audibility and clarity	Audible most of the time with clarity	Audible and clear
Understanding content	Lacks content understanding and is clearly a work in progress	Little depth of content understanding	Some depth of content understanding is evident but needs improvement	Insight and depth of content understanding are evident
Content Presentation	Content is inaccurate and	Content is accurate and information is	Content is accurate but some	Content is accurate and

	information is not presented in a logical order making it difficult to follow	not presented in a logical order making it difficult to follow	information is not presented in a logical order but is still generally easy to follow	information is presented in a logical order
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Suggested additional aspects for assessing Leadership Qualities:

1. Carrying self
2. Punctuality
3. Team work abilities
4. Moral values
5. Communication skills
6. Ensures the work is done in time

Suggested additional aspects for assessing “Participation in social task”

- 1 Interested to know the current situation of society.
- 2 Shows interest to participate in given social task.
- 3 Reliable
- 4 Helping nature
- 5 Inter personal skills
- 6 Ensures task is completed

Suggested additional aspects for assessing “Participation in Technical task”

1. Updated to new technologies
2. Identifies problems in society that can be solved using technology
3. Interested to participate in finding possible technical solutions to identified project
4. Reliable
5. Interpersonal skills

Suggested additional aspects for Carrying Self:

- 1 Stand or sit straight.
- 2 Keep your head level.
- 3 Relax your shoulders.
- 4 Spread your weight evenly on both legs.
- 5 If sitting, keep your elbows on the arms of your chair, rather than tightly against your sides.
- 6 Make appropriate eye contact while communicating.
- 7 Lower the pitch of your voice.
- 8 Speak more clearly.

Diploma in Electronics and Instrumentation Engineering
STUDENT ACTIVITY SHEET FOR SKILL UP GRADATION

The activity should be graded as

Excellent: 5 Marks, Good: 4 Marks, Satisfactory: 3 Marks, Needs improvement: 2 Marks, Unsatisfactory: 1 Mark

Note:

(1) Along with every activity the rubrics table should be given to the student for his information about the criterion of assessment.

(2) As a record of the activity at least Rubric sheet for each student for every activity at least Rubric sheet for each student as be preserved as a document.

RUBRICS MODEL – Group activity like Mini Project

RUBRICS FOR ACTIVITY(5 Marks)						
Dimension	Unsatisfactory <u>1</u>	Developing <u>2</u>	Satisfactory <u>3</u>	Good <u>4</u>	Excellent <u>5</u>	Student Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collect much information; but very limited relate to the topic	Collects some basic information; most refer to the topic	Collects a great deal of information; all refer to the topic	Ex: 4
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties but unreliable.	Performs very little duties	Performs nearly all duties	Performs all duties of assigned team roles	<u>5</u>
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Normally does the assigned work	Always does the assigned work without having to be reminded	<u>3</u>
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening others	Listens, but sometimes talk too much	Listens and speaks a fair amount	<u>2</u>
Average / Total marks=(4+5+3+2)/4=14/4=3.5=4						

Rubrics assessment for Power point presentations

ELEMENT	Exemplary	Proficient	Partially Proficient	Unsatisfactory	POINTS
Research and Note Taking	3 points	2 points	1 point	0 points	___/3
	Accurately researched a variety of information sources recorded and interpreted significant facts, meaningful graphics, and evaluated alternative points of view.	Recorded relevant information from multiple sources of information evaluated and synthesized relevant information.	Misinterpreted statements, graphics and questions and failed to identify relevant arguments.	Recorded information from four or less resources, did not find graphics and ignored alternative points of view.	
Presentation planning	3 points	2 points	1 point	0 points	___/3
	the slide presentation structure with thumbnail sketches of each slide including: title of slide, text, background color, placement & size of graphic, fonts - color, size, type for text and headings. All slides are numbered, and there is a logical sequence to the presentation.	The thumbnail sketches on the topic include titles and text for each slide and are in sequential order.	The thumbnail sketches on the topic are not in a logical sequence and have incomplete information.	There a very few thumbnail sketches on the topic and do not provide an overview of the presentation.	
Introduction	3 points	2 points	1 point	0 points	___/3
	The introduction presents the overall topic	The introduction is clear and coherent and	The introduction shows some structure but	The introduction does not orient the audience to	

	and draws the audience into the presentation with compelling questions or by relating to the audience's interests or goals.	relates to the topic.	does not create a strong sense of what is to follow. May be overly detailed or incomplete and is somewhat appealing to the audience.	what will follow. The sequencing is unclear and does not appear interesting or relevant to the audience.	
Content	3 points	2 points	1 point	0 points	____/3
	The content is written clearly and concisely with a logical progression of ideas and supporting information. The project includes motivating questions and advanced organizers. The project gives the audience a clear sense of the main idea. Information is accurate, current and comes mainly from * primary sources.	The content is written with a logical progression of ideas and supporting information. Includes persuasive information from reliable sources.	The content is vague in conveying a point of view and does not create a strong sense of purpose. Includes some persuasive information with few facts. Some of the information may not seem to fit. Sources used appear unreliable.	The content lacks a clear point of view and logical sequence of information. Includes little persuasive information and only one or two facts about the topic. Information is incomplete, out of date and/or incorrect. Sequencing of ideas is unclear.	
Text	3 points	2 points	1 point	0 points	____/3
	The fonts are easy to read and point size varies appropriately for headings and text.	Sometimes the fonts are easy to read, but in a few places the use of fonts, italics, bold, long	Overall readability is difficult with lengthy paragraphs, too many different fonts, dark or busy	The text is extremely difficult to read with long blocks of text and small point size of fonts, inappropriate	

	Use of italics, bold, and indentations enhances readability. Text is appropriate in length for the target audience and to the point. The background and colors enhance the readability of text.	paragraphs, color or busy background detracts and does not enhance readability.	background, overuse of bold or lack of appropriate indentations of text.	contrasting colors, poor use of headings, subheadings, indentations, or bold formatting.	
Layout	3 points The layout is visually pleasing and contributes to the overall message with appropriate use of headings, subheadings and white space.	2 points The layout uses horizontal and vertical white space appropriately.	1 point The layout shows some structure, but appears cluttered and busy or distracting with large gaps of white space or uses a distracting background.	0 points The layout is cluttered, confusing, and does not use spacing, headings and subheadings to enhance the readability.	___/3
Graphics, and/or Animation	3 points The graphics, and/or animation assist in presenting an overall theme and enhance understanding of concept, ideas and relationships. Original images are created using proper size	2 points The graphics, /and or animation visually depict material and assist the audience in understanding the flow of information or content. Original images are used.	1 point Some of the graphics, , and/or animations seem unrelated to the topic/theme and do not enhance the overall concepts. Most images are clip art or recycled from	0 points The graphics, , and/or animations are unrelated to the content. Graphics do not enhance understanding of the content, or are distracting decorations that create a busy feeling and detract	___/3

	and resolution, and all images enhance the content. There is a consistent visual theme.	Images are proper size, resolution.	the internet. Images are too large/small in size. Images are poorly cropped or the color/resolution is fuzzy.	from the content.	
Writing Skills	3 points	2 points	1 point	0 points	___/3
	The text is written with no errors in grammar, capitalization, punctuation, and spelling.	The text is clearly written with little or no editing required for grammar, punctuation, and spelling.	Spelling, punctuation, and grammar errors distract or impair readability. (three or more errors)	Errors in spelling, capitalization, punctuation, usage and grammar repeatedly distract the reader, and major editing and revision is required. (more than five errors)	
TOTAL POINTS					___/24

Note: This is only an example. Appropriate rubrics/criteria may be devised by the concerned faculty (Course Coordinator) for assessing the given activity.

C-18 DEIE II SEMESTER**SKILL UPGRADATION ACTIVITIES**

1. Visit the College library and prepare a list of at least 10 text books available in the library with author name and publishing company for each subject of the semester. The student should submit a handwritten report. (POs 8, 10)
2. Prepare 3D models of different exercises given in isometric drawings using AUTOCAD. (POs 8, 10)
3. Prepare a 3D view of the college campus using AUTO CAD with animation. (POs 8, 10)
4. Calculate the volume of the nearby pond/reservoir using contours interpreted from respective survey maps and topo sheets using Trapezoidal/Simpson's rule. (POs 5, 8)
5. Prepare 3D models of different exercises given in isometric drawings using Fibre board. (POs 5, 8)
6. Prepare a perspective view of entire college campus using AUTOCAD and demonstrate with animation. (POs 5, 8)
7. Prepare a presentation formulating an action plan to control air pollution in the city. (POs 5, 8)
8. Give a presentation describing the detailed action plan to minimize water pollution in the city. (POs 5, 8)
9. Listen to given passages/conversations/dialogues/speeches and answer the questions to improve the listening skills. (PO 8)
10. Speak about incidents/events/memories/dreams/role model to enhance public speaking skills. (PO 8, 9)
11. Compare and contrast two people/pictures/news items/ideas and give presentation. (PO 8, 9)
12. Student observes the available equipment in the Chemistry Lab to familiarize with them. (PO 8)
13. Create a spreadsheet for the data pertaining to students' bio-data. (PO 8)
14. Create a power point presentation on the performance of the students in Games and Sports meet. (PO 8)
15. Do Market survey on List of Semi conductor devices available in the market and collect the information like specifications, Price etc. The student should submit a handwritten report. Documents have to be maintained as a record. (PO 8, 9)

16. Take Quiz tests / assignments in Semiconductor devices. Documents have to be maintained as a record. (PO 8, 9)
17. Do a power point presentation on Electronic components used in the concerned subject experiments. Documents have to be maintained as a record. (PO 8, 9)
18. Visit YouTube or any other sites for the study of fabrication of Electronics components and devices. Listen to the lectures and submit a handwritten report and a soft copy (CD/DVD). (PO 8, 9, 10)

SECOND SEMESTER – Skill Up gradation – Student Activities

1. Telangana ku Haritha Haram (Tree plantation Programme) P6
2. Swatch bharaath programme. P5
3. Attending the Lectures delivered by the eminent personalities. P7, P10
4. Attending Safety programmes conducted by the college. P5, P10
5. Listen to a song and answer the questions P9
6. Listen to a passage/conversations/dialogues/speeches and answer the questions P9
7. Group Discussions P9
8. Student Presentations P9
9. Seminars P9
10. Talk about a movie/review P9
11. Talk about a book P9
12. Narrating a story P9
13. Chain stories P9
14. JAM on topics like environment, pollution, ethics, morals, responsibilities of citizens P5, P6
15. Speak about incidents/events/memories/dreams/role model P9
16. Interview with famous personalities P9
17. Cricket commentary P9
18. Reading for main ideas P9
19. Reading for specific details P9
20. Summarizing P9
21. Picture description P9
22. Writing a recipe P9
23. Surprise test on various courses of II semester P2
24. Compare and contrast two people/pictures/news items/ideas etc P9
25. Surveys P9
26. Filling forms P9
27. e-mail etiquette P9
28. Student visits Library to refer Standard Books on Mathematics and collect related material P2
29. Student inspects the available equipment in the Physics Lab to familiarize with them. P3
30. Student visits Library to refer to Text books, reference books and manuals P10
31. Student inspects the available equipment in the Chemistry Lab to familiarize with them. P3
32. Collection of different Upper, Bottom materials, Grinders P2
33. Collection of sketches and photos of different type of Leather goods, P2
34. Preparation of Posters. P9
35. Student visits nearby industry to see the bottom construction methods. P10
36. Collect different closed type footwear sketches. P2

The student activities can be Assessed by the one of the below Rubrics or Faculty can develop their own rubric

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RUBRICS TO EVALUATE DEBATE, SIMILAR ACTIVITIES

CATEGORY	4	3	2	1
se of Facts/Statistics	Every major point was well supported with several relevant facts, statistics and/or examples.	Every major point was adequately supported with relevant facts, statistics and/or examples.	Every major point was supported with facts, statistics and/or examples, but the relevance of some was questionable.	Every point was not supported.
Information	All information presented in the debate was clear, accurate and thorough.	Most information presented in the debate was clear, accurate and thorough.	Most information presented in the debate was clear and accurate, but was not usually thorough.	Information had several inaccuracies OR was usually not clear.
Rebuttal	All counter-arguments were accurate, relevant and strong.	Most counter-arguments were accurate, relevant, and strong.	Most counter-arguments were accurate and relevant, but several were weak.	Counter-arguments were not accurate and/or relevant
Presentation Style	Team consistently used gestures, eye contact, tone of voice and a level of enthusiasm in a way that kept the attention of the audience.	Team usually used gestures, eye contact, tone of voice and a level of enthusiasm in a way that kept the attention of the audience.	Team sometimes used gestures, eye contact, tone of voice and a level of enthusiasm in a way that kept the attention of the audience.	One or more members of the team had a presentation style that did not keep the attention of the audience.
Understanding of Topic	The team clearly understood the topic in-depth and presented their information forcefully and convincingly.	The team clearly understood the topic in-depth and presented their information with ease.	The team seemed to understand the main points of the topic and presented those with ease.	The team did not show an adequate understanding of the topic.
Respect for Other Team	All statements, body language, and responses were respectful and were in appropriate language.	Statements and responses were respectful and used appropriate language, but once or twice body	Most statements and responses were respectful and in appropriate language, but there was one	Statements, responses and/or body language were consistently not respectful.

