Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic

Approved by AICTE, New Delhi, Recognized by DTE, Govt. of Maharashtra, Affiliated to
Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra.

JCEP OBE MANUAL

Contents

Abbreviations:

OBE	Outcome Based Education	**BTL**	Bloom's Taxonomy Level
LOT	Lower Order of Thinking	**CO**	Course Outcome
PEO	Program Educational Objectives	**PO**	Program Outcome
CT	Class Test	**PSO**	Program Specific Outcome
MSE	Mid Sem Exvaluation	**POE**	Practical Oral Exam
ESE	End Sem Evaluation	**HoD**	Head of Department
CE	Course Exit Survey	**DAB**	Department Advisory Board
PC	Program Coordinator	**A.Y.**	Academic Year

Institute Vision

"To emerge as an institution of eminence following an interdisciplinary, innovative, and entrepreneurial approach to produce competent technocrats who would give affordable engineering solutions for the benefit of society"

Institute Mission

M1: To develop engineering graduates, for an employability, entrepreneurship, and higher education through effective teaching, learning, and training.
M2: To provide quality engineering solution to the needy and bring about holistic development in the adjoining rural areas.
M3: To inculcate strong ethical, moral values and inclusivity in students to work in team for sustainable development.
M4: To establish research clusters in emerging areas in collaboration with reputed interdisciplinary organizations.

Core Values

- Striving for Academic excellence
- Creating educational opportunities for holistic development.
- Professional ethics and moral
- Commitment towards nature and society

Quality Policy:

JCEP is committed to impart quality technical education leading to be one of the best Institute in rural area meeting standard norms through a continual improvement to meet the future challenges.

Objectives of the Institution

- To assist the students in bringing out the best of their abilities to become successful professionals.
- To create an excellent academic atmosphere to enable students to acquire a broad engineering background to meet the changing needs of the industry.
- To give an opportunity to acquire all-round development and inculcate sympathetic attitude to the needy and to the underprivileged.
- To ensure active participation of students in curricular, Co-curricular and extra-curricular activities.

Program Outcome (PO)

1) **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2) **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3) **Design/Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4) **Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions for complex problems.
5) **Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6) **The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7) **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
8) **Individual and Teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
9) **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
10) **Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
11) **Life-long Learning:** Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

➢ Preamble:

The core purpose of any education system is to ensure that learners acquire the necessary knowledge, skills, values, and attitudes to become competent professionals and responsible citizens. In contrast to traditional education, which focuses on the transmission of content from teacher to student, **Outcome-Based Education (OBE)** is a learner-centric approach that emphasizes the achievement of clearly defined learning outcomes.

Outcome-Based Education is a systematic and structured approach to education where all aspects of teaching and learning are aligned to ensure that students achieve the desired learning outcomes. These outcomes are expressed in terms of what students are expected to know, do, and demonstrate at the end of a program. The emphasis is on **measurable performance indicators** that reflect a student's ability to apply acquired knowledge and skills in real-world contexts.

The shift toward OBE is driven by the need to enhance educational quality and relevance in a rapidly evolving global landscape. Recognizing this, the **National Board of Accreditation (NBA)** adopted the outcome-based model in 2009 to align with international best practices. Under this model, institutions are evaluated not only based on infrastructure and teaching processes but also on the **attainment of Program Educational Objectives (PEOs), Program Outcomes (POs), and Course Outcomes (COs)**.

The implementation of OBE requires a continuous process of planning, delivery, assessment, and improvement. This includes:

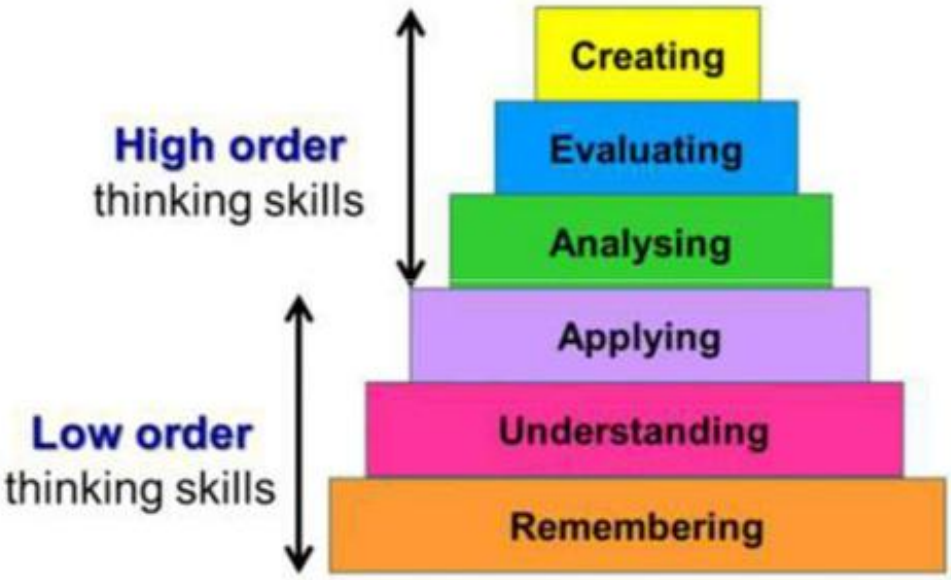
- Clearly defining intended outcomes.
- Designing curriculum and pedagogy to align with these outcomes.
- Assessing student performance using appropriate tools and techniques.
- Using assessment data to inform teaching and improve curriculum effectiveness.

This manual provides a structured framework for implementing OBE at **Jaywant College of Engineering and Polytechnic, KM Gad (JCEP)**. It serves as a guide for faculty, administrators, and stakeholders to plan, deliver, and assess education in a manner that ensures students achieve the expected competencies during and after their academic journey. Through this approach, the institution aims to produce graduates who are industry-ready, innovative, and socially responsible.

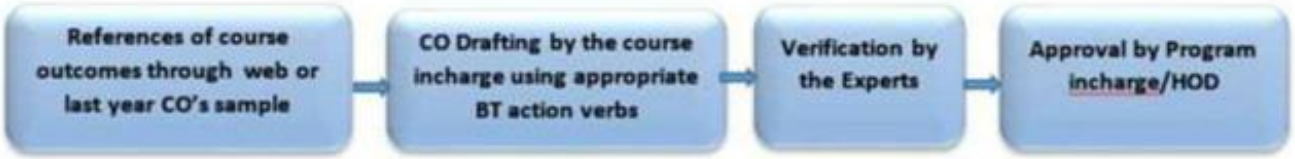
India, OBE and Accreditation:

From 13th June 2014, India has become the permanent signatory member of the Washington Accord. Implementation of OBE in higher technical education also started in India. The National Assessment and Accreditation Council (NAAC) and National Board of Accreditation (NBA) are the autonomous bodies for promoting global quality standards for technical education in India. NBA has started accrediting only the programs running with OBE from 2013. The National Board of Accreditation mandates establishing a culture of outcome based education in institutions that offer Engineering, Pharmacy, Management program. Reports of outcome analysis help to find gaps and carryout continuous improvements in the education system of an Institute, which is very essential.

Key Constituents of Outcome-based Education (OBE)



- **Process to maintain quality of CO:**



➢ Development of Course Plan:

A course plan (Lecture and Practical Plan) is a guided plan of the components of the course. This help in providing a check of various components in terms of the course outcomes.

The main aspects that are included in a course plan (lecture Plan) are:

- Lecture contents
- Lecture objectives
- Lecture outcomes
- Planned & Actual Date of the Lecture
- Teaching Pedagogy used
- Mapping of Lecture to CO,PO & PSO
- Remarks if any

➢ CO-PO Mapping and CO-PSO Mapping:

The final assessment in an OBE approach is the estimation of the level of attainment of POs and PSOs. These outcomes are estimated from the estimates of all COs s of the entire program. Hence every Course Outcomes (COs) is mapped onto the respective POs and PSOs in terms of the strength of mapping.

The various correlation levels are:

"1" – Slight (Low) Correlation

"2" – Moderate (Medium) Correlation

"3" – Substantial (High) Correlation

"-" indicates there is no correlation.

The various correlation levels are well justified by every course teacher who prepares CO-PO-PSO Mapping and justification document for the respective course allotted.

- **Reference: Lecture Plan Format in Appendix**

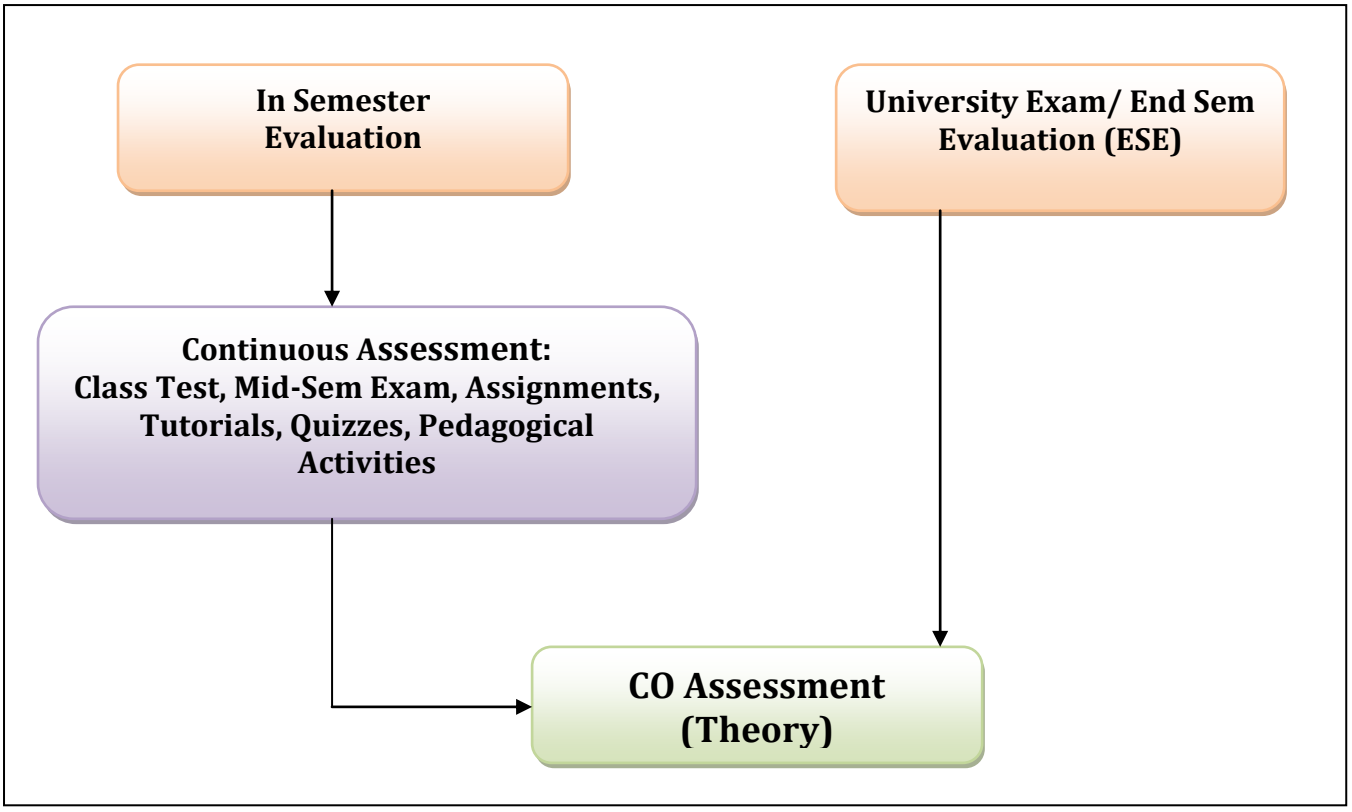
Course Delivery using Outcome based approach:

Use various pedagogical tools to measure COs. Defining pedagogical tools while teaching subjects add to the learning effectiveness depending upon the profile of the learner.