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		language was not.	sarcastic remark.	
Organization	All arguments were clearly tied to an idea (premise) and organized in a tight, logical fashion.	Most arguments were clearly tied to an idea (premise) and organized in a tight, logical fashion.	All arguments were clearly tied to an idea (premise) but the organization was sometimes not clear or logical.	Arguments were not clearly tied to an idea (premise).

RUBRICS TO EVALUATE PAPER PRESENTATION, SIMILAR ACTIVITIES

CATEGORY	4	3	2	1
Use of Class Time	Used time well during each class period. Focused on getting the project done. Never distracted others.	Used time well during each class period. Usually focused on getting the project done and never distracted others.	Used some of the time well during each class period. There was some focus on getting the project done but occasionally distracted others.	Did not use class time to focus on the project OR often distracted others.
Graphics -Clarity	Graphics are all in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content easily viewed and identified from 6 ft. away.	Most graphics are in focus and the content is easily viewed and identified from 4 ft. away.	Many graphics are not clear or are too small.

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Graphics - Originality	Several of the graphics used on the poster reflect a exceptional degree of student creativity in their creation and/or display.	One or two of the graphics used on the poster reflect student creativity in their creation and/or display.	The graphics are made by the student, but are based on the designs or ideas of others.	No graphics made by the student are included.
Graphics - Relevance	All graphics are related to the topic and make it easier to understand. All borrowed graphics have a source citation.	All graphics are related to the topic and most make it easier to understand. All borrowed graphics have a source citation.	All graphics relate to the topic. Most borrowed graphics have a source citation.	Graphics do not relate to the topic OR several borrowed graphics do not have a source citation.
Labels	All items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Almost all items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Several items of importance on the poster are clearly labeled with labels that can be read from at least 3 ft. away.	Labels are too small to view OR no important items were labeled.
Required Elements	The poster includes all required elements as well as additional information.	All required elements are included on the poster.	All but 1 of the required elements are included on the poster.	Several required elements were missing.
Knowledge Gained	Student can accurately answer all questions related to facts in the poster and processes used to create the poster.	Student can accurately answer most questions related to facts in the poster and processes used to create the poster.	Student can accurately answer about 75% of questions related to facts in the poster and processes used to create the poster.	Student appears to have insufficient knowledge about the facts or processes used in the poster.
Content - Accuracy	At least 7 accurate facts are displayed on the poster.	5-6 accurate facts are displayed on the poster.	3-4 accurate facts are displayed on the poster.	Less than 3 accurate facts are displayed on the poster.

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Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.
Title	Title can be read from 6 ft. away and is quite creative.	Title can be read from 6 ft. away and describes content well.	Title can be read from 4 ft. away and describes the content well.	The title is too small and/or does not describe the content of the poster well.
Mechanics	Capitalization and punctuation are correct throughout the poster.	There is 1 error in capitalization or punctuation.	There are 2 errors in capitalization or punctuation.	There are more than 2 errors in capitalization or punctuation.

RUBRICS TO EVALUATE ORAL PRESENTATION AND SIMILAR ACTIVITIES

CATEGORY	4	3	2	1
Comprehension	Student is able to accurately answer almost all questions posed by classmates about the topic.	Student is able to accurately answer most questions posed by classmates about the topic.	Student is able to accurately answer a few questions posed by classmates about the topic.	Student is unable to accurately answer questions posed by classmates about the topic.
Enthusiasm	Facial expressions and body language generate a strong interest and enthusiasm about the topic in others.	Facial expressions and body language sometimes generate a strong interest and enthusiasm about the topic in others.	Facial expressions and body language are used to try to generate enthusiasm, but seem somewhat faked.	Very little use of facial expressions or body language. Did not generate much interest in topic being presented.
Attire	Business attire, very professional look.	Casual business attire.	Casual business attire, but wore sneakers or seemed somewhat wrinkled.	General attire not appropriate for audience (jeans, t-shirt, shorts).

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Preparedness	Student is completely prepared and has obviously rehearsed.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Evaluates Peers	Fills out peer evaluation completely and always gives scores based on the presentation rather than other factors (e.g., person is a close friend).	Fills out almost all of the peer evaluation and always gives scores based on the presentation rather than other factors (e.g., person is a close friend).	Fills out most of the peer evaluation and always gives scores based on the presentation rather than other factors (e.g., person is a close friend).	Fills out most of the peer evaluation but scoring appears to be biased.
Listens to Other Presentations	Listens intently. Does not make distracting noises or movements.	Listens intently but has one distracting noise or movement.	Sometimes does not appear to be listening but is not distracting.	Sometimes does not appear to be listening and has distracting noises or movements.
Time-Limit	Presentation is 5-6 minutes long.	Presentation is 4 minutes long.	Presentation is 3 minutes long.	Presentation is less than 3 minutes OR more than 6 minutes.
Speaks Clearly	Speaks clearly and distinctly all (100-95%) the time, and mispronounces no words.	Speaks clearly and distinctly all (100-95%) the time, but mispronounces one word.	Speaks clearly and distinctly most (94-85%) of the time. Mispronounces no more than one word.	Often mumbles or can not be understood OR mispronounces more than one word.
Props	Student uses several props (could include costume) that show considerable work/creativity and which make the presentation better.	Student uses 1 prop that shows considerable work/creativity and which make the presentation better.	Student uses 1 prop which makes the presentation better.	The student uses no props OR the props chosen detract from the presentation.

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Vocabulary	Uses vocabulary appropriate for the audience. Extends audience vocabulary by defining words that might be new to most of the audience.	Uses vocabulary appropriate for the audience. Includes 1-2 words that might be new to most of the audience, but does not define them.	Uses vocabulary appropriate for the audience. Does not include any vocabulary that might be new to the audience.	Uses several (5 or more) words or phrases that are not understood by the audience.
Uses Complete Sentences	Always (99-100% of time) speaks in complete sentences.	Mostly (80-98%) speaks in complete sentences.	Sometimes (70-80%) speaks in complete sentences.	Rarely speaks in complete sentences.
Stays on Topic	Stays on topic all (100%) of the time.	Stays on topic most (99-90%) of the time.	Stays on topic some (89%-75%) of the time.	It was hard to tell what the topic was.
Posture and Eye Contact	Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation.	Stands up straight and establishes eye contact with everyone in the room during the presentation.	Sometimes stands up straight and establishes eye contact.	Slouches and/or does not look at people during the presentation.
Content	Shows a full understanding of the topic.	Shows a good understanding of the topic.	Shows a good understanding of parts of the topic.	Does not seem to understand the topic very well.
Collaboration with Peers	Almost always listens to, shares with, and supports the efforts of others in the group. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others in the group. Does not cause \"waves\" in the group.	Often listens to, shares with, and supports the efforts of others in the group but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others in the group. Often is not a good team member.

580180/2020/ACADEMIC SECTION - 2**RUBRICS TO EVALUATE LAB REPORT AND SIMILAR ACTIVITIES**

CATEGORY	4	3	2	1
Components of the report	All required elements are present and additional elements that add to the report (e.g., thoughtful comments, graphics) have been added.	All required elements are present.	One required element is missing, but additional elements that add to the report (e.g., thoughtful comments, graphics) have been added.	Several required elements are missing.
Question/Purpose	The purpose of the lab or the question to be answered during the lab is clearly identified and stated.	The purpose of the lab or the question to be answered during the lab is identified, but is stated in a somewhat unclear manner.	The purpose of the lab or the question to be answered during the lab is partially identified, and is stated in a somewhat unclear manner.	The purpose of the lab or the question to be answered during the lab is erroneous or irrelevant.
Drawings/Diagrams	Clear, accurate diagrams are included and make the experiment easier to understand. Diagrams are labeled neatly and accurately.	Diagrams are included and are labeled neatly and accurately.	Diagrams are included and are labeled.	Needed diagrams are missing OR are missing important labels.
Participation	Used time well in lab and focused attention on the experiment.	Used time pretty well. Stayed focused on the experiment most of the time.	Did the lab but did not appear very interested. Focus was lost on several occasions.	Participation was minimal OR student was hostile about participating.
Error Analysis	Experimental errors, their possible effects, and ways to reduce errors are	Experimental errors and their possible effects are discussed.	Experimental errors are mentioned.	There is no discussion of errors.

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	discussed.			
Procedures	Procedures are listed in clear steps. Each step is numbered and is a complete sentence.	Procedures are listed in a logical order, but steps are not numbered and/or are not in complete sentences.	Procedures are listed but are not in a logical order or are difficult to follow.	Procedures do not accurately list the steps of the experiment.
Journal/Notebook	Clear, accurate, dated notes are taken regularly.	Dated, clear, accurate notes are taken occasionally.	Dated, notes are taken occasionally, but accuracy of notes might be questionable.	Notes rarely taken or of little use.
Background Sources	Several reputable background sources were used and cited correctly. Material is translated into student's own words.	A few reputable background sources are used and cited correctly. Material is translated into student's own words.	A few background sources are used and cited correctly, but some are not reputable sources. Material is translated into student's own words.	Material is directly copied rather than put into students own words and/or background sources are cited incorrectly.
Summary	Summary describes the skills learned, the information learned and some future applications to real life situations.	Summary describes the information learned and a possible application to a real life situation.	Summary describes the information learned.	No summary is written.
Calculations	All calculations are shown and the results are correct and	Some calculations are shown and the results are correct and	Some calculations are shown and the results labeled	No calculations are shown OR results are inaccurate or

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	appropriately labeled.	labeled appropriately.	appropriately.	mislabeled.
Materials	All materials and setup used in the experiment are clearly and accurately described.	Almost all materials and the setup used in the experiment are clearly and accurately described.	Most of the materials and the setup used in the experiment are accurately described.	Many materials are described inaccurately OR are not described at all.
Conclusion	Conclusion includes whether the findings supported the hypothesis, possible sources of error, and what was learned from the experiment.	Conclusion includes whether the findings supported the hypothesis and what was learned from the experiment.	Conclusion includes what was learned from the experiment.	No conclusion was included in the report OR shows little effort and reflection.
Analysis	The relationship between the variables is discussed and trends/patterns logically analyzed. Predictions are made about what might happen if part of the lab were changed or how the experimental design could be changed.	The relationship between the variables is discussed and trends/patterns logically analyzed.	The relationship between the variables is discussed but no patterns, trends or predictions are made based on the data.	The relationship between the variables is not discussed.
Safety	Lab is carried out with full attention to relevant safety procedures. The set-up, experiment, and tear-down posed	Lab is generally carried out with attention to relevant safety procedures. The set-up, experiment, and	Lab is carried out with some attention to relevant safety procedures. The set-up, experiment, and	Safety procedures were ignored and/or some aspect of the experiment posed a threat to the safety of the

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	no safety threat to any individual.	tear-down posed no safety threat to any individual, but one safety procedure needs to be reviewed.	tear-down posed no safety threat to any individual, but several safety procedures need to be reviewed.	student or others.
Replicability	Procedures appear to be replicable. Steps are outlined sequentially and are adequately detailed.	Procedures appear to be replicable. Steps are outlined and are adequately detailed.	All steps are outlined, but there is not enough detail to replicate procedures.	Several steps are not outlined AND there is not enough detail to replicate procedures.
Scientific Concepts	Report illustrates an accurate and thorough understanding of scientific concepts underlying the lab.	Report illustrates an accurate understanding of most scientific concepts underlying the lab.	Report illustrates a limited understanding of scientific concepts underlying the lab.	Report illustrates inaccurate understanding of scientific concepts underlying the lab.
Experimental Design	Experimental design is a well-constructed test of the stated hypothesis.	Experimental design is adequate to test the hypothesis, but leaves some unanswered questions.	Experimental design is relevant to the hypothesis, but is not a complete test.	Experimental design is not relevant to the hypothesis.
Variables	All variables are clearly described with all relevant details.	All variables are clearly described with most relevant details.	Most variables are clearly described with most relevant details.	Variables are not described OR the majority lack sufficient detail.
Appearance/Organization	Lab report is typed and uses headings and subheadings to visually organize the material.	Lab report is neatly handwritten and uses headings and subheadings to visually organize the material.	Lab report is neatly written or typed, but formatting does not help visually organize the material.	Lab report is handwritten and looks sloppy with cross-outs, multiple erasures and/or tears and creases.

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Experimental Hypothesis	Hypothesized relationship between the variables and the predicted results is clear and reasonable based on what has been studied.	Hypothesized relationship between the variables and the predicted results is reasonable based on general knowledge and observations.	Hypothesized relationship between the variables and the predicted results has been stated, but appears to be based on flawed logic.	No hypothesis has been stated.
Data	Professional looking and accurate representation of the data in tables and/or graphs. Graphs and tables are labeled and titled.	Accurate representation of the data in tables and/or graphs. Graphs and tables are labeled and titled.	Accurate representation of the data in written form, but no graphs or tables are presented.	Data are not shown OR are inaccurate.

RUBRICS TO EVALUATE GROUP PLANNING AND SIMILAR ACTIVITIES

CATEGORY	4	3	2	1
Ideas/Research Questions	Researchers independently identify at least 4 reasonable, insightful, creative ideas/questions to pursue when doing the research.	Researchers independently identify at least 4 reasonable ideas/questions to pursue when doing the research.	Researchers identify, with some adult help, at least 4 reasonable ideas/questions to pursue when doing the research.	Researchers identify, with considerable adult help, 4 reasonable ideas/questions to pursue when doing the research.
Group Timeline	Group independently develops a reasonable, complete timeline describing when different parts of the work (e.g., planning, research, first draft, final draft) will be done. All students in group can independently describe the high points of the timeline.	Group independently develops a timeline describing when most parts of the work will be done. All students in group can independently describe the high points of the timeline.	Group independently develops a timeline describing when most parts of the work will be done. Most students can independently describe the high points of the timeline.	Group needs adult help to develop a timeline AND/OR several students in the group cannot independently describe the high points of the timeline.

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Delegation of Responsibility	Each student in the group can clearly explain what information is needed by the group, what information s/he is responsible for locating, and when the information is needed.	Each student in the group can clearly explain what information s/he is responsible for locating.	Each student in the group can, with minimal prompting from peers, clearly explain what information s/he is responsible for locating.	One or more students in the group cannot clearly explain what information they are responsible for locating.
Plan for Organizing Information	Students have developed a clear plan for organizing the information as it is gathered and in the final research product. All students can independently explain the planned organization of the research findings.	Students have developed a clear plan for organizing the information in the final research product. All students can independently explain this plan.	Students have developed a clear plan for organizing the information as it is gathered. All students can independently explain most of this plan.	Students have no clear plan for organizing the information AND/OR students in the group cannot explain their organizational plan.
Quality of Sources	Researchers independently locate at least 2 reliable, interesting information sources for EACH of their ideas or questions.	Researchers independently locate at least 2 reliable information sources for EACH of their ideas or questions.	Researchers, with some adult help, locate at least 2 reliable information sources for EACH of their ideas or questions.	Researchers, with extensive adult help, locate at least 2 reliable information sources for EACH of their ideas or questions.

Diploma in Garment Technology**1. FIELD VISIT RUBRIC**

	5	4	3	2
	Excellent	Good	Acceptable	Needs improvement
Preparedness for visit	1decently dressed in uniform with hair tied properly. 2followed all the instructions given by the industry for safety in the industry 3 carries small writing pad and pen for noting down the details of the visit 4 carries id card	1decently dressed in uniform with hair tied properly. 2followed all the instructions given by the industry for safety in the industry 3 carries small writing pad and pen for noting down the details of the visit	1decently dressed in uniform with hair tied properly. 2followed all the instructions given by the industry for safety in the industry 3 carries few papers and pen for noting down the details of the visit	Forgets to come in uniform. Carries a small pocket book for noting down the details observed
Behavior in group	1 friendly 2 adjusting in nature 3 shares points to observe in visit	1 friendly 2 adjusting in nature.	adjusting in nature	Gives more importance to self-comforts
Behavior with people at industry	1 greets them. 2 listens to them with respect 3 asks doubts in a pleasant low voice.4 thanks them	1 greets them. 2 listens to them with respect 3 asks doubts in a pleasant low voice.	listens to them with respect. asks doubts in a pleasant low voice.	Talks in a loud voice
Observation	Observes all processes with keen interest, clarifies doubts, makes note of each and every detail with illustrations in a neat systematic way	Observes all processes with interest, clarifies doubts, makes note of each and every detail in a systematic way with rough diagrams	Observes all processes with interest, makes note of detail.	Few major points not observed and not noted down.
Report writing	Mentions each and every important point. Good vocabulary. Logical sequence of presentation. easy to follow diagrams of the process	Mentions all major points. important point. Good Logical sequence of presentation. easy to follow. rough diagrams	Mentions most of the points. Good vocabulary. Logical sequence of presentation. easy to follow. no diagrams	Few major points missing. Not in correct sequence. Spelling and grammar mistakes

2. Poster Preparation

	5	4	3	2
	Excellent	Good	acceptable	Needs improvement
Title	Title visible from a reasonable distance and reflects the content significantly	Title visible from a reasonable distance and is correct for the content	Title visible from a little distance and almost describes the content	Title font is very small and also differing a little from the content
Labels	All items attractively labelled which are clearly visible from a reasonable distance	Almost all items of importance on the poster is clearly labelled with labels that can be read from at least 1 m away.	Several items of importance on the poster is clearly labelled with labels that can be read from at least 1 m away.	Labels are too small to view OR no important items were labelled.
Content accuracy and quantity	Content is accurate and all required information is presented in a sequential order.	Content is accurate but some required information is missing, presented in a logical order	Content is accurate but some required information is missing and/or not presented in a logical order, but easy to follow	Content incomplete. Information is not presented in a sequential order, making it difficult to follow
Attractiveness	The poster space is divided based on golden rule of proportion and is exceptionally attractive in terms of design, layout, and neatness	The poster is attractive in terms of design, layout, and neatness	The poster is acceptably attractive and, in few places, little bit messy	Space is not properly planned and looks messy in most of the areas.
Mechanics	No spelling, grammar, or punctuation errors in the text. Student own wordings.	One or two errors in spelling, grammar or punctuation. Student own wordings	Not more than 5 spelling, grammar or punctuation errors. Own wording	More than six mistakes in spellings, grammar own wording
Illustrations	Drawings, pictures, photos clip art items creatively placed making it more attractive and are related to text message, drawings are colourful and attractive.	Drawings, pictures, photos clip art items creatively placed making it more attractive and are related to text message, some pictures are not colourful	Drawings, pictures, photos clip art items creatively placed making it more attractive and are related to text message some pictures are not attractive.	Few drawings pictures, photos are not matching with text not creatively placed
Presentation parameters	Presentation is clean, well- organized and presented in a creative way. Presentation is colorful and creative. Information is interesting and accurate.	Presentation is mostly neat and clean. Information is organized in a logical manner and shows some degree of creativity. The overall presentation is interesting.	Presentation is clean over all presentation not up to the mark.	Presentation is clean. Presentation is unorganized.

3. Brochure Preparation Rubric

	5	4	3	2
	Excellent	Good	Acceptable	Needs improvement
Content and source of information	Authentic data collected from standard sources. like text books, research articles government publications. More than required amount of data interesting.	Authentic data collected from few sources. required data presented	Well organized data collected from standard sources. Most of the data available.	Lacks few important details
Attractiveness and organization	exceptionally attractive layout properly planned	Attractive. space layout well planned	Attractive space layout in few areas not proper	Space division somewhat not properly planned to make brochure readable
Conventions	Good Vocabulary and grammar. easy to follow simple language no spelling mistakes	Good Vocabulary and grammar easy to follow simple language one spelling mistake	Few spelling mistakes (up to 5)	Spelling and grammar mistakes (more than 8)
Pictures and drawings	Pictures, drawings are accurately related with text. pictures, drawing are attractive and very informative	Pictures, drawings are accurately related with text. pictures, drawing are informative	Pictures, drawings are accurately related with text. few pictures, (2) drawing are not informative	Pictures, drawings are not accurately related with text (more than 3). pictures, drawing are not clear

4. Exhibition

	5	4	3	2
	Excellent	Good	Acceptable	Needs improvement
Planning and preparation	Collected information and exhibits from a number of reliable sources. each and every minute details for display planned ahead. Collection of	Collected information and exhibits from a number of reliable sources each and every minute details for display planned ahead. Collection of	Collected information and exhibits from a number of reliable sources. Other details not planned	Collected information and exhibits from few sources. other details not planned

	materials required for display planned well in advance. financial implications calculated Space and location planned well in advance	materials required for display planned well in advance. Other details not planned		
Materials used	Indigenous materials used mostly; material selection made to suit the item of exhibition. innovativeness is clearly seen ecofriendly materials used some reusable plastic	Indigenous materials used mostly; material selection made to suit the item of exhibition. not much innovativeness is seen in ecofriendly materials mostly used. reusable synthetics	Indigenous materials used mostly; material selection made to suit the item of exhibition. innovativeness is not seen ecofriendly materials mostly used. reusable plastic used	Not used ecofriendly materials Mostly pollution causing materials
Creativity	Surprising and mesmerizing ways of presentation. Well thought off	Good attractive display	Good display	Not attractive and somewhat messy
Content and display	Real items, models, posters brochures simulated conditions, use of puppets other audio-visual aids attractive, colorful display	Real items, models, posters brochures simulated conditions, use of puppets other audio-visual aids attractive, colorful display	Few items displayed	Mostly bought from stores and not impressive
Response to queries	Authentic replies given to clear all doubts	Good replies given	Most of the queries answered	Answered few questions

5. Brain storming: Pollution control measures

	Excellent	Good	Acceptable	Needs improvement
	5	4	3	2
Innovativeness and importance of ideas	Suggest ideas which are very innovative and feasible with simple equipment and less expenditure	Suggested ideas which are very innovative and feasible with costly equipment and minimum maintenance	Suggested ideas which can be tried	Needs lot of refinement before implementing.
Quantity of ideas	Contributed to more than 5 ideas	Contributed to more than 4 ideas	Contributed to more than 3 ideas	Contributed to more than 2 ideas
Response to comments	Answers in an authentic manner	Gives convincing replies	Takes time to answer	Few queries not answered

6. Model Preparation ex Paper mesh dress form

	Excellent	Good	Acceptable	Needs improvement
Innovativeness in the construction of the model	Makes use of old newspapers. natural ingredients like fenugreek and	Makes use of old newspapers. natural ingredients like fenugreek and maida	Makes use of new white papers for getting bright colour uses gum	Uses colour paper and oil sheets and fevicol
New concepts and uses	uses for taking of body measurements for constructing various garments display of apparel, jewellery, draping of fabric	uses for taking of body measurements for constructing various garments. display of apparel. Jewellery display draping of fabric	uses for taking of body measurements for constructing various garments. display of apparel.	Uses for taking of body measurements
Quality of information	Informs about the precautions to take in use and for long preservation of the model. need for ecofriendly display items	Informs about the precautions to take in use and for long preservation of the model	Informs about few precautions to take in use and for long preservation of the model	Gives one or two tips regarding display
Preparedness and presentation	Confident and well planned with all necessary tools and implements. arranges for clear view of model making involves every one by telling the contribution of ecofriendly dress form to environment	Confident and well planned with all necessary tools and implements. Sometimes involves classmates	Engrossed in preparation of the model	Makes mistakes in the shaping of the dress form.
Results of Effort and perseverance	Makes the perfect model because of many trials	Makes good model because of adequate effort	Makes satisfactory model because of less practice	Needs lot of hard work to make a perfect dress form

7 Collage work

	Excellent	Good	Acceptable	Needs improvement
Title	Very appropriate for the theme	Appropriate for the theme	Ok for the theme	Somewhat relevant to the theme
Originality and craftsmanship/creativity.	1 Ideas - original and innovative. 2 Collage elements are well planned and provide accurate relation to the theme and arranged in relation to size.	1 ideas original and innovative 2 collage elements are well planned and adequately	1only two ideas original and innovative. 2 only 2 collage Elements are well planned	1 Only one idea was original and innovative. 2 Collage elements not planned in appropriate manner. and poorly

		related to the theme. One item not arranged in relation to size.	and provide acceptable relation to the theme. Items arranged in relation to size.	properly arranged in relation to size.
Composition	Excellent application of design principles and elements.	Good application of design principles and elements	Acceptable levels in application of design principles and elements.	Not able to apply design principles and elements in appropriate manner.
Colour	Choice and application of color shows excellent knowledge of color relationships. Color blocking technique very efficiently used	Choice and application of color shows good knowledge of color relationships. Colour blocking technique efficiently used	Choice and application of colour shows knowledge of colour. Few places colours not planned properly	Student needs to work on learning color relationships most of the places colours not properly planned
Text	Clearly written and visible from a long distance of 2.5 meters	Clearly written and visible from a long distance of 2. meters	Clearly written and visible from a long distance of 1 meters	Not clearly written visible from a very short distance.
Time and effort	Leisure time and class time was used wisely. Much time and effort went into the planning and design of the collage. It is clear the student worked at home as well as at school.	Leisure time and class time was used wisely. Student could have put in more time and effort at home.	Leisure time and class time was not always used wisely, but student did do some additional work at home.	Leisure time and class time was not used wisely and the student put in no additional effort
Answering queries	The student gives very good explanation of how	The student gives a good explanation of	The student gives a fairly reasonable	The student's explanations are not relevant

	every item in the collage is related to the assigned theme. For all the items the relationship is very clear Without any explanation	how most items in the collage are related to the assigned theme. For many of the items, the relationship is clear without explanation.	explanation of how most items in the collage is related to the assigned theme for few items relationship is very clear.	difficulty encountered in understanding how the items are related to the assigned theme.