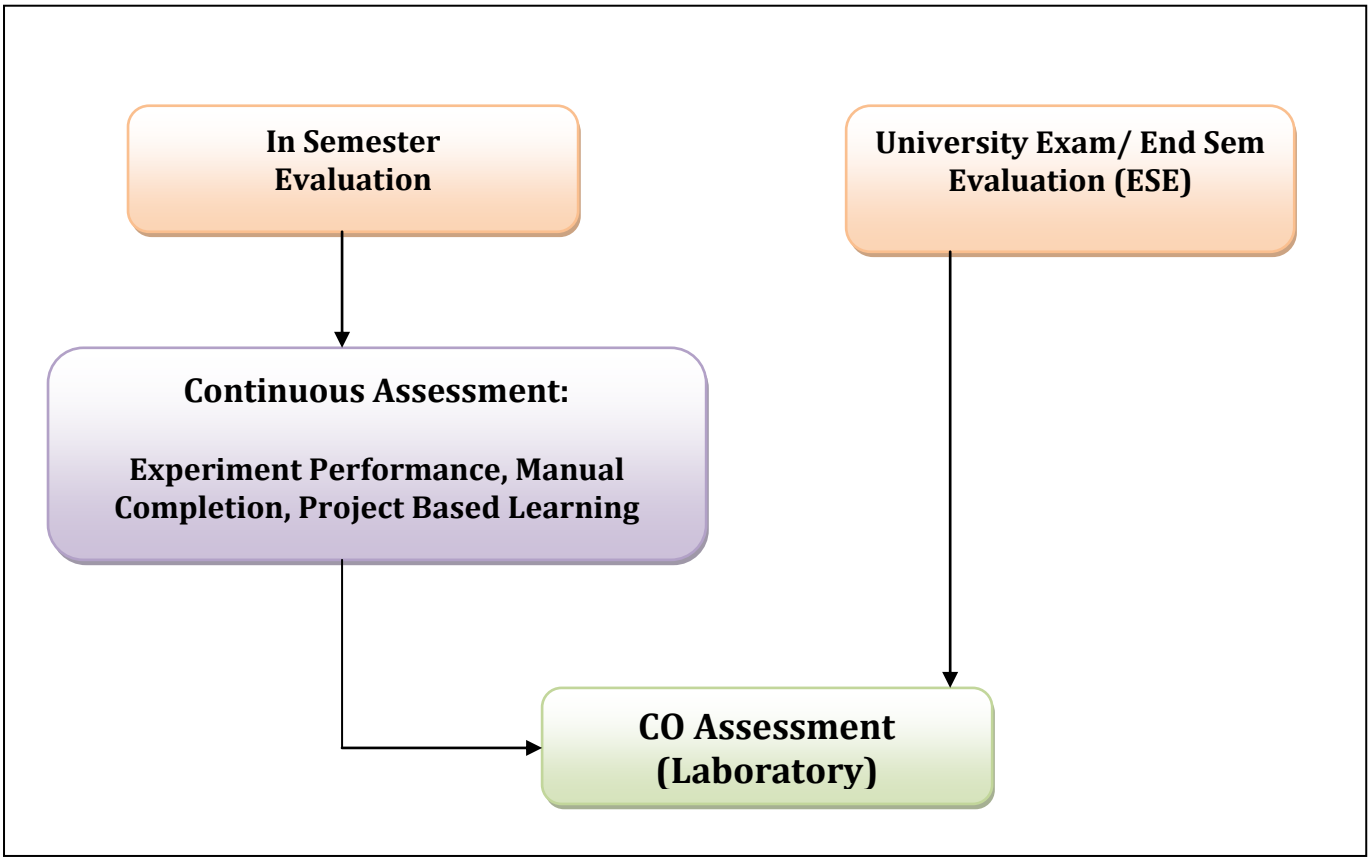
➢ Small Group Discussion ➢ Problem based Learning ➢ Group Activities / Project work ➢ Assignments. ➢ Case Studies ➢ Concept mapping / mind mapping ➢ Tutorial worksheets ➢ Collaborative learning	➢ Inquiry – based Learning ➢ Simulation and Gaming ➢ Writing with peer review ➢ Debates and Discussions ➢ Random Calling ➢ Snow balling / syndicate groups ➢ Team based learning ➢ Buzz Groups

➢ **CO Assessment process for various courses in the curriculum:**

CO Assessment for Theory



CO Assessment for Laboratory Practice



OBE Enactment

BEFORE SEMESTER BEGINS

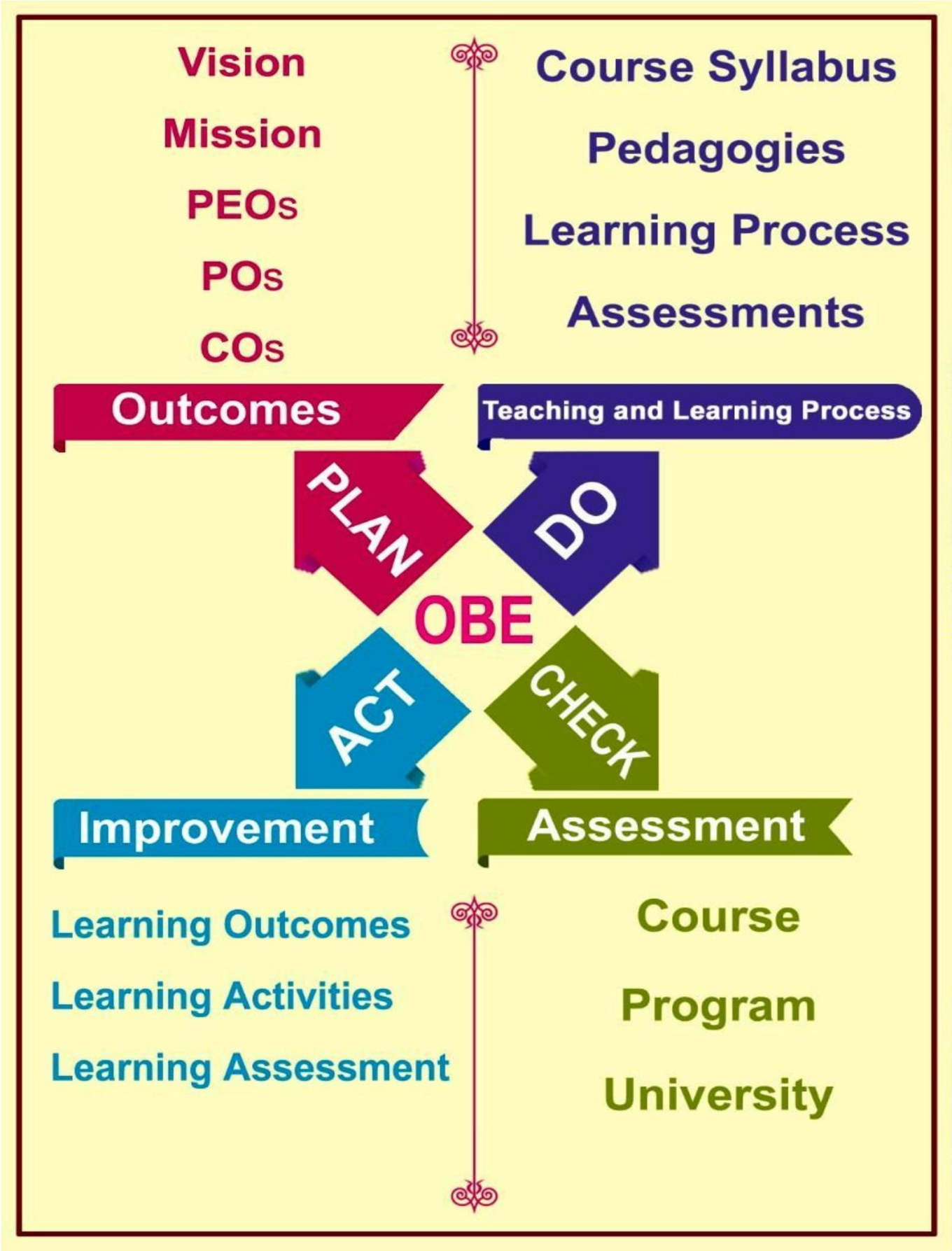
1. Subject Preference.
2. Subject allocation based on expertise.
3. Notes, Lesson plan, Course Information Sheet preparation.
4. Quality Assessment cell verification & approval of course contents.

DURING SEMESTER

1. Verification of Quality of Tests.
2. Feedback Analysis.
3. Quality circle meetings & Corrections.
4. Check on active teaching strategies by Heads.
5. Implementation of all activities.

END OF SEMESTER

1. Course exit survey.
2. Assessment & Evaluation of Co & PO attainments.
3. Academic audition quality of the contents delivered and suggestion for improvement.

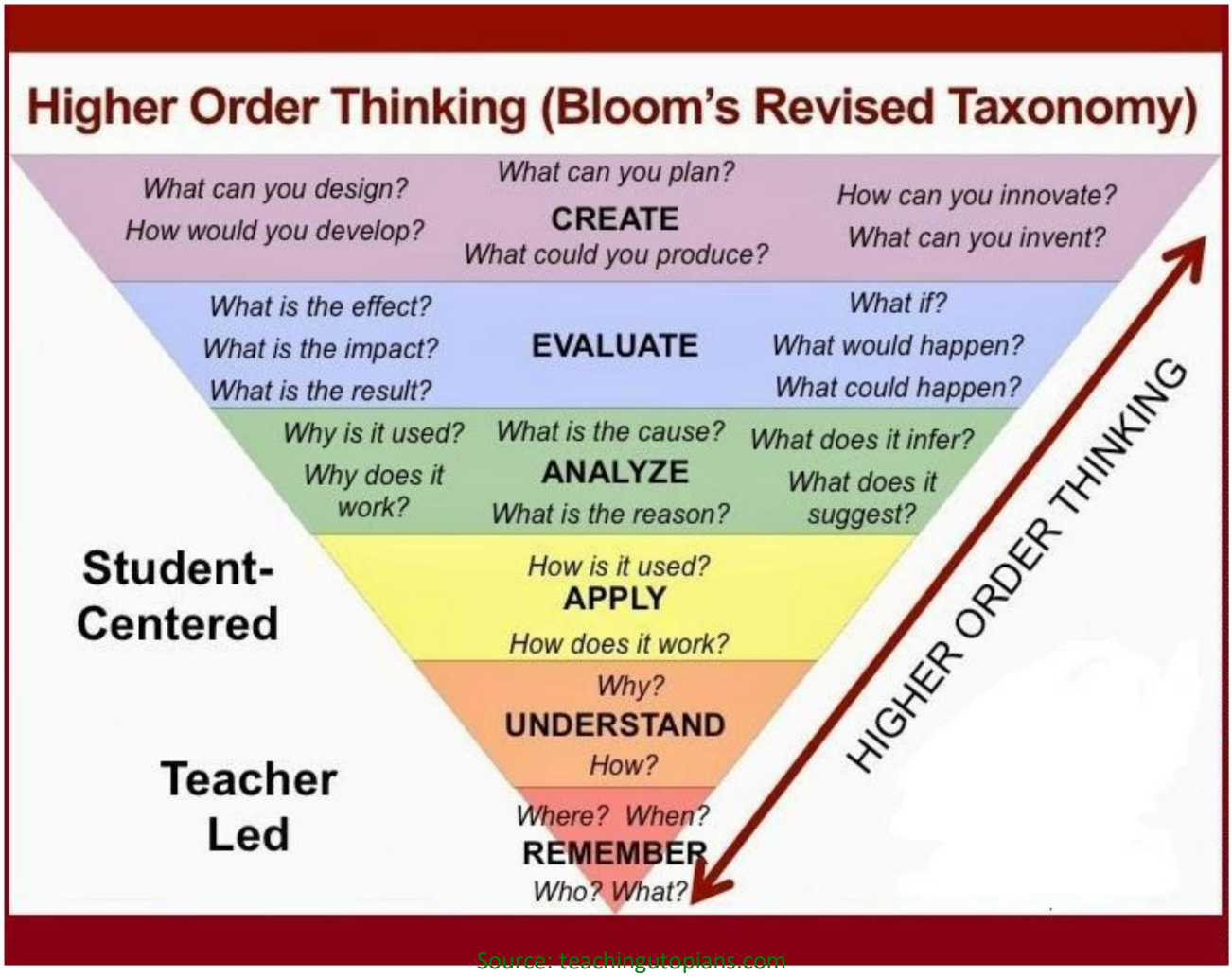

Vision
Mission
PEOs
POs
COs
Course Syllabus
Pedagogies
Learning Process
Assessments
Outcomes
Teaching and Learning Process
PLAN
DO
OBE
ACT
CHECK
Improvement
Assessment
Learning Outcomes
Learning Activities
Learning Assessment
Course
Program
University

Procedure to be followed for Implementing OBE

- Every faculty member must write Course Outcomes (COs) for the subject allotted to them.
- The Course Outcomes are written with Bloom's Taxonomy action verbs indicating the cognitive level at which the faculty plans to teach based their expertise.
- CO – PO mapping has to be done using Blooms Taxonomy correlation level between written CO and POs.
- Activities and Assessment tools should be planned for each of the mapped values in CO-PO matrix.
- Faculty have to Prepare the Test items for the above CO-PO matrix based on Competency level and Performance Indicators.
- Faculty should plan and conduct activities like Quiz, Chart presentation, Assignment etc., for matrix values in the CO-PO map that is not covered by the Test Items.
- Faculty must take course Exit survey at the end of the semester for their subjects to get indirect attainment of COs.
- Faculty must calculate the CO attainments for each subject from the Internals exams results and university results. The PO attainments are calculated from CO-PO map values.
- Department will collect surveys for PO Indirect attainment and calculate the overall attainment.
- The Department Committee will verify the above process regularly.
- The scope for improvement and fixing targets for next academic years will be decided at the end of each academic year by Department Committee.

B L O O M S T A X O N O M Y

Understanding Various Levels of Bloom's Taxonomy



Source: teachingutopians.com

Note:

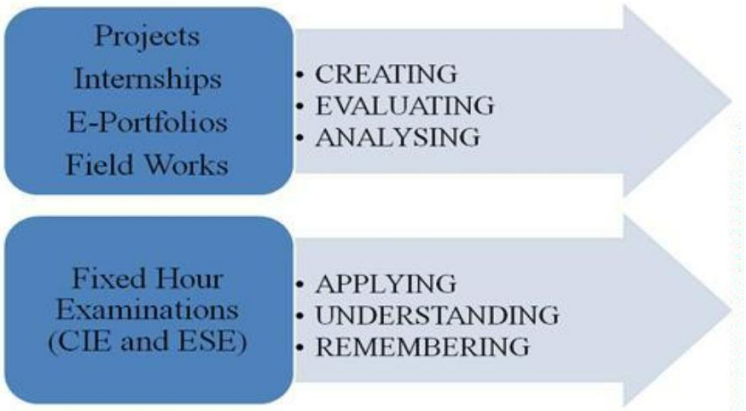
- The end semester written examinations can assess only very limited course outcomes and program outcomes.
- It means written examinations of time bound duration are not sufficient to make valid judgement about student learning.
- Therefore, some alternative assessment methods like problem solving assignments, projects portfolios etc. are required to assess the higher order skills at level 4, 5 and 6.

Top three levels i.e., Creating, Evaluating and up to some extent Analyzing are to be assessed by extended course works like projects, internship experiences and e-portfolios of students. Adoption of Bloom's Level framework should be implemented at university level for the sake of uniformity and to provide same playing field to all students regarding:

- Mapping of questions in the written examinations with Course Outcomes and then with Program Outcomes.
- Weightage of Bloom's Level attached to each question in the question paper.
- Criteria of assessment with mapping of questions in the viva-voce with Course Outcomes and then with Program Outcomes.
- Characteristics which are to be assessed.
- A rating scale which defines student's ability within each criterion.
- Mapping of scale with Course outcomes and hence Program outcomes.

Bloom's level	Description Attainment of Skill	Attainment of Skill
1	**Remembering**	Memorization of facts or knowledge attained in class or by reading the subject material.
2	**Understanding**	Explanation of previously learned material, ideas or concepts.
3	**Applying**	Use of knowledge attained for the application in another similar situation.
4	**Analyzing**	Split the information into parts and to find relationships between them and able to analyze.
5	**Evaluating**	Based on the work done and knowledge to justify the decision taken.
6	**Creating**	Develop and design a new concept or to generate a new idea while solving a problem.

Assessment Tools for Different Bloom's Levels



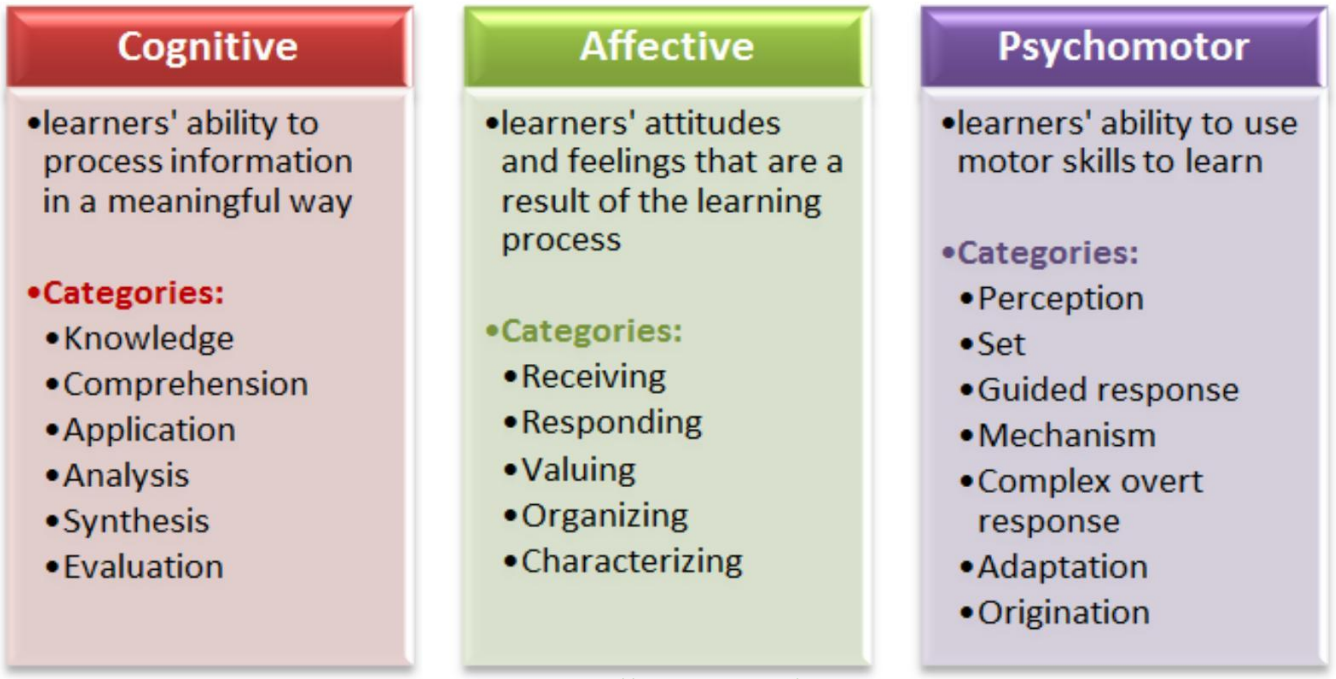
Learning Domains

"**Domains of learning**" refers to the three separate, yet interdependent components of learning outcomes achievable by human learners. These domains--cognitive, affective, and psychomotor represent various categories and levels of learning complexity and are commonly referred to as educational taxonomies.

The cognitive domain (*knowledge*) refers to knowledge attainment and mental/intellectual processes.