8 (a) Sample collection (Fabric swatches, pictures of dress made with the fabric samples collected)

	Ample	Sufficient	Needs few more
Weaves	10 samples	8 samples	6 samples
Finish	8 finishes	6 finishes samples	4 samples
Fabric Count	6 samples	4 samples	3 samples
Fabric Texture	8 samples	6 samples	4 samples
Pictures relating to the end use of the fabric	8 pictures	6 pictures	4 pictures
Write up	Accurate and all required information presented	Accurate but 1 main points missing	Accurate but two main points missing

8 (b) yarn sample collection rubric

	Ample	Sufficient	Needs improvement	
Simple yarns	6 samples	5 samples	4 samples	
Novelty yarns	8	6	5	
Fabric swatches with simple yarns	6	5	4	
Novelty yarn fabric swatches	8	6	5	
Write up	Accurate and all details given	Accurate but one point missing	Accurate but two points missing	

9 Market survey in your local area (Ready-made Garments – Men's shirt, Sari blouse, Frocks/Home textiles)

	Excellent	Good	Acceptable	Needs improvement
Brands	9 brand names	7 Brand names	5 brand names	3 brand names

Price range	For all 9 brands	For 7 brands	For 5 brands	For 3 brands
Fabric type composition, colour and texture)	Excellent description of the fabric composition	Good description of the fabric composition	2 to 3 details missing	More than 3 details missing
Design details	Pictures/ drawings and very detailed description of all 9 brands	Pictures/ drawings and very detailed description of all 7 brands	Pictures/ drawings and very detailed description of all 5 brands	Pictures/ drawings and very detailed description of all 3 brands
Customer preferences	Summary of Reasons given by 50 people for any two brands	Summary of Reasons given by 40 people	Summary of Reasons given by 30 people	Summary of Reasons given by 50 people
Customer grievances	Summary of Reasons given by 50 people for any two brands	Summary of Reasons given by 40 people for any two brands	Summary of Reasons given by 30 people for any two brands	Summary of Reasons given by 20 people for any two brands

10 Role Play (Dealing with customers returning the apparel bought from the student's fair price shop)

	Excellent	Good	Acceptable	Needs improvement
Receiving of customer	Greets the customer with smile and offers seat to sit and give water asks simple cordial questions.	Greets the customer with smile and offers seat to sit and give water	Greets the customer and offers seat to sit and give water	Unpleasant facial expressions, offers seat.
Customer grievance details	Asks questions about the problem faced by them to find the exact nature of the problem. Makes note of each and every minute details about the complaints in a pleasant manner	Makes note of each and every minute details about the complaints in a pleasant manner	Makes note of details with two details missing in a pleasing manner	Makes note of details in an unpleasant manner and forgets most of the details
Facts regarding the grievance	Finds the causes for the discomfort caused to the customer in a systematic manner and clarifies the doubts for	Finds the causes for the discomfort caused to the customer in a systematic manner and clarifies the doubts for	Finds the causes for the discomfort caused to the customer in a systematic manner.	Finds the causes for the discomfort caused to the customer in a systematic manner with unpleasant body gestures

	problems by giving authentic accurate details and precautions if any for use and maintenance	problems by giving authentic accurate details.		
Good will Gestures	Offers replacement if problem is genuine and Offers discount coupon for next two purchase	Offers replacement if problem is genuine and Offers discount coupon for next one purchase	Offers replacement if problem is genuine.	Offers replacement by taking nominal amount.

11 Group Discussion

	Excellent	Good	Acceptable	Needs improvement
Content	All points are Relevant and comprehensive	All points are Relevant and one or two points not comprehensive	All points are Relevant and three points not comprehensive	One or two points are not Relevant and more than three points not comprehensive
Communication skills	Excellent professional vocabulary, high degree of grammatical accuracy, fluent and spontaneous, accurate pronunciation and intonation presentation is well structured	good command of professional vocabulary, good degree of grammatical accuracy, most of the time fluent and spontaneous, Pronunciation and intonation generally accurate, Presentation is clearly structured and appropriate to the audience.	Adequate vocabulary, reasonable accuracy, sometimes hesitant, Some inaccuracy in pronunciation and intonation, presentation level is appropriate	Limited professional Vocabulary, communication limited in terms of accuracy, poor pronunciation.
Body language	Maintains excellent eye contacts,	Maintains excellent eye contacts,	Maintains eye contacts, pleasing facial expressions,	Maintains no eye contact pleasing facial expressions, good

	pleasing facial expressions, good voice, correct hand gestures	pleasing facial expressions, good voice.	good voice.	voice.
Listening skill	Listens to the speaker with keen interest and makes note of all-important points.	Listens to the speaker with keen interest and makes note of few important points	Listens to the speaker with keen interest without noting any points.	Listens to the speaker most of the time without noting any points
Leadership	Demonstrates excellent leadership qualities by inspiring others, being confident, cooperative, honest, innovative and focused	Demonstrates leadership qualities by inspiring others, being confident, cooperative, honest and focused	Demonstrates leadership qualities by inspiring others, being confident, cooperative and honest.	Demonstrates little leadership qualities by being cooperative.
Group behavior	Friendly, cooperative and empathetic	Friendly and cooperative	Friendly and sometimes not cooperative	Sometimes not Friendly and cooperative

General skill upgradation activities for all semesters based on the local conditions and aptitude and attitude of the students.

1. **Swachh Bharath** : maintaining clean classrooms, labs and college premises. 2 Display of posters on cleanliness and general hygiene. Adopt areas near college and educate the people on maintaining clean surroundings.
2. **Plantation of Saplings and preparation of vermicompost** for green environment and reducing carbon foot prints. Planting of medicinal plants etc.
3. Plan for simple **rain water harvesting**.
4. **Role play** to help people understand the Cleanliness, washing of clothes etc.
5. **Consumer education** on the workmanship of readymade garments. Label reading on garments., home dry cleaning.
6. **Reuse and recycle items** for value addition and to make it as source of income.

7. **Design and make crafts** for aesthetic appeal, improve skills and as a source of income and to avoid land fill.
8. **Use natural resources** for dyeing of clothes.
9. **Educating people** on minor sewing machine repairs and giving maintenance tips.
10. **Visit the local famous artisans and try to learn the most treasured traditional skills.**

All the skill upgradation activities to be assessed through rubrics.

Diploma in Hotel Management and Catering Technology

STUDENT ACTIVITIES II SEMESTER

SKILL UPGRADATION – CO – PO MAPPING MATRIX

CREDITS: 2.5 maximum

1.5 minimum

COURSE CODE	CO	STUDENT ACTIVITY	DURATIONS	LINKED PO
18 HMCT 201C	CO2	1. visit to godowns, warehouse of super markets for package of pulses and cereals.	-	8
		2. prepare report on the commercial ready to cook foods, soup.	02Hrs	5,7
		3.map the areas of beef and pork houses.	02Hrs	5,7,8
		4. visit at least 4 fish market and prepare a report on the varieties available.	-	8,9,10
		5. visit a bakery and prepare a report on its hygienics conditions.	-	5,6,7,8
	CO5	6. Visit Dairy farm of milking.	-	5,6,7,8
		7. prepare a report on the adulteration of wheat hour	02Hrs	5,6,7,8
	CO6	8. Visit a sugar production factory and present a PPT varieties of sugar	-	5,6,7,8
		9. Visit and present sanitary procedures followed in slaughter houses.	-	5,6,7,8,10
		10. present a report on colors and flavors used by bakers.	02Hrs	5,6,7,8,9

SUGGESTED STUDENT ACTIVITIES:**SKILL UPGRADATION – CO – PO MAPPING MATRIX****CREDITS: 2.5 maximum****1.5 minimum****STUDENT ACTIVITIES II SEMESTER**

COURSE CODE	CO	STUDENT ACTIVITY	DURATIONS	LINKED PO
18 HMCT 202C	CO1	11. compile common French terms used for communication.	02Hrs	5,9
		12. role play the service of tea to guest who is not satisfied.	02Hrs	5,6,7,8,9,10
	CO2	13. prepare a report on brunch items.	02Hrs	5,6
	CO3	14. Create an operation for reserving a table.	02Hrs	5,8,9,
		15. role play- for over-booking of tables.	02Hrs	5,6,7,8,9,10
		16. prepare menu cards for service of cafeteria and counter services.	02Hrs	5,8
	CO4	17. prepare a report on wines used for French dishes.	02Hrs	5,6,7,9
		18. prepare a report on accompaniments given for Indian break-fast.	02Hrs	5,6,7
		19. role play for presenting the menu and the drill.	02Hrs	7,8,9
		20. role play as restaurant hostess for a pre cocktail dinner.	02Hrs	7,8,9
		21. Compile and present guest comment, feedback and follow-Ups.	02Hrs	7,8,9,10
		22. prepare PPT on the effects of tobacco.	02Hrs	5,6,7,8,9

SUGGESTED STUDENT ACTIVITIES:**SKILL UPGRADATION – CO – PO MAPPING MATRIX****CREDITS: 2.5 maximum****1.5 minimum****STUDENT ACTIVITIES II SEMESTER**

COURSE CODE	CO	STUDENT ACTIVITY	DURATIONS	LINKED PO
18 HMCT 203C	CO1	23. Visit to a hotel for rooms reservation on-time, submit report.	-	8,9
	CO2	24. Study the registration process of guests in five-star.	02Hrs	8
	CO3	25. Visit the Hotel, to observe the activities of reception.	-	8
		26. Role play in a situation where a guest lost their phone.	02Hrs	8,9,10
	CO4	27. present a PPT on handling guest complaints.	02Hrs	7,8,10
		28. Summarize black listed guests by a role play.	02Hrs	7,8,9,10
	CO5	29. compile room charges and the GST.	02Hrs	6,7,8,9,10
		30. prepare a poster on guest history.	02Hrs	5,8,9,10
	CO6	31. compile type of keys used in Hotels.	02Hrs	5,9
		32. present a seminar on guest safety.	02Hrs	8,9,10
		33. Visit hotel to observe the security systems.	-	7,8,9
		34. Role play on break down of elevators the guest is a lady and a heart patient.	02Hrs	6,7,8,9,10

SUGGESTED STUDENT ACTIVITIES:**SKILL UPGRADATION – CO – PO MAPPING MATRIX****CREDITS: 2.5 maximum****1.5 minimum****STUDENT ACTIVITIES II SEMESTER**

COURSE CODE	CO	STUDENT ACTIVITY	DURATIONS	LINKED PO
18 HMCT 204C	CO1	35. present services on types of polishes and their characteristics.	02Hrs	5,7
		36. A report on types of woods	02Hrs	-
	CO2	37. A report on equipment used for cleaning public areas in hotels and malls.	02Hrs	8,9
	CO3	38. Compile a list of organic and ecofriendly supplies used in guest rooms.	02Hrs	5,7,8
		39. Role play the arrangements of VIP's placements and requests in a suite.	02Hrs	5,7,8,9,10
	CO4	40. Prepare a PPT on the types of filling in a bed mattress spread and protector.	02Hrs	5,7,9
	CO5	41. demonstrate a mock drill on fire outbreak.	02Hrs	5,6,7,8,9,10
	CO6	42. Compile a list of repellants and equipment used for pest control.	02Hrs	5,7

SUGGESTED STUDENT ACTIVITIES:

SKILL UPGRADATION – CO – PO MAPPING MATRIX

CREDITS: 2.5 maximum

1.5 minimum

STUDENT ACTIVITIES II SEMESTER

COURSE CODE	CO	STUDENT ACTIVITY	DURATIONS	LINKED PO
18 HMCT 205C	CO1	43. Prepare a poster on health care.	02Hrs	5,7,8,9,10
		44. Present a JAM on common nutrition definitions.	02Hrs	5,9,10
	CO2	45. Seminar on RDA.	02Hrs	8,9
	CO3	46. Prepare and present the sources of carbohydrates.	02Hrs	5,9
		47. Compile a report on protein supplement and health foods available in the market.	02Hrs	5,7,9
		48. Visit slum area for malnutrition in up to 10 years old child.	-	5,6,7,8,9,10
	CO4	49. Present a seminar on the toxic levels of drinking water.	02Hrs	8,9
		50. Visit kitchens of a five-star hotel of observe the principle of cooking retaining the essential vitamins.	-	8,9
	CO5	51. Compile a diet chart for a slum girl child.	02Hrs	8,9,10,
		52. visit the local market for groups major foods.	-	8,9
	CO6	53. present a seminar on preservation methods of foods.	02Hrs	8,9
		54. Group discussion on usage of food-additives.	02Hrs	8,9

18 HMCT 206P

STUDENT ACTIVITY: -visit to Poultry farm to Identify the various birds and Eggs.

18 HMCT 207P

Student Activities-- Visit to Hotels Restaurant Fast Food Centers and Catering establishments To Collect Menu Cards

18 HMCT 208P

Student Activity –Visit hotels for Observing Activities in front office and back office.

18 HMCT 209P

Student Activity –Visit to Fire Fighting service Station to Collect information regarding Fire Safety equipment .