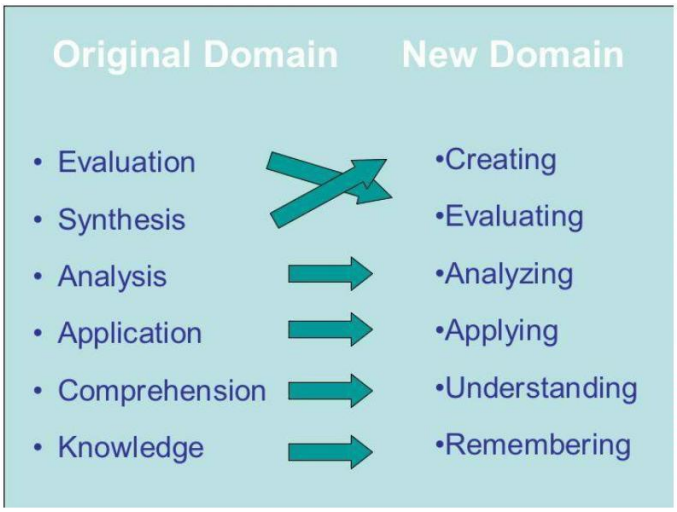
The affective domain (attitude or self) characterizes the emotional arena reflected by learners' beliefs, values and interests.

The psychomotor domain (manual or physical skills) reflects learning behavior achieved through neuromuscular motor activities.



Courtesy: https://tell.colvee.org/

The Revised Blooms Taxonomy in the cognitive Domain. This new taxonomy reflects a more active form of thinking and is perhaps more accurate.



Revised Bloom's Action Verbs for Course Outcomes

Remember	Understand	Apply	Analyze	Evaluate	Create
Arrange	Alter	Apply	Analyze	Appraise	Arrange
Cite	Classify	Change	Appraise	Argue	Assemble
Define	Convert	Choose	Ascertain	Assess	Collect
Identify	Defend	Compute	Associate	Attach	Combine
Label	Describe	Demonstrate	Breakdown	Choose	Comply
List	Discuss	Discover	Calculate	Compare	Compose
Memorize	Explain	Dramatize	Categorize	Conclude	Conceive
Match	Express	Draw	Compare	Critique	Construct
Name	Extend	Employ	Conclude	Deduce	Create
Order	Generalize	Illustrate	Contrast	Defend	Derive
Outline	Give examples	Interpret	Criticize	Estimate	Devise
Pronounce	Indicate	Manipulate	Designate	Evaluate	Expand
Quote	Locate	Modify	Determine	Judge	Extend
Recall	Paraphrase	Operate	Diagnose	Justify	Formulate
Recite	Recognize	Practice	Diagram	Predict	Generate
Recognize	Rephrase	Prepare	Differentiate	Prove	Integrate
Repeat	Restate	Produce	Discriminate	Rate	Invent
Reproduce	Reword	Schedule	Distinguish	Review	Modify
State	Rewrite	Show	Divide	Support	Originate
	Select	Sketch	Examine	Value	Plan
	Summarize	Solve	Experiment	Weigh	Prepare
	Translate	Use	Find		Project
			Infer		Rearrange
			Outline		Reconstruct
			Point out		Reorganize
			Separate		Set up
			Specify		Synthesize
			Subdivide		

Cognitive domain

The cognitive domain is focused on intellectual skills such as critical thinking, problem solving, and creating a knowledge base. It was the first domain created by the original group of Bloom's researchers. The cognitive hierarchy spans from simple memorization designed to build the knowledge of learners, to creating something new based on previously-learned information. In this domain, learners are expected to progress linearly through the hierarchy, beginning at "remember" and ending at "create."

A search for "Bloom's Verbs" will provide lists of synonyms to use.

Course Outcome Formation

What should an CO contain?

Course Outcome (CO) describe what students are able to demonstrate in terms of knowledge, skills, and values upon completion of a course. Clear articulation of learning outcomes serves as the foundation to evaluate the effectiveness of the teaching and learning process.

Effective, learning objectives need to be **specific, observable** and **measurable** statements

The Components of a Measurable Course Outcome.

Three essential components of a measurable Course Outcome are:

- Student learning behaviors
- Appropriate assessment methods
- Specific student performance criteria / criteria for success When writing a measurable Course

Outcome, it is important to:

⇒ focus on student behavior

⇒ use simple, specific action verbs

⇒ select appropriate assessment methods

⇒ state desired performance criteria

Focus on Student Behavior.

Course Outcomes are about what students are able to demonstrate upon completion of a course. Course Outcomes are not about what the instructors can provide but what the students can demonstrate. The following are not Course Outcomes:

× Offer opportunities for students to master integrated use of information technology.

× The program will engage a significant number of students in a formalized language/cultural studies program.

× Students who participate in critical writing seminars will write two essays on critical thinking skills.

× Students will be exposed to exceptionality in learning disabilities including visual and perception disabilities.

Use Simple, Specific Action Verbs.

When writing Course Outcomes, focus on student behavior and use simple, specific action verbs to describe what students are expected to demonstrate.

The following are examples of Course Outcomes:

Students will be able to **collect** and **organize** appropriate clinical data (history, physical exam, laboratory assessments including technology advancements in diagnostic such as PCR).

Students will be able to **apply** principles of evidence-based medicine to determine clinical diagnoses, and formulate and implement acceptable treatment modalities.

Students will be able to articulate cultural and socioeconomic differences and the significance of these differences for instructional planning.

Students will be able to use technology effectively in the delivery of instruction, assessment, and professional development.

Students will be able to evaluate the need for assistancetechnology for their students.

Note: Bloom's Taxonomy can be a useful resource in developing Course Outcomes.

ACTION VERBS

Concrete verbs such as "define," "apply," or "analyze" are more helpful for assessment than verbs such as "be exposed to," "understand," "know," "be familiar with."

Cognitive Learning	Action Verbs:
Remember- to recall or remember facts without necessarily understanding them	arrange, define, duplicate, label list, memorize, name, order, recognize, relate, recall, reproduce, list, tell, describe, identify, show, label, collect, examine, tabulate, quote
Understand – to understand and interpret learned information	classify, describe, discuss, explain, express, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend, translate, review, restate, locate, recognize, report
Apply– to put ideas and concepts to work in solving problems	apply, choose, demonstrate, dramatize, employ, illustrate, interpret, operate, practice, schedule, sketch, solve, use, calculate, complete, show, examine, modify, relate, change, experiment, discover
Analyze– to break information into its components to see interrelationships and ideas	analyze, appraise, calculate, categorize, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test, separate, order, connect, classify, arrange, divide, infer
Evaluate– to judge the value of information based on established criteria	appraise, argue, assess, attach, defend, judge, predict, rate, support, evaluate, recommend, convince, judge, conclude, compare, summarize
Create – to use creativity to compose and design something original	arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan, prepare, propose, set up, rewrite, integrate, create, design, generalize

Select Appropriate Assessment Methods.

Assessment methods are tools and techniques used to determine the extent to which the stated Course Outcomes are achieved. A variety of methods, qualitative and quantitative, direct and indirect, should be used. The following are examples of direct and indirect assessment methods:

Examples of Direct Assessment Methods:	**Examples of Indirect Assessment Methods:**
Internal assessment University Examinations Certification exams Assignments Mini-projects major project Internship evaluations Grading with scoring rubrics* Comprehensive exams	Course Exit Surveys after end of each course Employer surveys Program Exit Survey

State Desired Performance Criteria.

Performance criteria express in specific and measurable/observable terms that are acceptable to a specific course or program. Note that grades alone do not provide adequate feedback to students' performance because grades represent overall competency of students and do not identify strengths and weaknesses on specific Course Outcomes. However, if the grading system is tied to rubrics, it can be a useful tool to identify areas for improvement that should be addressed. The following is not an acceptable measurable Course Outcome:

> *Students will be able to communicate effectively, as demonstrated by obtaining at least a "C" grade in the course.*

With slight modification, the above Course Outcome can be stated in measurable terms.

✓ *Students will be able to communicate effectively, as exhibited by scoring at least 8 out of 10 for all the components within the grading criteria on the final writing assignment.*

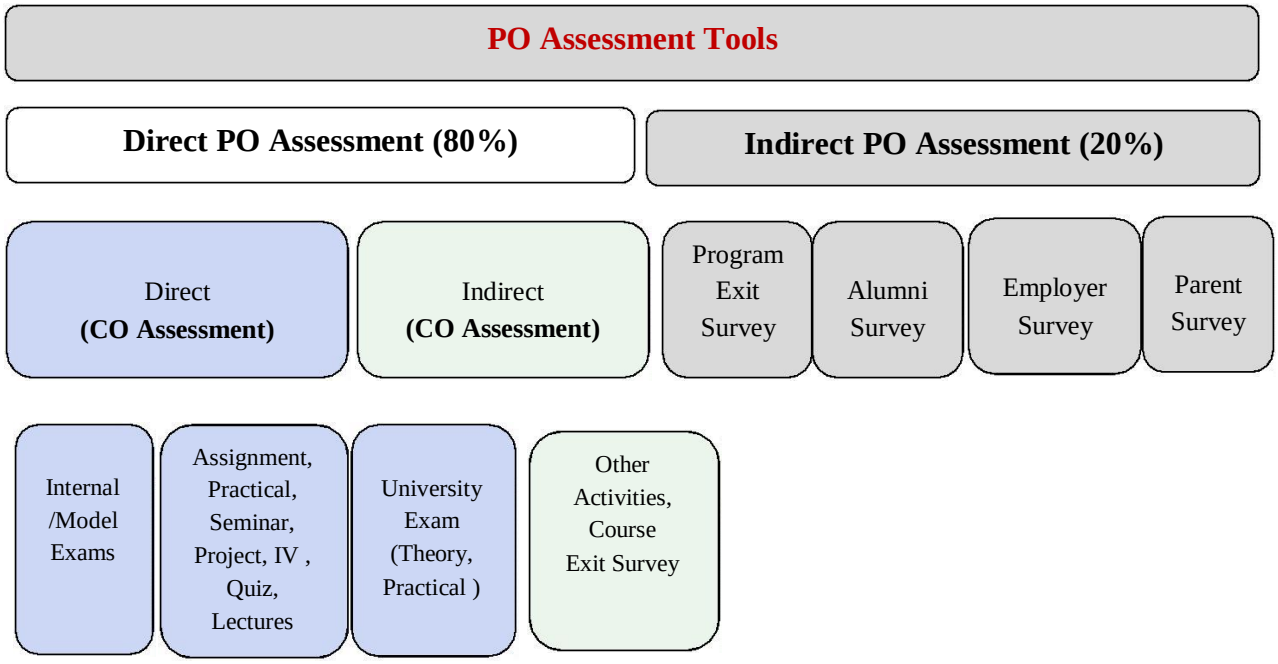
List of Assessment Tools

CO Assessment Tools

- ⇒ Internal Test
- ⇒ Model Test
- ⇒ University Exam
- ⇒ Practical/ Lab model exam
- ⇒ Industrial Visit
- ⇒ Workshops
- ⇒ Quiz
- ⇒ Assignment
- ⇒ Special /Invited Lectures
- ⇒ Projects
- ⇒ Seminar
- ⇒ Course Exit Survey
- ⇒ External Feedback

Direct Tools: (Measurable in terms of marks and w.r.t. CO)

Indirect Tools: (Non measurable in terms of marks and w.r.t. CO)



Co-curricular Activity:

Analyze the data's and collect the no of students participated in Several CO-curricular activities.

Based on the expected number of students and the actual number of students who have participated in the attainment level calculation for each program outcomes.

Collection of data for various co-curricular activities

Co-Curricular Components	Expected Number of Students participated in this Activity (%)
NPTEL/Online Certification courses	90%
Project at Industries (Internship)/Higher learning Institutions	30%
Summer Training	90%
Participation in International/National Event	10%
Student Contest	80%
Publication along with the Faculty	80%
Placement	90%
Higher Studies	10%
Industrial Visit	90%
Professional Society Activities	95%
…….	……
…….	……

PO Articulation of Co-curricular Components:

Co-Curricular Components	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
NPTEL/Online Certification courses	3	3	2		2		2	2	2	1		2	2	1
Project at Industries (Internship)/Higher learning Institutions	3	3	2		2		1	1				2	1	1
Summer Training	3				1		1	1				1		
Participation in International/National Event	3	3	2		1		1	1		1		2	1	1
Student Contest	3	3	2		2			2	1			2	1	1
Publication along with the Faculty	3	3	2		2		1	1				2	1	1

Placement	3	3	2		2							2	2	2
Higher Studies	3	3	2		2						2	2	2	1
Industrial Visit	3	3	1				1	1				1	1	1
Professional Society Activities	3	3	2		1		1	1			2	2	1	2
Etc.,														

Data Collection for PO Calculation through various co-curricular-components

Co-Curricular Components	No of students participated/ Certified/ Placed
NPTEL/Online Certification courses	59
Summer Training	55
Participation in International/National Event	15
Student Contest	35
Publication along with the Faculty	59
Placement	47
Higher Studies	5
Industrial Visit	59
Professional Society Activities	59
Etc.,	

Actual PO attainment through Co-Curricular Components

Co-Curricular Components	PO 1	PO2	PO3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
NPTEL/Online Certification courses	3	3	2		2		2	2	2	1		2	2	1
Summer Training	3				1		1	1				1		
Participation in International/National Event	2.5	2.5	1.67		0.833		0.833	0.833		0.833		1.67	0.833	0.833
Student Contest	2.24	2.24	1.49		1.49			1.49	0.745			1.49	0.745	0.745
Publication along with the Faculty	3	3	2		2		1	1				2	1	1
Placement	2.66	2.66	1.77		1.77							1.77	1.77	1.77
Higher Studies	2.5	2.5	2		2						2	2	2	1
Industrial Visit	3	3	1				1	1				1	1	1
Professional Society Activities	3	3	1.67		0.833		0.833	0.833			1.67	1.67	0.833	1.67
Etc.,														
Sum	24.9	21.9	13.6	0	11.93	0	6.67	8.16	2.75	1.83	3.67	14.6	10.18	9.02
Maximum score	30	27	17	0	15	0	8	10	3	2	4	18	12	11
Percentage	**83**	**81.1**	**80**	**0**	**79.5**	**0**	**83.4**	**81.6**	**91.7**	**91.5**	**91.8**	**81.1**	**84.8**	**82**

X = No of students Done a particular co-curricular component

Y = Actual Attained students strength for each CO-curricular component = Class strength *Expected Number of Students participated in this Activity (%)

Actual Attainment of students for each PO = (X/Y)

Sample Calculations:

X = 59 students Done NPTEL/Online Certification courses

Y = 59*90/100= 53-Actual Attained students strength

Actual Attainment of students for PO1 = (X/Y) = 59/53=1.11

PO1 mapping attainment = 1.11*3 = 3.33 ≈ 3

Summary of Attainment of PO/PSO in %

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
83	72	79	67	65	66	73	66	78	85	65	74	78	85
71	77	66	77	66	66	67	73	77	75	80	77	66	80
77	76	74	80	71	77	80	69	74	82	68	66	72	66

Percentage Level for the attainment of POs

Component	Percentage
Curricular component	60%
Co-curricular Component	20%
Graduate Exit survey	20%

Program Outcomes	Curricular	Sub Total (60%)	Co-Curricular	Sub Total (20%)	Survey	Sub Total (20%)	Total
PO1	73	43.8	70	14	84	16.8	**74.6**
PO2	72	43.2	65	13	85	17	**73.2**
PO3	75	45	65	13	86	17.2	**75.2**
PO4	68	40.8	74	14.8	84	16.8	**72.4**
PO5	52	31.2	75	15	85	17	**63.2**
PO6	45	27	64	12.8	74	14.8	**54.6**
PO7	48	28.8	80	16	65	13	**57.8**

Improvements in Attainments of CO and PO

High Attainment of CO and PO — Increase Target value

Moderate Attainment of CO and PO — Target is not changed. Conduct more activities to attain the fixed Target

Low Attainment of CO and PO — Consider reducing the Target and analyze methodologies to attain the Targets.

No Attainment of CO and PO — Reduce Target and review the entire process of OBE to achieve the low level Attainments

Improvements for Non-Technical Program Outcomes

Improvements can be done by

- Personalized learning
- Blended Learning Activities
- Competitions
- Extension activities
- Industrial Interaction
- Project based Learning
- Innovative Assignments
- Teaching Life skills

ANNEXURE

Shetkari Shikshan Prasarak Mandal's
Jaywant College of Engineering and Polytechnic, K.M. Gad
(Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra, Affiliated to BATU, Lonere)

COURSE DETAILS

Structure of Course

Class	F.Y B. Tech, Sem.-II
Course Code and Course Title	**24AF2CMEES208** **Basic Civil and Mechanical Engineering**
Prerequisite/s	Nil
Teaching Scheme: Lecture/Tutorial	02/00
Credits	03
Evaluation Scheme: CA/MSE/ESE	20/20/60

Course Objectives:	
01	To Identify various Civil Engineering materials and choose suitable material among various options.
02	To know and apply principles of surveying to solve engineering problem
03	To Identify various Civil Engineering structural components and select appropriate structural system among various options
04	To Explain and define various properties of basic thermodynamics,
05	To Explain IC Engines and their classification, applications, basic terminology, 2 and 4 stroke IC engine working principle, automobiles basic definitions and objectives.
06	To Explain Power plant like gas power plant, thermal power plant, nuclear power plant.
07	To Describe the design basics, Machine and Mechanisms, engineering materials, fasteners, lathe machine, drilling machine, milling machine, basics of machining processes such as turning, drilling, and milling, casting.

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:	
BCME208-01	Identify various Civil Engineering materials and choose suitable material among various options. (K2)
BCME208-02	Apply principles of Basic Civil and Basic Mechanical Engineering to solve engineering problem (K3)
BCME208-03	Identify various Civil Engineering structural components and select appropriate structural system among various options. (K2)
BCME208-04	Explain various properties of basic thermodynamics, IC Engines and their classification, applications, basic terminology, automobiles basic (K2)
BCME208-05	Describe the design basics, Machine and Mechanisms, engineering materials, fasteners. (K2)
BCME208-06	Describe lathe machine, drilling machine, milling machine, basics of machining processes such as turning, drilling, and milling, casting. (K2)

Mapping of Course Outcomes to Program Outcomes

Course Outcomes	Program Outcomes											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
BCME208-01	3											
BCME208-02	3	2										
BCME208-03	3											
BCME208-04	3											
BCME208-05	3											
BCME208-06	3											
Total	18	2										
Avg.	**3**	**2**										

Target Set For Course Outcome

Course BCME208	Course Outcomes					
	BCME208-01	**BCME208-02**	**BCME208-03**	**BCME208-04**	**BCME208-05**	**BCME208-06**
Target	3	3	3	3	3	3

Target Level Set Criteria

Target Level	Average of Grade (K)%
1	>60%
2	>70%
3	>80%

Course Skill Acquisition Matrix

Course	Program Outcome											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
24AF2CMEES208 Basic Civil and Mechanical Engineering	**3**	**2**										

Course Contents:		
Unit 1	**Part I Basic Civil Engineering** **Introduction to civil engineering:** Various Branches, role of civil engineer in various construction activities, basic engineering properties and uses of materials: earth, bricks, timber, stones, sand, aggregates, cement, mortar, concrete, steel, bitumen, glass, FRP, composite materials.	**04 Hrs.**
Unit 2	**Building Components & Building Planning:** Foundation and superstructure, functions of foundation, types of shallow and deep foundations, suitability in different situation, plinth, walls, lintels, beams, columns, slabs, roofs, staircases, floors, doors, windows, sills, Study of Building plans, ventilation, basics of plumbing and sanitation.	**04 Hrs.**
Unit 3	**Surveying:** Principles of survey, elements of distance and angular measurements, plotting of area, base line and offsets, introduction to Plane table surveying, introduction to levelling, concept of benchmarks, reduced level, contours	**04 Hrs.**
Unit 4	**Part II Basic Mechanical Engineering** Introduction to Laws of Thermodynamics with simple examples pertaining to respective branches, **IC Engines:** Classification, Applications, Basic terminology, 2 and 4 stroke IC engine working principle, **Power Plant:** Types of Power plant; gas power plant, thermal power plant, nuclear power plant, **Automobiles:** Basic definitions and objectives	**04 Hrs.**
Unit 5	Design Basics, Machine and Mechanisms, Factor of safety, **Engineering Materials:** types and applications, basics of fasteners machining and machinability, Introduction to Lathe machine, drilling machine, milling machine, basics of machining processes such as turning, drilling, and milling, Introduction to casting.	**04 Hrs.**

Text Books /Reference Books:

Sr. No	Title	Author	Publisher	Edition	Year of Edition
01	Elements of Civil Engineering	Anurag Kandya	Charotar Publishing, Anand	9	2010
02	Building Drawing	M. G. Shah, C. M. Kale, and S. Y. Patki,	Tata Mc-Graw Hill Publication	6	2006
03	Building Construction	Sushil Kumar	Standard Publishers Distributors	6	2005
04	Basic Civil Engineering	M. S. Palani Gamy	Tata Mc-Graw Hill Publication	4	2004
05	Surveying and Levelling	Kanetkar T. P. and Kulkarni S. V.,	Vidyarthi Gruh Prakashan, Pune	Vols. I, II and III	1984