RUBRICS

Attributes: Environment

Life Long Learning P. O 6 & 10

	RUBRICS FOR ACTIVITY – (VISIT)					
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory	
	5	4	3	2	1	
Attitude towards visit	Very eager about the about	Showing very much interest when opportunity comes	Showing interest under compulsion	Showing less interest	Reluctant	
Observation at the visit place	Very enthusiastic to know new things	Shows interest on existing things	Observation with less interaction	Observation without interaction	Not observing any thing	
Interaction with new persons at the visit place	Easily mingle and make friendship	Easily mingle	Less mingle	Reserved in nature	Not at all mingle	
Presentation about the visit	Excellent report with good presentation	Good report with fair presentation	Satisfactory report with fair presentation	Sufficient report with poor presentation	Insufficient on-puts Shabby presentation	

580180/2020/ACADEMIC SECTION - 2
RUBRICS

Attributes: Engineering and Society
 Communication

P. O 5 & 9

	RUBRICS FOR ACTIVITY – (Collection)					
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory	
	5	4	3	2	1	
Subject/ Topic coordination	Concept linked to topic with advanced knowledge	Concept linked to topic with little Knowledge	Concept linked to topic only	Concept not linked and not clear	Not at all linked with topic	
Sources used for the topic	Different sources with latest information	Different sources with sufficient information	Single source with limited information	Reproduction matter	Copied from others	
Quality and Quantity of the material/ model/ sample	Excellent in quality with enough quantity	Good quality with enough quantity	Appreciable in quality and quantity	Insufficient in quality and quantity	Irrelevant to the assigned topic/ Not submitted	
PRESENTATION						
<u>ORAL</u>	Highly receptive	Receptive	Moderately receptive	Mediocre	Non receptive	
<u>DOCUMENT</u>	Highly exemplary	Exemplary	Moderate	Not in orientation	Abstract/ Distorted	

	RUBRICS FOR ACTIVITY - (Collection) Individual& Team work, Lifelong learning P-08,P-10					
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory	
	5	4	3	2	1	
Subject/ Topic coordination	Concept linked to topic with advanced knowledge	Concept linked to topic with little knowledge	Concept linked to topic only	Concept not linked and not clear	Not at all linked with topic	
Sources used for the topic	Different sources with latest information	Different sources with sufficient information	Single source with limited information	Reproduced matter	Copied from others	
Quality and Quantity of the material /model /sample	Excellent in quality with enough quantity	Good quality with enough quantity	Appreciable in quality and quantity	Insufficient in quality and quantity	Irrelevant to the assigned topic/ Not submitted	
<u>Presentation ORAL/DOCUMENT</u>	Highly receptive/ Highly Exemplary	Receptive/ Exemplary	Moderately receptive/ Moderate	Mediocre/ Not in orientation	Non receptive Abstract/ Distorted	
	RUBRICS FOR SEMINAR / INDIVIDUAL PRESENTATION P-08,09					
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory	
	5	4	3	2	1	
Personal Disposition	Poise	Disposition	Stance	Gait	Un pleasant	
Diction	vocabulary	continuous	confident	Lisping	gibberish	
content	Thought Provoking	Alacrity	placid	Good	Insufficient inputs	
Interaction	Profound Reply	Ability to satisfy	Ability to respond	Misleading	evading	

	RUBRICS FOR GROUP DISCUSSION P-08,P-09,P-10					
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory	
	5	4	3	2	1	
Participation towards the Topic	Initiative & Extempore	Contradictory	Pro initiative	Passive	Non inclined	
Decimation of information	Updated presentation	Chronological	Only established facts	Misinterpretation of Facts	Distorted Decimation	
Presence of mind	Focused	Confident	Wavered	Confused	Vague	
Summation	Trouble shooter	Balanced	Convincing	In coherent	Mute spectator	

	RUBRICS FOR Group Discussion/seminar PO-05 & PO-06 ENVIRONMENT & SOCIETY				
Dimension	Exemplary	Good	Satisfactory	Developing	Unsatisfactory
	5	4	3	2	1
Awareness about the environment	Compassion	Concern	Responsibility	Compulsive	Irresponsible
Concern towards the environment	Eco friendly	Close to nature	Recycle	Ignorant	Negligent
Implementation	Penchant(craving)	Involvement	Commitment	No self-motivation	Disinterested
sustainability	Innovative	Incorporative	Practicing	Non reliable	irresponsible

Rubrics

Attributes: Ethics Role Play P. O 7

Dimension	Exemplary	Good	Satisfaction	Developing	Unsatisfactory
Response	Listening with E	Sympathy	Inattention	Indifferent	Callous
Authentication	Credibility	Logical	Ambiguity	Distorted Representation	False Evidence
Clarification on the Allegation	Maintaining Good Willing	Assurance	Up selling	Arguing	Deny
Rectification	Replacement Complimentary	Partial Replacement	Discount	Referral	No Exchange

Diploma in Leather Technology**Suggested Student Activities FOR ADVANCED ENGLISH**

- Listen to a passage /conversation / dialogue / speech and answer the questions
- Group Discussions
- Seminars
- Review a movie
- Review a book
- Narrating a story
- Chain stories
- JAM
- Speak about incidents /events /memories /dreams /role model
- Interview with famous personalities
- Reading for main ideas and specific details
- Summarizing
- Picture description
- Writing a recipe

Method of evaluation of the student activities (Rubrics)**Model Rubrics**

S.No	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared

3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

II SEMESTER

SKILL UPGRADATION IN - ENGINEERING MATHEMATICS

ACTIVITY ASSESSMENT Steps

- 1. Mathematical concepts**
- 2. Procedure**
- 3. Explanation**
- 4. Working with others**
- 5. Mathematical errors**

ACTIVITIES

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

CO / PO - MAPPING OF ACTIVITIES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	1			1	2	2	3
CO2	3	2	2	1			1	2	2	3
CO3	3	2	2	1			1	2	2	3
CO4	3	2	2	1			1	2	2	3
CO5	3	2	2	1			1	2	2	3
CO6	3	2	2	1			1	2	2	3
CO7	3	2	2	1			1	2	2	3

Rubrics for Activity assessment

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.

Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

PASS SCORE: 2.5

STUDENT ASSESSMENT by RUBRICS

[illegible]

SEMESTER – IISKILL UPGRATION – APPLIED PHYSICSTASK

LEVEL 1: Concept, Ethical Data, Materials, Source (Library/internet/others)

LEVEL 2: Methodology/procedure

LEVEL 3: Analysis/experiment

LEVEL 4: Interpretation/inference/evaluation.

Bridge activity: - Visiting your college Library:

(A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.

(B) Prepare a list of Physics/Science journals, magazines, monographs with details.

(C) Prepare a log book of your visits to college library with brief description.

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.
11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: The above activities are indicative. The teacher may assign any other activity relevant

to the course based on resources available.

Course Outcomes (CO)		Linked Pos	Activity Hours
CO1	Construction of a blowing pipe to detect dangerous gases in mines	PO1, PO2, PO3, PO4, PO5, PO6	3
CO2	Construction of model stethoscope with known materials	PO1, PO2, PO5, PO7	3
CO3	Conduct of awareness program on noise pollution in the college, colony and preparation of a video report.	PO1, PO2, PO5, PO6, PO7, PO8, PO9	3
CO4	Construction of a seconds' pendulum timer	PO1, PO2, PO3, PO4	3
CO5	Preparation of PPT on photosensitive materials with detailed specifications	PO1, PO2	3
CO6	Preparation of report on lasers practically used	PO1, PO2, PO4, PO5, PO10	3
CO7	Preparation of PPT on application of optical fibers in medical and engineering field	PO1, PO2, PO4, PO5, PO6, PO9, PO10	3
CO8	Production of electricity with a magnet –working model, PPT with animation and drawings on a chart.	PO1, PO2, PO3, PO4	3
CO9	Construction of an electric calling bell	PO1, PO2, PO3, PO4	3
CO10	Construction of a circuit on breadboard to verify Kirchhoff's voltage law	PO1, PO2, PO3, PO4	3
CO11	Preparation of PPT on Superconductors and their practical applications with motion pictures.	PO1, PO2, PO3, PO4, PO9, PO10	3
CO12	Collection of various resistors, diodes and LEDs with specifications and installation on a card board	PO1, PO2	3

Rubrics for Task Assessments

General Scale for scoring student performance in Skill Upgradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

PASS SCORE: 2.5

STUDENT ASSESSMENT (RUBRICS)

[illegible]

Engineering Chemistry and Environmental Studies

Suggested Skill Upgradation Activities

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

- Step-1: Data collection on the ores and different methods of concentration of ore.
- Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.
- Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation
- Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

- Step-1: Collection of data related to the factors effecting the corrosion.
- Step-2: Summarization of data/ literature collected.
- Step -3: Setting and Execution of experiment under different conditions such as
- i. Metal exposed to air only
 - ii. Metal exposed to dry air
 - iii. Metal partially dipped in salt water
 - iv. Metal completely dipped in water
 - v. Metal partially dipped in pure water
- Note: This experiment may be conducted in other conditions also.
- Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation
- Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

- Step-1: Data collection.
- Step-2: Summarization of data/ literature collected.
- Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions
- Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation
- Step-5: Overall presentation of the activity

Activity – 4**Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5**Study of Prevention of Corrosion of a metal by using different coating materials**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6**Study of plastics, recycling of plastics and their advantages and disadvantages**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7**Study on natural rubber and its uses**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8**Power point presentation on fossil fuels**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9**Study and analysis of environment related air pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10**Study and analysis of environment related water pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11**Study and analysis of college environment**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12**Construction of Galvanic cell**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Mapping of POs to Student activities

S.No	Name of the activity	Linked POs
1	Power point presentation on the different methods of concentration of ore	1,2,4,8,9
2	Corrosion of a metal under different conditions	1,2,3,4, 5,6,8,9,10
3	Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions	1,2,3,4, 5,6,8,9,10
4	Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions	1,2,3,4,5,6,8,9,10
5	Study of Prevention of Corrosion of a metal by using different coating materials	1,2,3,4,5,6,8,9,10
6	Study of plastics, recycling of plastics and their advantages and disadvantages	1,2,4,5,6,7,8,9,10
7	Study on natural rubber and its uses	1,2,4,5,6,7,8,9,10
8	Power point presentation on fossil fuels	1,2,4,5,7,8,9,10
9	Study and analysis of environment related air pollution	1,2,4,5,6,7,8,9,10
10	Study and analysis of environment related water pollution	1,2,4,5,6,7,8,9,10
11	Study and analysis of college environment	1,2,4,5,6,7,8,9,10
12	Construction of Galvanic cell	1,2,3,4,5,8,9

Method of evaluation of the student activities (Rubrics)**Model Rubrics**

S · N o	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

INTRODUCTORY POST-TANNAGES

ACTIVITIES:

- 1) List different defects in wet blue and E.I Leathers. Visit nearby wet blue/ E.I Leathers storage place (mandi). Observe the different defects present in wet blue and E.I Leathers. Submit a record with necessary photos—P8
- 2) Collect different mineral tanning materials and prepare a chart with their characteristics—P8
- 3) Survey on wet blue and E.I Leathers prices and submit a report—P8, P10
- 4) Visit a nearby tannery and prepare a flow chart about the processing of wet blue into finished leather with necessary photos of machinery and chemicals –
- 5) Visit a nearby tannery and prepare a flow chart about the processing of effluents discharged into the environment—P5, P6, P8
- 6) Give a seminar presentation on purpose of the dyeing, retanning, fatliquoring leathers by using power point presentation—P8
- 7) Give a seminar presentation on list of chemicals used in dyeing, retanning, fatliquoring and their hazards, regulations by the government in using it.
- 8) Give a seminar presentation on list of chemicals used in post-tanning operations and their hazards, regulations by the government in using it.
- 9) Collect different tanned leathers samples and test for its tensile strength and submit a comparison report—P8
- 10) Collect from journals the recent post-tanning techniques adopted in tanneries and submit a report—P8, P10
- 11) Prepare a chart about the responsibilities of a good citizen- P7, P8
- 12) Collect different colour dyes and prepare a shade card —P8

Diploma in Mechanical Engineering

Course Title:	Skill Upgradation	Course Code :	
Semester:	II Semester	Course Group :	Practical
Teaching Scheme in Periods(L:T:P):	0:0:105	Credits :	2.5
Type of Course :	Practicals	Total Contact Periods :	105Periods

SKILL UPGRADATION(SUGGESTED STUDENT ACTIVITIES)

ACTIVITIES IN ENGINEERING MATHEMATICS

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

Rubrics for Activity assessment-MATHEMATICS

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.

Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

ACTIVITIES IN APPLIED PHYSICS

Bridge activity: - Visiting your college Library:

(A) Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.

(B) Prepare a list of Physics/Science journals, magazines, monographs with details.

(C) Prepare a log book of your visits to college library with brief description.

Activities:-

1. Construct a blowing pipe to detect dangerous gases in mines.
2. Construct model stethoscope with known materials.
3. Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
4. Hypothesize seconds' pendulum timer.
5. Prepare a power point presentation on photosensitive materials with detailed specifications.
6. Prepare a report on Lasers where they are practically used.
7. Prepare a power point presentation on application of optical fibers in medical and engineering field.
8. How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
9. Construct an electric calling bell.
10. Setup a circuit on breadboard to verify Kirchhoff's voltage law.

11. Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
12. Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: *The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.*

Rubrics for Activity assessment (in Applied Physics)

General Scale for scoring student performance in Skill Up gradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion clearly.	Student provided a somewhat detailed conclusion clearly.	Student provided a conclusion with some reference.	No conclusion was apparent.

NOTE: *The above types of skills are indicative. The teacher may change the skills depending on type of activity.*

ACTIVITIES IN ENGINEERING CHEMISTRY AND ENVIRONMENTAL STUDIES

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

Step-1: Data collection on the ores and different methods of concentration of ore.

Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.

Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation

Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

Step-1: Collection of data related to the factors effecting the corrosion.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment under different conditions such as

- i. Metal exposed to air only
- ii. Metal exposed to dry air
- iii. Metal partially dipped in salt water
- iv. Metal completely dipped in water
- v. Metal partially dipped in pure water

Note: This experiment may be conducted in other conditions also.

Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation

Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 4

Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5

Study of Prevention of Corrosion of a metal by using different coating materials

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6

Study of plastics, recycling of plastics and their advantages and disadvantages

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7

Study on natural rubber and its uses

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8

Power point presentation on fossil fuels

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9

Study and analysis of environment related air pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10

Study and analysis of environment related water pollution

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11

Study and analysis of college environment

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12

Construction of Galvanic cell

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Rubrics for Activity assessment(in Engineering Chemistry and Environmental Studies)

Model Rubrics

S . N o	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

SKILL UPGRADATION ACTIVITIES IN ALL SUBJECTS

1. Visit nearby workshops and industries and identify various tools and equipments used in practical application. Observe the working and usage of the tools
2. Take up the repair works of benches, table and office furniture of college under the guidance and supervision of instructor and teaching faculty.
3. Conduct seminars on experiences and knowledge gained during field visits.
4. Conducting quiz programs on subject topic and current affairs.
5. Prepare 3D models of different exercises given in isometric drawings using AUTOCAD.
6. Prepare a 3D view of tools and machines and display in the workshops in the form of flexi.
7. Specific knowledge and working principle of different machines available in workshops related to the semester.
8. Listening passages/conversations/dialogues/speeches and answer the questions to improve the listening skills.
9. Conduct Interviews with famous personalities and prepare a report to cover its essence.
10. Create a spreadsheet for the data pertaining to student's bio-data.
11. Create a power point presentation on the performance of the students in Games and Sports meet.
12. Prepare a presentation formulating an action plan to control air pollution in the city
13. Give a presentation describing the detailed action plan to minimize water pollution in the city.
14. Listen to given passages/conversations/dialogues/speeches and answer the questions to improve the listening skills.
15. Conduct JAM on topics such as environment, pollution, ethics, morals, responsibilities of citizens.

16. Speak about incidents/events/memories/dreams/role model to enhance public speaking skills.
17. Conduct Interviews with famous personalities and prepare a report to cover its essence.
18. Conduct personality development classes with experienced faculty from nearby engineering and other higher level institutions.
19. Compare and contrast two people/pictures/news items/ideas and give presentation
20. Student visits Library to refer Text books, reference books and manuals to find their specifications.
21. Student inspects the available equipment in the Chemistry Lab to familiarize with them.
22. Create a spreadsheet for the data pertaining to students bio-data.
23. Create a power point presentation on the performance of the students in Games and Sports meet.

Note:

1. The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.

2. Rubrics for student activities can be generated by subject teacher

3. The above student activities will be assessed using rubrics. A sample rubrics template is given below. The subject teacher can assess students using rubrics with at least four relevant aspects.

RUBRICS MODEL (For assessing Presentation skills)

Aspects	Needs improvement	Satisfactory	Good	Exemplary
Collection of data	Collects very limited information	Collect much Information with very limited relevance	Collects some basic information with little bit of	Collects a great deal of information with relevance

		to the topic	irrelevance	
Presentation of data	Clumsy presentation of data	Presents data well; but presentation needs to be more meaningful	Presents data well but need to improve clarity	Presents data in an understandable yet concise manner
Fulfill team's roles & duties	Performs very little duties but Unreliable.	Performs very little duties and is inactive	Performs nearly all duties	Performs all duties of assigned team roles
Shares work equally	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Normally does the assigned work	Always does the assigned work without having to be reminded
Interaction with other team mates	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening to others	Listens, but sometimes talks too much	Listens and speaks a fair amount
Audibility and clarity in speech	Hardly audible and unclear	Very little audibility and clarity	Audible most of the time with clarity	Audible and clear
Understanding content	Lacks content understanding and is clearly a work in progress	Little depth of content understanding	Some depth of content understanding is evident but needs improvement	Insight and depth of content understanding are evident
Content Presentation	Content is inaccurate and information is not presented in a logical order making it difficult to follow	Content is accurate and information is not presented in a logical order making it difficult to follow	Content is accurate but some information is not presented in a logical order but is still generally easy to follow	Content is accurate and information is presented in a logical order

Suggested additional aspects for assessing Leadership Qualities:

1. Carrying self
2. Punctuality
3. Team work abilities
4. Moral values
5. Communication skills
6. Ensures the work is done in time

Suggested additional aspects for assessing "Participation in social task"

- 1 Interested to know the current situation of society.
- 2 Shows interest to participate in given social task.
- 3 Reliable
- 4 Helping nature
- 5 Inter personal skills
- 6 Ensures task is completed

Suggested additional aspects for assessing “Participation in Technical task”

1. Updated to new technologies
2. Identifies problems in society that can be solved using technology
3. Interested to participate in finding possible technical solutions to identified project
4. Reliable
5. Interpersonal skills

Suggested additional aspects for Carrying Self:

- 1 Stand or sit straight.
- 2 Keep your head level.
- 3 Relax your shoulders.
- 4 Spread your weight evenly on both legs.
- 5 If sitting, keep your elbows on the arms of your chair, rather than tightly against your sides.
- 6 Make appropriate eye contact while communicating.
- 7 Lower the pitch of your voice.
- 8 Speak more clearly.

DMNG – IInd Semester
Course: SKILL UPGRADATION
Methodology: ACTIVITY
Semester : II

Credits :2.5
Total Contact Periods : 105

Suggested Course Outcomes

CO.1 Address the identified needs of the community collaboratively to facilitate positive social change.

- Prepare a chart related to the topics covered in the present semester.
- Listen to expert talk, guest lecture, YouTube video and write a summary.
- Participate in Haritha Haram and submit a small report about the activities.
- Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
- Seminar on problems with possible solutions in the campus or nearby places
- Group discussions or enacting a play on topics creating awareness about socio-economic problems
- Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- Participate in NCC

(PO 5, 6, 7, 8, 9, 10)

CO.2 Listen attentively to others and respond appropriately

- Listen to expert talk, guest lecture, YouTube video and write a summary.
- Participating in Group discussions or enacting a play on topics creating awareness about socio-economic problems that can be mitigated by technologies.
- Participate in quiz on technical aspects or current affairs
- Participate in Mock Interview

(PO 5, 7, 8, 9, 10)

CO.3 Adapt your style to the occasion, task, and audience

- Group discussions or enacting a play on topics creating awareness about socio-economic problems that can be mitigated by technologies.
- Seminar on problems with possible solutions in the campus or nearby places
- Participate in Mock Interview

(PO5, 6, 7, 8, 9, 10)

CO.4 Articulate ideas in various formats including oral, written, nonverbal, visual, and electronic devices.

- Prepare a chart related to the topics covered in the present semester.
- Refer to an e-journal and submit a summary report on upcoming technologies.
- Visit factory / industry and submit a report/PPT on the observations made.
- Prepare a mini project and submit report.
- Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
- Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- Seminar on problems with possible solutions in the campus or nearby places
- Participate in Mock Interview

(PO5, 6, 7, 8, 9, 10)

CO.5 Demonstrate ability to recognize and effectively manage ambiguous ideas, experiences and situations

- Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- Seminar on problems with possible solutions in the campus or nearby places

(PO5, 6, 7, 8, 9, 10)

CO.6 Analyze the interconnections between individuals and society as well as how individual actions have an impact on others.

- Participate in Haritha Haram and submit a small report about the activities.
- Participate in Swatch Bharath and write an essay on the importance of the program
- Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.7 Utilize others' ideas, strengths, knowledge, and abilities to foster an inclusive environment & Develop and sustain healthy and meaningful relationships with others

- Prepare a mini project and submit report.
- Participate in Haritha Haram and submit a small report about the activities.
- Participate in Swatch Bharath and write an essay on the importance of the program
- Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.8 Ability to recognize their strengths and those of others to work towards a shared vision.

- Prepare a mini project and submit report.
- Participate in Haritha Haram and submit a small report about the activities.
- Participate in Swatch Bharath and write an essay on the importance of the program
- Participate in NCC

(PO5, 6, 7, 8, 9, 10)

CO.9 Act in alignment with one's own values to contribute to one's life-long growth and learning.

- Physical activities such as sports, yoga, meditation and other relaxation techniques

CO.10 Gain, process, and act upon knowledge regarding the effects of individual, community, national, and international level choices on ecosystems and people.

- Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
- Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster
- Seminar on problems with possible solutions in the campus or nearby places

(PO5, 6, 7, 8, 9, 10) CO

CO1

Outcome

Address the identified needs of the community collaboratively to facilitate positive social change.

CO/PO Mapping

5, 6, 7, 8, 9, 10

CO2

Listen attentively to others and respond appropriately

5, 6, 7, 8, 9, 10

CO3	Adapt your style to the occasion, task, and audience	5, 6, 7, 8, 9, 10
CO4	Articulate ideas in various formats including oral, written, nonverbal, visual, and electronic devices.	5, 6, 7, 8, 9, 10
CO5	Demonstrate ability to recognize and effectively manage ambiguous ideas, experiences and situations	5, 6, 7, 8, 9, 10
CO6	Analyze the interconnections between individuals and society as well as how individual actions have an impact on others.	5, 6, 7, 8, 9, 10
CO7	Utilize others' ideas, strengths, knowledge, and abilities to foster an inclusive environment & Develop and sustain healthy and meaningful relationships with others	5, 6, 7, 8, 9, 10
CO8	Ability to recognize their strengths and those of others to work towards a shared vision	5, 6, 7, 8, 9, 10
CO9	Act in alignment with one's own values to contribute to one's life-long growth and learning.	5, 6, 7, 8, 9, 10
CO10	Gain, process, and act upon knowledge regarding the effects of individual, community, national, and international level choices on ecosystems and people.	5, 6, 7, 8, 9, 10
(PO5, 6, 7, 8, 9, 10) CO	Outcome	CO/PO Mapping
CO1	Address the identified needs of the community collaboratively to facilitate positive social change.	5, 6, 7, 8, 9, 10
CO2	Listen attentively to others and respond appropriately	5, 6, 7, 8, 9, 10
CO3	Adapt your style to the occasion, task, and audience	5, 6, 7, 8, 9, 10
CO4	Articulate ideas in various	5, 6, 7, 8, 9, 10

	formats including oral, written, nonverbal, visual, and electronic devices.	
CO5	Demonstrate ability to recognize and effectively manage ambiguous ideas, experiences and situations	5, 6, 7, 8, 9, 10
CO6	Analyze the interconnections between individuals and society as well as how individual actions have an impact on others.	5, 6, 7, 8, 9, 10
CO7	Utilize others' ideas, strengths, knowledge, and abilities to foster an inclusive environment & Develop and sustain healthy and meaningful relationships with others	5, 6, 7, 8, 9, 10
CO8	Ability to recognize their strengths and those of others to work towards a shared vision	5, 6, 7, 8, 9, 10
CO9	Act in alignment with one's own values to contribute to one's life-long growth and learning.	5, 6, 7, 8, 9, 10
CO10	Gain, process, and act upon knowledge regarding the effects of individual, community, national, and international level choices on ecosystems and people.	5, 6, 7, 8, 9, 10

Note: The above COs may map to other POs from 1 to 4 apart from PO's 5 to 10 depending on the topic

Suggested Student Activities

1. Prepare a chart related to the topics covered in the present semester.
2. Refer to an e-journal and submit a summary report on upcoming technologies.
3. Visit nearby Mines / Processing plants and submit a report/PPT on the observations made.
4. Prepare a mini project and submit report.
5. Listen to expert talk, guest lecture, YouTube video and write a summary.
6. Participate in Haritha Haram and submit a small report about the activities.
7. Prepare a report / PPT / poster on waste water recycling or any eco-friendly practices.
8. Take up a case study on identification of latest technologies to tackle day to day problems such as pollution control or traffic management and submit a report / PPT/ poster

9. Participate in Swatch Bharath and write an essay on the importance of the program
10. Group discussions or enacting a play on topics creating awareness about socio-economic problems
11. Physical activities such as sports, games, yoga, meditation and other relaxation techniques
12. Participate in quiz on technical aspects or current affairs
13. Seminar on problems with possible solutions in the campus or nearby places
14. Participate in NCC
15. Participate in Mock interviews

Note: The above student activities will be assessed using rubrics. A sample rubrics template is given below. The subject teacher can assess students using rubrics with at least four relevant aspects.