06	Surveying	Punmia	Laxmi Publications	2	2003
07	Basic Civil Engineering	G. K. Hiraskar	Dhanpat Rai Publications	2	2003
08	Basic Civil Engineering	Gopi Satheesh	Pearson Education	2	2004
09	Engineering Thermodynamics	P. K. Nag	Tata McGraw Hill, New Delhi	3	2005
10	Theory of Mechanisms and Machines	Ghosh, A K Malik	Affiliated East West Press Pvt. Ltd. New Delhi.	3	2004
11	A manufacturing Engineering and Technology	Serope Kalpakaji and Steven R Schimd	Addision Wsley Laongman India	6	2009
12	Design of Machine Elements	V. B. Bhandari	Tata McGraw Hill Publications, New Delhi.	6	2005

NPTEL Resources (Web Link):

1) https://www.youtube.com/watch?v=H6guqGSzcNc
2) https://onlinecourses.nptel.ac.in/noc24_me104/preview
3) https://onlinecourses.nptel.ac.in/noc25_me09/preview

Content Delivery and assessment tools

Module	Lect No.	Lesson Plan Content Delivery	TM	TA	AT	Mapping with Outcomes CO	 PO
Unit 1 Introduction to civil Engineering	1	**Introduction to civil Engineering** Various Branches, role of Civil Engineer in various construction activities	(LT)	(CB)	Assignment ,CT-I & MSE	**BCME208-01**	**1**
	2	Basic engineering properties and uses of materials: earth, bricks, timber, stones,	(LT)	(CB)			
	3	Sand, aggregates, cement, mortar, concrete,	(LT)	(CB)			
	4	Steel, bitumen, glass, FRP, composite materials.	(LT)	(CB)			
Unit 2 Building Components & Building Planning	5	**Building Components & Building Planning** Foundation and superstructure, functions of foundation, types of shallow and deep foundations,	(LT)	(CB)	Assignment ,CT-I & MSE	**BCME208-02**	**1,2**
	6	suitability in different situation,	(LT)	(CB)			
	7	plinth, walls, lintels, beams, columns, slabs, roofs, staircases, floors, doors, windows, sills,	(LT)	(CB)			
	8	Study of Building plans, ventilation, basics of plumbing and sanitation	(LT)	(CB)			
Unit 3 Surveying	9	Principles of survey, elements of distance and angular measurements	(LT)	(CB)	Assignment & CT-II	**BCME208-03**	**1**
	10	Plotting of area, base line, and offsets,	(LT)	(CB)			
	11	Introduction to Plane table surveying, introduction to levelling,	(LT)	(CB)			
	12	concept of benchmarks, reduced level, contours	(LT)	(CB)			
Unit 4 Introduction to Mechanical Engineering,	13	**Introduction to Mechanical Engineering, Thermodynamics:** Introduction to Laws of Thermodynamics with simple examples pertaining to respective branches,	(LT)	(CB) (PP)	Assignment ,CT-I & MSE	**BCME208-02 BCME208-04**	1
	14	**IC Engines:** Classification, Applications, Basic terminology, 2 and 4 stroke IC engine working principle,	(LT)	(CB) (PP)			
	15	**Power Plant:** Types of Power plant; Gas power plant, Thermal power plant, nuclear power plant,	(LT)	(CB) (PP)			
	16	**Automobiles:** Basic definitions and objectives	(LT)	(CB) (PP)			
Materials, Machines, Machini	17	Design Basics, Machine and Mechanisms, Factor of safety,	(LT)	(CB) (PP)	Assignment & CT-II	**BCME208-05 BCME208-06**	1
	18	**Engineering Materials:** types and applications, basics of Fasteners	(LT)	(CB) (PP)			

	19	**Machining and Machinability**, Introduction to Lathe machine, machining processes such as turning,	(LT)	(CB) (PP)			
	20	Drilling machine, milling machine, basics of drilling and milling, Introduction to casting	(LT)	(CB) (PP)			

Note: TM-Teaching Method- Lecture (LT),
TA-Teaching Aids–Chalk Board (CB), Power Point Presentation (PP),
AT- Assessment Tool – ISE I/MSE /ISE II/ESE, Rubrics (RB),

Question Bank

Unit	Q. No.	Questions	Marks	CO
I	1	Mention the different branches of Civil Engineering and describe each in short	(06)	BCME208-01
	2	Describe role of Civil Engineer in various construction activities	(06)	
	3	List out all different materials used in construction	(06)	
	4	Describe following construction materials with respect to their Quality, Physical properties, and their characteristics Bricks, 2) Stones, 3) Sand, 4) Cement, 5) Aggregate, 6) Concrete, 7) Composite Material		
	5	Describe importance of Civil Engineering for overall development of Nation		
II	1	Describe different components of building with sketch.	(06)	BCME208-02
	2	Explain different types of foundations with their function and suitability in different situation	(06)	
	3	Write short note on 1) Ventilation, 2) Plumbing	(06)	
	4	Differentiate between Building planning and Building Plans	(06)	
	5	Explain Principals of Building Planning	(06)	
III	1	Write general Principals of Surveying	(06)	BCME208-03
	2	Write short note on classification of surveying	(06)	
	3	List out following a) Distance measuring equipment's b) Angle measuring equipment's, c) Area measuring equipment's, 4) Level measuring equipment's	(06)	
	4	Describe Plane Table Survey in detail	(06)	
	5	Write in detail a) Benchmark, b) Reduced Level, c) Contour	(06)	
IV	1	Write definition of Mechanical Engineering.	(06)	BCME208-04
	2	State the First and second law of Thermodynamics.	(06)	
	3	Explain with neat sketch working principle of two stroke and four stroke IC engine.	(06)	
	4	Explain the classification of the IC engine.	(06)	
	5	List out application of I. C. Engine.	(06)	
	6	Draw the neat, labelled diagram of a nuclear power plant and briefly explain its working.	(06)	
	7	Draw the layout of the automobile vehicle and explain various components.	(06)	
V	1	Explain general procedure of mechanical engineering design.	(06)	BCME208-05

	2	Define the factor safety decide the factor of safety and enlist all the factors for selection of factor of safety.	(06)	BCME208-06
	3	Classify the different types of the materials used in engineering applications and write. two applications and two characteristics of each.	(06)	
	4	Explain engineering design process with the help of block diagram.	(06)	
	5	Draw the neat, labelled diagram of a lathe machine and enlist all its necessary specifications.	(06)	
	6	Explain the basics of machining processes such as turning, drilling, and milling,	(06)	
	7	Explain with neat sketch casting process.	(06)	

Plan to Cover Contents beyond Syllabus:

Planed Date/ Week	Topic Beyond Syllabus	Resource Person with Affiliation	Outcome Met
Nil	Nil	Nil	**Nil**

Plan Exam

Planed Date/ Week	Type of Exam	Based on Unit No.
7th April to 9th April 2025	CT- I	1
2nd May to 7th May 2025	MSE	1,2,3
2nd June to 5th June 2025	CT- II	4,5,
24th June to 3rd July 2025	ESE	All

Prepared by
Prof.R.V. Pethkar
Subject Incharge,
Dept. of Mech. Engg.

Approved by
Prof. S.N.More
Head,
Department Of General Sciences And Humanities

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

(Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra, Affiliated to BATU, Lonere)

Class Test Question Paper format:

ShetkariShikshanPrasarak Mandal's

Jaywant College of Engineering and Polytechnic

(Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra, Affiliated to DBATU, Lonere and MSBTE, Mumbai)

Class Test -I

Class Test No-I Examination –March/April-2025.

Course:		Semester:	
Subject:		Subject Code:	
MaximumMarks:		Duration:	
Date:		Time:	

Instructions to students:

1. All Questions are compulsory.2. Figures to right indicate full marks.3. Double attempted answers should not be assessed.

Que No-1	All Questions are compulsory(Objectives)	BTL	CO	06 Marks
A)				01
B)				01
C)				01
D)				01
E)				01
F)				01
Que No-2	Solve any Two the following			08 Marks
A)				04
B)				04
C)				04
Que No-2	Solve any Two the following			06 Marks
A)				03
B)				03
C)				03

Mid-Sem Exam Question Paper format:

ShetkariShikshanPrasarak Mandal's

Jaywant College of Engineering and Polytechnic

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Mid-Sem Exam

Class Test No-I Examination –March/April-2025.

Course:		Semester:	
Subject:		Subject Code:	
MaximumMarks:		Duration:	
Date:		Time:	

Instructions to students:

1. All Questions are compulsory.2. Figures to right indicate full marks.3. Double attempted answers should not be assessed.

Que No-1	All Questions are compulsory(Objectives)	BTL	CO	06 Marks
A)				01
B)				01
C)				01
D)				01
E)				01
F)				01
Que No-2	Solve any Two the following			08 Marks
A)				04
B)				04
C)				04
Que No-2	Solve any Two the following			06 Marks
A)				03
B)				03
C)				03

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

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Jaywant College of Engineering and Polytechnic

Department of General Science

Assessment Report of Test Marks for Attainment of CO's

CLASS TEST I **Year :- 2023-24**

Class:- FY BTech **Subject:- Energy and Environment Engineering (BTES205)** **Marks:- 20**

Question No.	**1A,1C,2C,3B**	**1B**	**2A,2B,3A,3C**	**Remark if any**	
PO Attained	**CO1**	**CO3**	**CO5**		
Marks	**19**	**9**	**14**		
Roll No.	**Mark Obtained**			**Total mark**	**Remark if any**
23101				0	AB
23102	2	3	6	11	
23103		1	2	3	
23104	2	1	5	8	
23105			0	0	
23106			1	1	
23107	9		5	14	
23108	1		1	2	
23109	5		0	5	
23110	3		0	3	
23111				0	AB
23112				0	
23113				0	AB
23114	1		2	3	
23115				0	
23116	2		2	4	
23117	1			1	
23118				0	AB
23119			2	2	
23120		2		2	
23121	2		4	6	
23122			3	3	
23123				0	
23124	4	2	6	12	
23125		2	4	6	
23126	6		8	14	
23127	9		4	13	
23128	3		5	8	
23129				0	AB
23130			1	1	
TOTAL	50	11	61	122	

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

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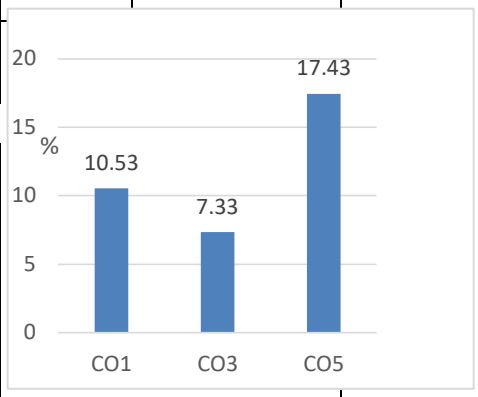
CO	CO1	CO3	CO5
AVG.	2.00	0.44	2.44
%	**10.53**	**7.33**	**17.43**



Total No. of Student	30
Total No. of Student Appered	25
No. of Student Passed	8
Passing Percentage	32.00%
First class with distinction Percentage	37.50%
First class Percentage	12.50%
Second Class Percentage	50.00%

Course Co-ordinator | HOD

Jaywant College of Engineering and Polytechnic

Department of General Science

Assessment Report of Test Marks for Attainment of CO's

Mid Semister Exam **Year :- 2023-24**

Class:- FY BTech **Subject:- Energy and Environment Engineering (BTES205)** **Marks:- 20**

Question No.	**1A,1B,1C,3A**	**3B,3C**	**2A,2B,2C**	**Remark if any**
CO Attained	**CO1**	**CO4**	**CO5**	
Marks	**22**	**8**	**9**	

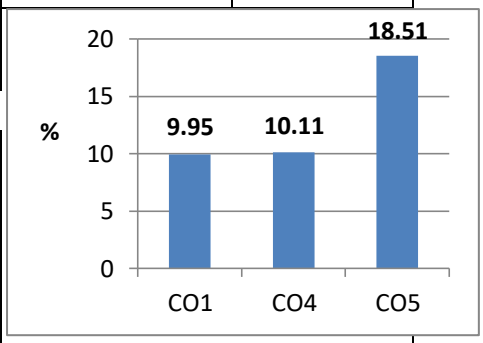
Roll No.	**Mark Obtained**			**Total mark**	**Remark if any**
23101			1	1	
23102	1	2	2	5	
23103		4	4	8	
23104				0	AB
23105	2			2	
23106	4		2	6	
23107	5	1	4	10	
23108				0	AB
23109	3	2	3	8	
23110				0	AB
23111				0	AB
23112				0	
23113				0	AB
23114	2		2	4	
23115				0	AB
23116	2			2	

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

(Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra, Affiliated to BATU, Lonere)

23117				0	
23118				0	AB
23119				0	
23120				0	
23121	6	1	4	11	
23122				0	
23123				0	
23124	6	2	5	13	
23125				0	AB
23126	4	5	4	13	
23127	8		2	10	
23128	2		2	4	
23129				0	AB
23130	1			1	
TOTAL	46	17	35	98	
CO	**CO1**	**CO4**	**CO5**		
AVG.	2.19	0.81	1.67		
%	**9.96**	**10.12**	**18.52**		



Total No. of Student	30
Total No. of Student Appered	21
No. of Student Passed	7
Passing Percentage	33.33%
First class with distinction Percentage	28.58%
First class Percentage	0.00%
Second Class Percentage	71.42%

Course Co-ordinator

HOD

Jaywant College of Engineering and Polytechnic

Depertment of General Science

CO Assessment Report of ClassTest & MSE Marks for Attainment of CO's

CLASS TEST I & MSE **Year :- 2023-24**

Class:- FY BTech **Subject:- Energy and Environment Engineering (BTES205)**

Marks:- 20

CO	CO1	CO3	CO4	CO5
CT-I	10.53	7.33		17.42857
MSE	9.96		10.12	18.52
Avrage	10.24	7.33	5.06	17.97

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

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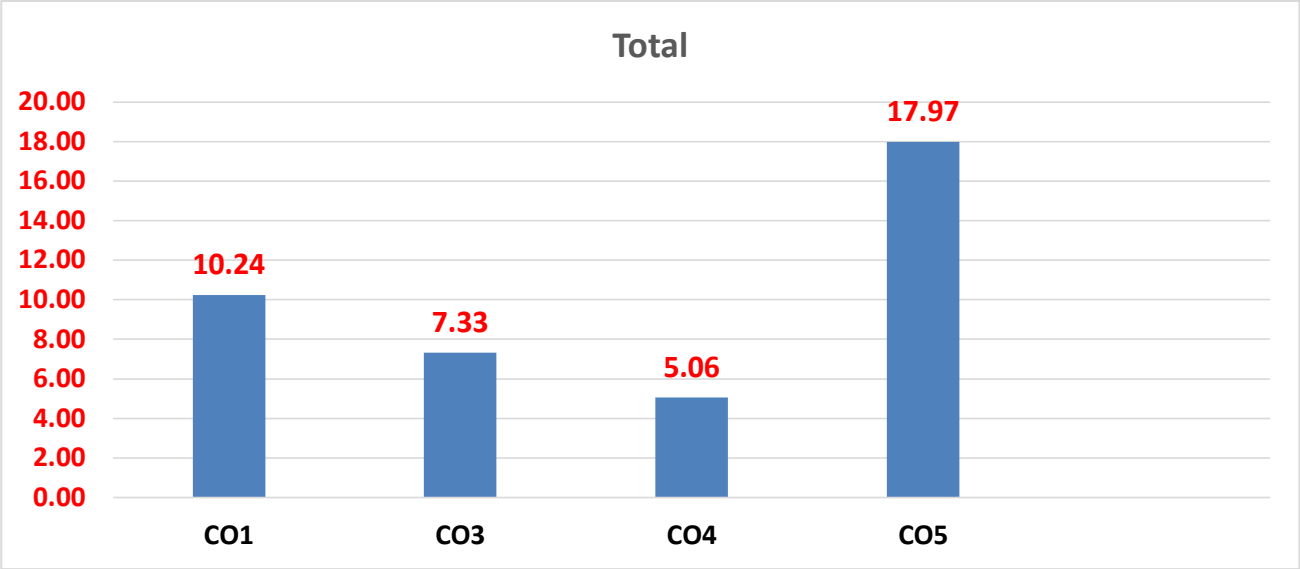
CO	CO1	CO3	CO4	CO5
Total	10.24	7.33	5.06	17.97

CO Attainment Through CT-I and MSE



CO Attainment

Course Co-ordinator	HOD

Jaywant College of Engineering and Polytechnic	
Depertment of General Science	
CO Assessment Report of ClassTest -I,Class Test-II & MSE Marks for Attainment of CO's	
CLASS TEST I ,CLASS TEST -II & MSE 2023-24	Year :-
Class:- FY BTech Subject:- Energy and Environment Engineering (BTES205) Marks:- 20 each exam	

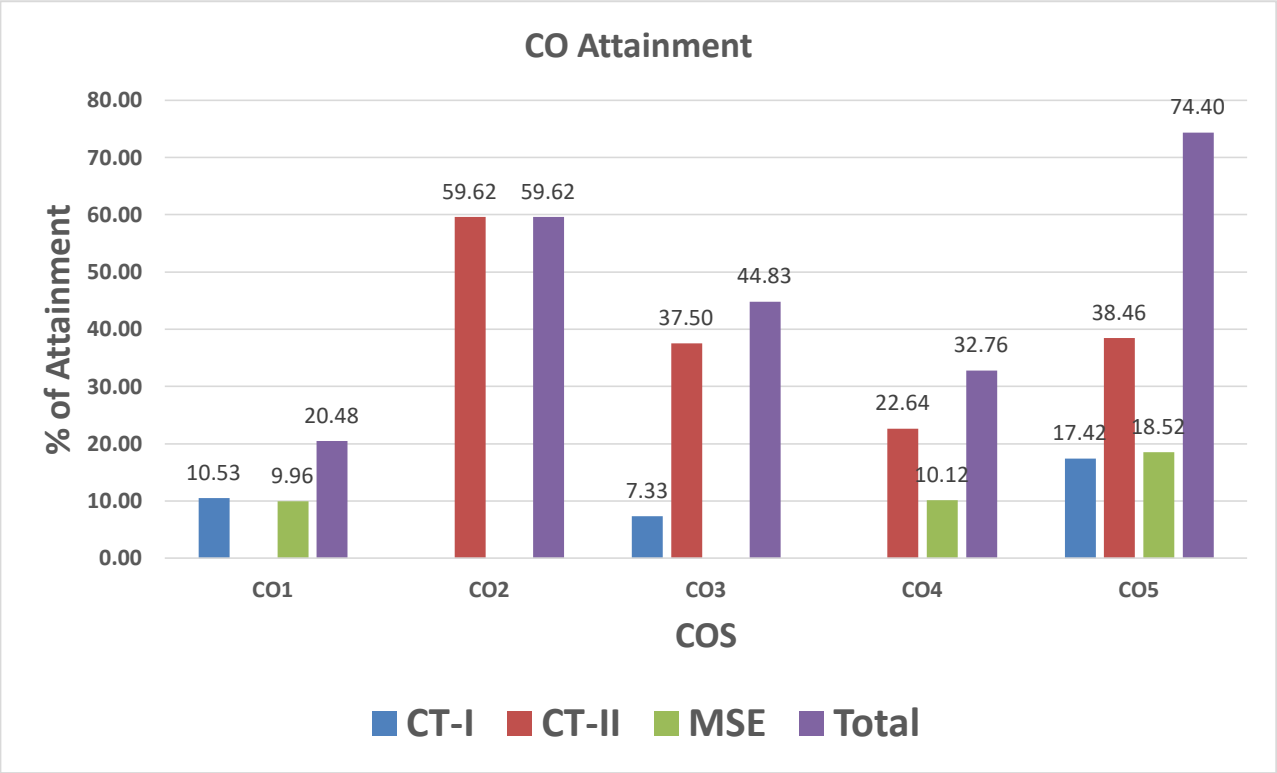
CO	CO1	CO2	CO3	CO4	CO5
CT-I	10.53		7.33		17.42
CT-II		59.62	37.50	22.64	38.46
MSE	9.96			10.12	18.52
Total	20.48	59.62	44.83	32.76	74.40

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic, K.M. Gad

(Approved by AICTE, New Delhi, DTE, Govt. of Maharashtra, Affiliated to BATU, Lonere)