RUBRICS MODEL (For assessing Presentation skills)	Needs improvement	Satisfactory	Good	Exemplary
Aspects Collection of data	Collects very limited information	Collect much Information with very limited relevance to the topic	Collects some basic information with little bit of irrelevance	Collects a great deal of information with relevance
Presentation of data	Clumsy presentation of data	Presents data well; but presentation needs to be more meaningful	Presents data well but need to improve clarity	Presents data in an understandable yet concise manner
Fulfill team's roles & duties	Performs very little duties but Unreliable.	Performs very little duties and is inactive	Performs nearly all duties	Performs all duties of assigned team roles
Shares work equally	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Normally does the assigned work	Always does the assigned work without having to be reminded
Interaction with other team mates	Usually does most of the talking; rarely allows others to speak	Talks good; but never show interest in listening to others	Listens, but sometimes talks too much	Listens and speaks a fair amount
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- 1 Stand or sit straight.
- 2 Keep your head level.
- 3 Relax your shoulders.
- 4 Spread your weight evenly on both legs.
- 5 If sitting, keep your elbows on the arms of your chair, rather than tightly against your sides.
- 6 Make appropriate eye contact while communicating.
- 7 Lower the pitch of your voice.
- 8 Speak more clearly.

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SKILL UP GRADATION/ ACADEMIC ACTIVITIES**CREDITS - 2.5**

- Listen to a passage /conversation / dialogue / speech and answer the questions
- Group Discussions
- Seminars
- Review a movie
- Review a book
- Narrating a story
- Chain stories
- JAM
- Speak about incidents /events /memories /dreams /role model
- Interview with famous personalities
- Reading for main ideas and specific details
- Summarizing
- Picture description
- Writing a recipe
- Describing a process
- Giving directions using maps
- Surveys
- Filling forms
- e-mail etiquette
- Preparing reports on field visits, experiments, projects

SKILL UPGRADATION IN - ENGINEERING MATHEMATICS**ACTIVITY ASSESSMENT Steps**

1. **Mathematical concepts**
2. **Procedure**
3. **Explanation**
4. **Working with others**
5. **Mathematical errors**

ACTIVITIES

- 1 . Prepare a presentation to describe various types of Straight lines.
- 2 . Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.

580180/2020/ACADEMIC SECTION - 2

5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

Rubrics for Activity assessment

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

- 1 .Student visits Library to refer to Text books, reference books and manuals to find their specifications
- 2.Student inspects the available equipment in the Chemistry Lab to familiarize with them.
- 3..Quiz
- 4.Group discussion
5. Seminar
- 6.Surprise test

580180/2020/ACADEMIC SECTION - 2

- 1.) Prepare a detail Study Report on Layout and Graphic designing
- 2.) Tell/Take the students to visit printing industry; ask to observe the Typographic specifications for different classes of work and prepare the report
- 3.) Analyze and compare the types Groups
- 4.) Prepare the report on understanding of Colour
- 5.) Prepare the Layout for different commercial jobs
- 6.) Make a Detail Study report on Software used for designing and page layout
- 7.) Create a spreadsheet for the class
- 8.) Create power point presentation for a course
- 9.) Create a database for the class

Diploma in Textile Technology**COMMON ACTIVITIES FOR SKILL UPGRADATION**

1. Yoga and Meditation
2. Swacha Bharat and Swacha Telangana
3. Plantation
4. Reports / Debate / Street Campaign / Street show / Quiz / Group discussion / Seminar
 - a) Protecting Environment
 - b) Conservation of Water and other natural resources
 - c) Our Social responsibilities
 - d) Social Services
 - e) Use of Technology
 - f) Nutritional food and Health
 - g) Traffic Rules and Road Safety
 - h) Media
5. Any other activities as per the teachers / student choice

RUBRICS for Assessing Student Activity

Model Rubrics for Visiting the field / Organization and Drawing a Process flow chart						
S.No	Sub activity	Performance				
		Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)	Need improvement
1	Use of visuals diagrams, symbols, directions	Excellent	Very Good	Good	Satisfactory	Need improvement
2	Correct sequence of machines	Excellent	Very Good	Good	Satisfactory	Need improvement
3	Identified major machines and processes and shown in the chart	Excellent	Very Good	Good	Satisfactory	Need improvement
4	Defined the major process / principle of working	Excellent	Very Good	Good	Satisfactory	Need improvement
5	Participation in the work	Lead the team	Took very active role	Took active role in the team	Participated in the team	Not participated in the team

Model Rubrics for carrying out a brief study / experiment / survey on a particular problem or new ideas related to the subject and submitting a report					
S. No	Sub activity	Performance			
		Excellent	Good	Satisfactory	Need improvement
1	Data Collection	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Standards of Conditions for experiment	Excellent	Good	Satisfactory	Need improvement
3	Usefulness of Study conducted	Excellent	Very Useful	Moderately Useful	Less Useful
4	Presented/ explained about the activity with attractive visuals or diagrams	Excellent	Good	Satisfactory	Need improvement
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note : Separate rubrics may be prepared according to the activity and assessed the performance of the students

BIOMEDICAL ENGINEERING**SKILL Upgradation-II**

Course Title	: Skill Upgradation -II	Course Code	:Common
Semester	: II	Course	: Core
Teaching Scheme in periods (L :	: 0:0:7	Credits	: 2.5
Methodology	: Activities	Total	: 105
CIE	: Rubrics	Contact SEE	: Nil

Rationale: This course is introduced for all semesters with a purpose of providing outside classroom experiences that lead to overall development of the students. One whole day is allocated for activities.

Course Objectives:

1. To create an awareness on Engineering Ethics and Human Values.
2. To instil Moral, Social Values and Loyalty.
3. Create awareness about social responsibilities of Engineers
4. To improve Communication and Participation skills

Course Content and Blue Print of Marks for SEE			
Activity No	Activity	Periods	Frequency
1	Haritha Haram(plantation &Maintenance)	9	3 times in a semester
2	Waste management	12	3 times in a semester
3	SwachBharath	28	4 times in a semester
4	Mini projects	7	1 time in a semester
5	Video Clips	9	3 times in a semester
6	Seminar/Quiz/Presentation/Group discussion	18	6 times in a semester
7	Local Visits (also with in the campus)	6	2 times
8	Expert Lectures • Engineering ethics- • moral issues • Ethical theories Personality– Self control- Self-interest –Selfrespect. • Emerging technologies	16	4 Times
Total Periods		105	

580180/2020/ACADEMIC SECTION - 2

Note: in case Expert faculty are not available English faculty should handle the expert lectures or Video clips on the suggested lectures may be played

Course Outcomes:

CO	Outcome	CO/PO Mapping
CO1	Practice the moral values that ought to guide the Engineering profession.	1,2,5,6,7,8,9,10
CO2	Develop the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them in real life situations	8,10
CO3	Create awareness of saving environment through activities	3,4,5,8,9
CO4	Create awareness of Constitution of India	1,4,7,8,9,10

COURSE CONTENT:

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy –Profession-Definition–Ethical theories-Theories about right action Personality– Self control- Self-interest –Selfrespect.

Evaluation:

The student must maintain a record of all activities conducted on **skill upgradation/ Activities** day and prepare a soft copy of report and submit it to their mentor or upload to the institute website or mail.

The reports shall be evaluated by the mentors through rubrics and accordingly give the eligibility for 2.5 credits . The student must have participated in at least 75% of activities to get eligibility.

CO-PO Mapping Matrix

Course Outcome	Basic knowledge	Discipline Knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & sustainability	Ethics	Individual and Team work	Communication	Lifelong learning	Mapped POs
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	
CO1	✓				✓					✓	5,10
CO2					✓					✓	5,10
CO3						✓	✓		✓	✓	6,7,9,10
CO4					✓		✓			✓	5,7,10

EMBEDDED SYSTEMS**SKILL Upgradation-II**

Course Title	: Skill Upgradation -II	Course Code	:ES
Semester	: II	Course	: Core
Teaching Scheme in periods (L :	: 0:0:7	Credits	: 2.5
Methodology	: Activities	Total	: 105
CIE	: Rubrics	Contact SEE	: Nil

Rationale: This course is introduced for all semesters with a purpose of providing outside classroom experiences that lead to overall development of the students. One whole day is allocated for activities.

Course Objectives:

1. To create an awareness on Engineering Ethics and Human Values.
2. To instil Moral, Social Values and Loyalty.
3. Create awareness about social responsibilities of Engineers
4. To improve Communication and Participation skills

Course Content and Blue Print of Marks for SEE			
Activity No	Activity	Periods	Frequency
1	Haritha Haram(plantation &Maintenance)	9	3 times in a semester
2	Waste management	12	3 times in a semester
3	Swach Bharath	28	4 times in a semester
4	Mini projects	7	1 time in a semester
5	Video Clips	9	3 times in a semester
6	Seminar/Quiz/Presentation/Group discussion	18	6 times in a semester
7	Local Visits (also with in the campus)	6	2 times
8	Expert Lectures • Engineering ethics- • moral issues • Ethical theories Personality– Self control- Self-interest –Selfrespect. • Emerging technologies	16	4 Times
Total Periods		105	

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Note: in case Expert faculty are not available English faculty should handle the expert lectures or Video clips on the suggested lectures may be played

Course Outcomes:

CO	Outcome	CO/PO Mapping
CO1	Practice the moral values that ought to guide the Engineering profession.	1,2,5,6,7,8,9,10
CO2	Develop the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them in real life situations	8,10
CO3	Create awareness of saving environment through activities	3,4,5,8,9
CO4	Create awareness of Constitution of India	1,4,7,8,9,10

COURSE CONTENT:

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy –Profession-Definition–Ethical theories-Theories about right action Personality– Self control- Self-interest –Selfrespect.

Evaluation:

The student must maintain a record of all activities conducted on **skill upgradation/ Activities** day and prepare a soft copy of report and submit it to their mentor or upload to the institute website or mail.

The reports shall be evaluated by the mentors through rubrics and accordingly give the eligibility for 2.5 credits . The student must have participated in at least 75% of activities to get eligibility.

CO-PO Mapping Matrix

Course Outcome	Basic knowledge	Discipline Knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & sustainability	Ethics	Individual and Team work	Communication	Lifelong learning	Mapped POs
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	
CO1	✓				✓					✓	5,10
CO2					✓					✓	5,10
CO3						✓	✓		✓	✓	6,7,9,10
CO4					✓		✓			✓	5,7,10

ELECTRONICS & VIDEO ENGINEERING
SKILL Upgradation-II

Course Title	: Skill Upgradation -II	Course Code	: Common
Semester	: II	Course	: Core
Teaching Scheme in periods (L :	: 0:0:7	Credits	: 2.5
Methodology	: Activities	Total	: 105
CIE	: Rubrics	Contact SEE	: Nil

Rationale: This course is introduced for all semesters with a purpose of providing outside classroom experiences that lead to overall development of the students. One whole day is allocated for activities.

Course Objectives:

1. To create an awareness on Engineering Ethics and Human Values.
2. To instil Moral, Social Values and Loyalty.
3. Create awareness about social responsibilities of Engineers
4. To improve Communication and Participation skills

Course Content and Blue Print of Marks for SEE			
Activity No	Activity	Periods	Frequency
1	Haritha Haram(plantation & Maintenance)	9	3 times in a semester
2	Waste management	12	3 times in a semester
3	SwachBharath	28	4 times in a semester
4	Mini projects	7	1 time in a semester
5	Video Clips	9	3 times in a semester
6	Seminar/Quiz/Presentation/Group discussion	18	6 times in a semester
7	Local Visits (also with in the campus)	6	2 times
8	Expert Lectures • Engineering ethics- • moral issues • Ethical theories Personality– Self control- Self-interest –Selfrespect. • Emerging technologies	16	4 Times
Total Periods		105	

Note: in case Expert faculty are not available English faculty should handle the expert lectures or Video clips on the suggested lectures may be played

Course Outcomes:

CO	Outcome	CO/PO Mapping
CO1	Practice the moral values that ought to guide the Engineering profession.	1,2,5,6,7,8,9,10
CO2	Develop the set of justified moral principles of obligation, ideals that ought to be endorsed by the engineers and apply them in real life situations	8,10
CO3	Create awareness of saving environment through activities	3,4,5,8,9
CO4	Create awareness of Constitution of India	1,4,7,8,9,10

COURSE CONTENT:

Engineering ethics-Definition-Approach-Senses of Engineering Ethics-variety of moral issues– Inquiry-Types-Moral dilemmas-Steps to solve dilemma-Moral autonomy –Definition-consensus & controversy –Profession-Definition–Ethical theories-Theories about right action Personality– Self control- Self-interest –Selfrespect.

Evaluation:

The student must maintain a record of all activities conducted on **skill upgradation/ Activities** day and prepare a soft copy of report and submit it to their mentor or upload to the institute website or mail.

The reports shall be evaluated by the mentors through rubrics and accordingly give the eligibility for 2.5 credits . The student must have participated in at least 75% of activities to get eligibility.