CO Attainment Through CT-I ,CT-II and MSE



CO Attainment

Course Co-ordinator **HOD**

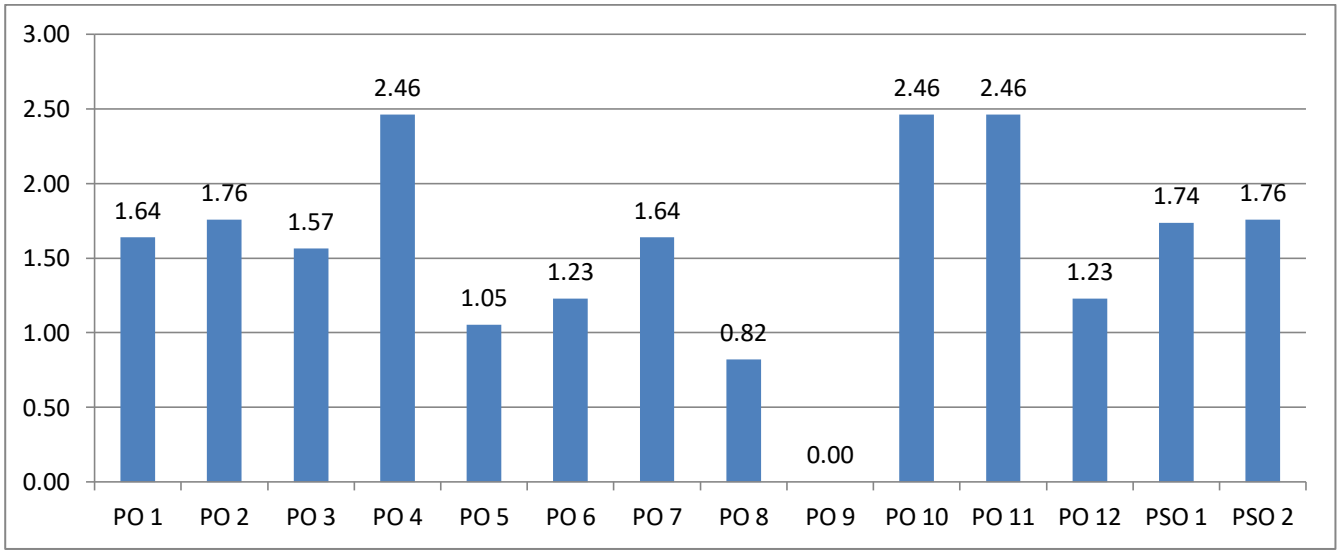
Program Outcomes Attainment Sheet

Name of the Course CS306 Object Oriented Programming

Semester III Academic Year 2023-24

		PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PS O 1	PSO 2
CO 1	Outline the characteristics of an object-oriented programmin	2	3					1			1	1		3	1

	g language in a program														
CO 2	Make use of the basic object-oriented design principles in computer problem solving	1	3	3	2	1	1	1			1	1	2	3	1
CO 3	Implementation of concept of Polymorphism	1	2	2		2	1	2	1					3	1
CO 4	Implementation of concept of Inheritance	2	2	2		2	1	2	1					3	1
CO 5	Develop Program with advanced features of the C++ programming language	1	2	2		2	1		1				2	2	1
CO 6	Function with the basic principles of software engineering in managing complex software project.	2	2	2	3							1		3	2
		9	14	11	5	7	4	6	3	0	2	3	4	17	7
PO Attainment		1.64	1.76	1.57	2.46	1.05	1.23	1.64	0.82	#DIV/0!	2.46	2.46	1.23	1.74	1.76



Program Outcomes Attainment

Appendix: Academic Diary Format

TEACHING WORK ASSIGNED

Sr. No.	Class	Subject	Teaching Work Hours per Week			Total Hours Per Week
			Lecture	Practical	Tutorial	
Total Work Hours Per Week						

WORK ASSIGNED BY HOD/PRINCIPAL

Sr. No.	Department Level	Institute Level

Faculty Member **HOD**

COURSE DETAILS

Class: **Course Code:** **Course Name:**

Course Pre-requisites

Course Objectives	

Course Outcomes (COs) Upon successful completion of this course, the student will be able to:		**Bloom's Level**	**PO & PSO Mapped**

Note:
Bloom Taxonomy Levels:
L1=Remembering/Knowledge, L2=Understanding/Comprehending, L3=Application/Apply
L4=Analysis/Analyze, L5=Synthesis/Evaluate, L6=Creation/Create

Course Co-ordinator **HOD**

COURSE MAPPING

Class: **Course Code:** **Course Name:**

Mapping of Course Outcomes to Program Outcomes: (Low:1, Medium:2, High:3)

Course Outcomes	Program Outcomes												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	I	II
Average														

Course Skill Acquisition Matrix

CourseOutcomes	Program Outcomes												PSO	PSO
	1	2	3	4	5	6	7	8	9	10	11	12	I	II

Course Co-ordinator **HOD**

LECTURES CONDUCTED

Class:_____ Div.:_____ Semester:_____

Subject:_____ Lectures Per Week:_____

Lecture No.	Topic/Content Covered	Planned Date	Conducted Date	Teaching Aid Used

FACULTY MEMBER **H.O.D.**

THEORY

Class:______________________________ Div.:______________________________

Roll No.	Name of Student	Lect No.																			
		Date																			

ATTENDANCE SHEET

Subject: ______________________________ Sign of Faculty

																													Total	CT-I	MSE

LABORATORY DETAILS

Class: **Lab No.:** **Laboratory Name:**

Laboratory Objectives	

Laboratory Outcomes(LOs) Upon successful completion of this course, the student will be able to:		**Bloom's Level**	**PO & PSO Mapped**

Note:
Bloom Taxonomy Levels:
L1=Remembering/Knowledge,L2=Understanding/Comprehending,L3=Application/Apply,L4=Analysis/Analyze,L5=Synthesis/Evaluate,L6=Creation/Create

Course Co-ordinator **HOD**

PRACTICAL/TUTORIAL

Class:_____ Div.: _____

Expt. No.	Title of the Experiment/ Tutorial/ Assignment	Batch		Batch	
		Planned Date	Conducted Date	Planned Date	Conducted Date

Course Co-ordinator **HOD**

ASSIGNMENT CONDUCTED

Subject Name:_____ Subject Code:_____

Batch		Batch		Lab Outcomes	Course Outcomes	Bloom's Level	POs
Planned Date	Conducted Date	Planned Date	Conducted Date				

Note:

BloomTaxonomyLevels:L1=Remembering/Knowledge,L2=Understanding/Comprehending,L3=Application/Apply,L4=Analysis/Analyze,L5=Synthesis/Evaluate,L6=Creation/Create

PRACTICAL

Class:...Div.:......................................

			Attendance									
Roll No.	Name of Student	Pract. No.										
		Date										

ATTENDANCE SHEET

Subject:..Batch:...

																		Total

Signature of Faculty:

Student Academic Performance Record

Class: _____ Div.: _____

Subject: _____ Semester: _____

Roll No.	AT- 1	AT- 2	AT- 3	AT- 4	AT- 5	Total Marks (25/50)	Student Sign.

AT: Assessment Tool

Faculty Member **HOD**

REMEDIAL/SLOW LEARNER

Class:...Div.:.......................................

			Attendance									
Roll No.	Name of Student	Lect No.										
		Date										

CLASSES RECORD

Subject:..Batch:..

																		Total

DETAILS OF EXTRA LECTURES CONDUCTED

Class: _____ Div.: _____

Subject: _____ Semester: _____

Sr. No.	Date of Lecture	Duration of Lecture	Reason for Conduction Extra Lecture	No. of Students Attended

Faculty Member **HOD**

PROGRESS OF SEMINAR/PROJECT WORK/ MINI-PROJECT

Name of Seminar/Project:_____

Name of Guide:_____

Name of Students in Group: _____

_____

_____

_____

_____

Sr. No.	Date of Meeting	Status of Work	Sign of Student

Project Guide **Project Co-ordinator** **H.O.D.**

CONTENT BEYOND SYLLABUS

Subject:_____Class_____Div.:_____

Sr. No.	Date of Lecture	Contents of Topic	Course Outcome	Program Outcome/ PSO

Faculty Member **HOD**

MENTOR MENTEE ALLOCATION

Name of The Mentor: Class: Div.:

Roll No.	Name of Ward	Mobile No.	Parent Name & Address	Mobile No.	E-mail of Ward	Sign

Faculty Member **HOD**

MENTOR MEETING REPORT

Day

Day & Date of Meeting:: _

Points Discussed:

Action Taken:

Feedback:

Any Other:

Note: Submit the reports fortnightly

Signature of Mentor

RECORD OF SEMINAR/WORKSHOP/CONFERENCE/QIPCOURSES/ FDP/STTP

Sr. No.	Nature of Programme	Subject/Theme	Place	Date & Duration of Programme

RECORD OF RESEARCH PAPER PUBLISHED/PRESENTED

Sr. No.	Nature of Periodical Seminar/ Conference	Year/Month	Title of Paper

Signature of Faculty Member

RECORD OF INDUSTRY-INSTITUTE-INTERACTION

Sr. No.	Name of Industry/ Organization	Date of Interaction	No. of Participants	Outcomes

RESULT ANALYSIS

Year: Semester:

Class	Subject	Target Result	No. of Students Appeared	No.of Students Passed	Passing%	Remarks
				D- I- II- F-		
				D- I- II- F-		
				D- I- II- F-		
				D- I- II- F-		

D-Distinction **I-First Class** **II Second Class** **F-Fail**

Faculty Member **HOD**

RECORD OF OTHER ACTIVITIES

1. Co-Curricular & Extension Activities Carried Out:

Sr. No.	Name of Activity	Details	Remarks

2. R&D Work

(Write details of paper published, present project guided, sponsored projects & Consultancy Project)

Sr. No.	**Name of Activity**	**Details**	**Remarks**

3. Professional Development (Write details about STTP's Conferences, Seminars &Workshop, Expert Lectures engaged etc.)

Sr. No.	**Name of Activity**	**Date**	**Place**	**Details**

4. Members of Professional/ Scientific Bodies

Sr. No.	**Name of Activity**	**Date**	**Place**	**Details**

5. Contribution in Development of Laboratories/ Workshops/ Infrastructure/ Course Curriculum

Sr. No.	**Name of Activity**	**Date**	**Place**	**Details**

MONTHLY SELF ASSESSMENT SHEET

Teaching Learning: Month:

1. Theory

Sr. No.	Subject	Class	Div.	No.of Lectures Planned	No.of Lectures Conducted	% of Syllabus Completed

2. Practicals:

Sr. No.	Subject	Class	Div.	No. of Practicals Planned	No.of Practicals Conducted	% of Syllabus Completed

3. Assignments/Tutorials:

Sr. No.	Subject	Class	Div.	No. of Assignments Planned	No.of Assignments Conducted	% of Syllabus Completed

4. Course Notes & Lab Manuals: Prepared/In Process /Not Prepared(Write %Completion)

1) Counseling & Mentor Activity:

Sr. No.	Date of Mentor Meeting	No. of Student Attended	Report Submitted (Yes/No)

Remark:

HOD **Academic Coordinator** **Principal**

Shetkari Shikshan Prasarak Mandal's

Jaywant College of Engineering and Polytechnic

Approved by AICTE, New Delhi, Recognized by DTE, Govt. of Maharashtra, Affiliated to
Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra.

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