CO-PO Mapping Matrix

Course Outcome	Basic knowledge	Discipline Knowledge	Experiments and practice	Engineering Tools	Engineer and society	Environment & sustainability	Ethics	Individual and Team work	Communication	Lifelong learning	Mapped POs
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	
CO1	✓				✓					✓	5,10
CO2					✓					✓	5,10
CO3						✓	✓		✓	✓	6,7,9,10
CO4					✓		✓			✓	5,7,10

Diploma in Packaging Technology

ENGLISH

Method of evaluation of the student activities (Rubrics)

Model Rubrics

S.No	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected from more than four sources.	Data was collected from three to four sources	Data was collected from two sources.	Data was collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/	Provided a conclusion /	Student provided a conclusion/	Conclusions /summary was

		summary clearly based on the data and activity	summary clearly based on the data and activity	summary less effectively	not relevant.
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Note: Separate rubrics may be prepared according to the activity

II SEMESTER

SKILL UPGRADATION IN - ENGINEERING MATHEMATICS

ACTIVITY ASSESSMENT Steps

- **Mathematical concepts**
- **Procedure**
- **Explanation**
- **Working with others**
- **Mathematical errors**

ACTIVITIES

- 1 Prepare a presentation to describe various types of Straight lines.
- 2 Identify the geometrical shapes in and around your locality and give the details about them.
3. Prepare a comparative study of conic sections and their uses in engineering applications.
3. Prepare a detailed study report on differentiation using different methods.
4. List out and explain the applications of Differentiation.
5. Apply the differentiation in geometrical problems.
6. Apply the differentiation in rate measure problems.
7. Apply the differentiation to problem solving in finding maxima minima.

CO / PO - MAPPING OF ACTIVITIES

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	2	1			1	2	2	3
CO2	3	2	2	1			1	2	2	3

CO3	3	2	2	1			1	2	2	3
CO4	3	2	2	1			1	2	2	3
CO5	3	2	2	1			1	2	2	3
CO6	3	2	2	1			1	2	2	3
CO7	3	2	2	1			1	2	2	3

Rubrics for Activity assessment

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Procedures	Typically, uses an efficient and effective procedure to solve the problem(s).	Typically, uses an effective procedure to solve the problem(s).	Sometimes uses an effective procedure to solve problems, but does not do it consistently.	Rarely uses an effective procedure to solve problems.
Explanation	Explanation is detailed and clear.	Explanation is clear.	Explanation is a little difficult to understand, but includes critical components.	Explanation is difficult to understand and is missing several components OR was not included.
Working with Others	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
Mathematical Errors	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.

PASS SCORE: 2.5

STUDENT ASSESSMENT by RUBRICS

S.N O	PIN	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	C O7	AVERA GE

SEMESTER – II**SKILL UPGRATION – APPLIED PHYSICS****TASK****LEVEL 1: Concept, Ethical Data, Materials, Source (Library/internet/others)****LEVEL 2: Methodology/procedure****LEVEL 3: Analysis/experiment****LEVEL 4: Interpretation/ inference/ evaluation.*****Bridge activity: - Visiting your college Library:***

- *Prepare a list of available reference books in Physics with details such as author, publisher, edition etc.*
- *Prepare a list of Physics/Science journals, magazines, monographs with details.*
- *Prepare a log book of your visits to college library with brief description.*

Activities:-

- Construct a blowing pipe to detect dangerous gases in mines.
- Construct model stethoscope with known materials.
- Conduct awareness program on noise pollution in your college, colony. Prepare a video report.
- Hypothesize seconds' pendulum timer.
- Prepare a power point presentation on photosensitive materials with detailed specifications.
- Prepare a report on Lasers where they are practically used.

- Prepare a power point presentation on application of optical fibers in medical and engineering field.
- How can you produce electricity with a magnet? – (a) Develop a working model/ prepare a power point presentation with animation/ prepare drawings on a chart.
- Construct an electric calling bell.
- Setup a circuit on breadboard to verify Kirchhoff's voltage law.
- Prepare a power point presentation on Superconductors and their practical applications with motion pictures embedded.
- Collect various resistors, diodes and LEDs with specifications and compile on a card board.

NOTE: *The above activities are indicative. The teacher may assign any other activity relevant to the course based on resources available.*

Course Outcomes (CO)		Linked Pos	Activity Hours
CO1	Construction of a blowing pipe to detect dangerous gases in mines	PO1, PO2, PO3, PO4, PO5, PO6	3
CO2	Construction of model stethoscope with known materials	PO1, PO2, PO5, PO7	3
CO3	Conduct of awareness program on noise pollution in the college, colony and preparation of a video report.	PO1, PO2, PO5, PO6, PO7, PO8, PO9	3
CO4	Construction of a seconds' pendulum timer	PO1, PO2, PO3, PO4	3
CO5	Preparation of PPT on photosensitive materials with detailed specifications	PO1, PO2	3
CO6	Preparation of report on lasers practically used	PO1, PO2, PO4, PO5, PO10	3
CO7	Preparation of PPT on application of optical fibers in medical and engineering field	PO1, PO2, PO4, PO5, PO6, PO9, PO10	3
CO8	Production of electricity with a magnet –working model, PPT with animation and drawings on a chart.	PO1, PO2, PO3, PO4	3
CO9	Construction of an electric calling bell	PO1, PO2, PO3, PO4	3

CO10	Construction of a circuit on breadboard to verify Kirchhoff's voltage law	PO1, PO2, PO3, PO4	3
CO11	Preparation of PPT on Superconductors and their practical applications with motion pictures.	PO1, PO2, PO3, PO4, PO9, PO10	3
CO12	Collection of various resistors, diodes and LEDs with specifications and installation on a card board	PO1, PO2	3

Rubrics for Task Assessments

General Scale for scoring student performance in Skill Upgradation

Type of Skill/Score	4	3	2	1
Data/Material Collection	All Data/Material was collected one time independently.	All Data/Material was collected more than one time independently.	All Data/Material was collected several times independently.	All Data/Material was collected several times with assistance.
Methodology/ Procedure	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations.	Procedures were outlined in a step-by-step fashion that could be followed by anyone without additional explanations. Expert help was needed to accomplish this.	Procedures were outlined in a step-by-step fashion, but had 1 or 2 gaps that require explanation even after expert feedback.	Procedures that were outlined were incomplete or not sequential, even after Expert feedback had been given.
Activity/ Development	Quality of Skill is high.	Skill is mastered to the level of expectation.	Skill is present but with errors and omissions.	Skill needs improvement.
Interpretation/ summary	Student provided a detailed conclusion	Student provided a somewhat detailed	Student provided a conclusion with	No conclusion was apparent.

	clearly.	conclusion clearly.	some reference.	
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NOTE: The above types of skills are indicative. The teacher may change the skills depending on type of activity.

PASS SCORE: 2.5

STUDENT ASSESSMENT (RUBRICS)

S. N O	PIN	Course Outcomes (Skill Activities)												AVERAGE
		CO 1	CO 2	CO 3	CO 4	CO 5	CO 6	CO 7	CO 8	CO 9	CO 10	CO 11	CO 12	

Engineering Chemistry and Environmental Studies Suggested Skill Upgradation Activities

Activity – 1

Oral/Power point presentation on the different methods of concentration of ore :

Step-1: Data collection on the ores and different methods of concentration of ore.

Step -2: Prepare for oral/a power point presentation on different methods of concentration of ore.

Step-3: Explain the methods of concentration of ore with oral presentation/ power point presentation

Step-4: Submit the report along with ppt.

Activity – 2

Corrosion of a metal under different conditions:

Step-1: Collection of data related to the factors effecting the corrosion.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment under different conditions such as

- Metal exposed to air only
- Metal exposed to dry air
- Metal partially dipped in salt water
- Metal completely dipped in water
- Metal partially dipped in pure water

Note: This experiment may be conducted in other conditions also.

Step-4: Recording of observations and comparison of extent of corrosion under different conditions after one week with explanation

Step-5: overall presentation of the activity

Activity – 3

Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with different metals/alloys such as Iron, stainless steel, aluminum, copper etc. under the same conditions

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 4

Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions:

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal having different shapes and surfaces under the same conditions.

Step-4: Recording of observations and comparison of extent of corrosion on different metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 5

Study of Prevention of Corrosion of a metal by using different coating materials

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Setting and Execution of experiment with a metal coated with different materials like oil, paint, plastic, rubber etc

Step-4: Recording of observations and comparison of extent of corrosion on the metals after one week with explanation

Step-5: Overall presentation of the activity

Activity – 6

Study of plastics, recycling of plastics and their advantages and disadvantages

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on recycling, advantages and disadvantages of plastics

Step-4: Explain about the recycling, advantages and disadvantages of plastics and suggest the measures to protect the environment

Step-5: Submission of the report along with the ppt.

Activity – 7**Study on natural rubber and its uses**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on processing of natural rubber from natural source and vulcanization..

Step-4: Explain about the properties and uses of natural and vulcanized rubber.

Step-5: Submission of the report along with the ppt.

Activity – 8**Power point presentation on fossil fuels**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Preparation of power point presentation on fossil fuels.

Step-4: Explain about the advantages and disadvantages of solid , liquid and gaseous fuels.

Step-5: Submission of the report along with the ppt.

Activity – 9**Study and analysis of environment related air pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of air.

Step-4: Explain about the quality of air and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 10**Study and analysis of environment related water pollution**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the quality of water body.

Step-4: Explain about the quality of water body and suggest the remedial measures through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 11**Study and analysis of college environment**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Identify the factors that affecting the environment of the institution.

Step-4: Explain about the existing environment and suggest the measures to improve it through ppt.

Step-5: Submission of the report along with the ppt.

Activity – 12**Construction of Galvanic cell**

Step-1: Data collection.

Step-2: Summarization of data/ literature collected.

Step -3: Construction of any galvanic cell.

Step-4: Explain about the construction and functioning of Galvanic cell through ppt.

Step-5: Submission of the report along with the ppt.

Note: Any other skill upgradation activity related to the course may be taken up.

Mapping of POs to Student activities

S.No	Name of the activity	Linked POs
1	Power point presentation on the different methods of concentration of ore	1,2,4,8,9
2	Corrosion of a metal under different conditions	1,2,3,4, 5,6,8,9,10
3	Comparison of Corrosion of different metals /alloys exposed to the same environmental conditions	1,2,3,4, 5,6,8,9,10
4	Comparison of Corrosion of metal with different shapes and surfaces under same environmental conditions	1,2,3,4,5,6,8,9,10
5	Study of Prevention of Corrosion of a metal by using different coating materials	1,2,3,4,5,6,8,9,10
6	Study of plastics, recycling of plastics and their advantages and disadvantages	1,2,4,5,6,7,8,9,10
7	Study on natural rubber and its uses	1,2,4,5,6,7,8,9,10

8	Power point presentation on fossil fuels	1,2,4,5,7,8,9,10
9	Study and analysis of environment related air pollution	1,2,4,5,6,7,8,9,10
10	Study and analysis of environment related water pollution	1,2,4,5,6,7,8,9,10
11	Study and analysis of college environment	1,2,4,5,6,7,8,9,10
12	Construction of Galvanic cell	1,2,3,4,5,8,9

Method of evaluation of the student activities (Rubrics)

Model Rubrics

S · N o	Sub activity	Performance			
		excellent	Good	Satisfactory	Need improvement
1	Step-1	Data was collected	Data was collected	Data was	Data was

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		from more than four sources.	from three to four sources	collected from two sources.	collected only one source.
2	Step-2	All materials and data required for the activity were accurately prepared based on the data collected independently.	Almost all materials and data required for the activity were accurately prepared based on the data collected independently.	The materials and data required for the activity were accurately prepared based on the data collected with the help of teacher.	The materials and data required for the activity were inaccurately prepared
3	Step-3	Procedures were outlined in a step-by-step fashion that could be followed by anyone & performed the activity effectively.	Procedures were outlined in a step-by-step fashion, require explanation & performed the activity effectively.	Procedures that outlined were complete with 1 or 2 gaps and require explanation & performed the activity normally	Procedures that outlined were not sequential, & performed the activity in a poor way
4	Step-4	Presented/ explained the information about the activity in logical, interesting sequence with attractive visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with visuals or diagrams.	Presented/ explained the information about the activity in logical sequence with less visuals or diagrams.	Presented/ explained the information about the activity without sequence and visuals or diagrams.
5	Conclusion / summary	Provided a detailed conclusion/ summary clearly based on the data and activity	Provided a conclusion / summary clearly based on the data and activity	Student provided a conclusion/ summary less effectively	Conclusions /summary was not relevant.

Note: Separate rubrics may be prepared according to the activity

Diploma in Metallurgical Engineering

SKILL UPGRADATION (RUBRICS)

- Attending yoga classes
- Clean and green activities to protect the environment in the institute and near by places
- Attending motivational classes given by experts
- Visiting nearby public places and extending help to the needs as the part of social responsibility
- Guiding junior students in academic affairs
- Study of effect of metallurgical industries on environment
- Study of Role of Metallurgical industries on the National economy
- Must register and study the courses offered by NPTEL/Swayam/MOOCs.