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OBE PROCESS AND FRAMEWORK

There are two levels of outcomes are considered in OBE Processes such as Course Outcomes (CO), Programme Specific Outcomes &, Program Outcomes (PO).

Course Outcomes (COs) are statements that outline the knowledge and skills students should have after finishing a course. These outcomes help to achieve *Program Outcomes (PO) through the design of the curriculum, how the course is* taught, and the assessment tasks used to measure student attainment of each outcome.

Programme Specific Outcomes (PSOs) are the skills and abilities that students in a particular program are expected to possess by the time they complete the program.

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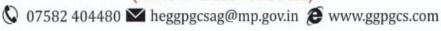
Programme Outcomes (POs) are overarching statements outlining the expected knowledge, skills, and behaviors that students should possess after finishing a particular program. They define what students are expected to be able to accomplish and understand.

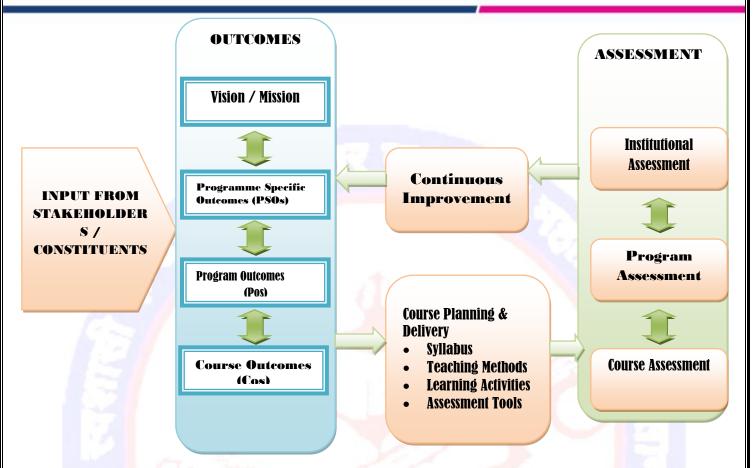
OBE focuses on three main areas: aligning outcomes with the syllabus (OBC), helping students achieve these outcomes (OBLT), and measuring the success of students (OBA).





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Outcome Based Curriculum:

Outcome-based education revolves around developing a curriculum that is focused on the competencies students should demonstrate by the end of their educational program. The skills or goals shape various aspects of the curriculum like content, teaching methods, course options, learning environment, and assessment techniques. All decisions related to curriculum and teaching are aimed at successfully reaching the desired end results.

Steps for creating and carrying out a curriculum based on outcomes:

Determining the results: The educational results are clearly defined and accurately described in terms of content, context, and skills.









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Showing results: It is important to clearly define the anticipated results by establishing benchmarks for each stage of the program. These benchmarks represent specific skills that students are required to exhibit. They should precisely address the objectives of the curriculum and establish methods to evaluate if students have achieved these objectives at that particular stage of their academic journey.

Choosing content and teaching methods in Outcome-Based Education can be done through whole class models that focus on bringing all students in a classroom to high levels of learning before moving on, or through flexible models that utilize various strategies such as flexible grouping, continuous progress, technology, and instructional management.

Evaluations in outcome-based education (OBE) are primarily based on clearly defined learning objectives rather than factors like the content taught, the time taken by students to reach these objectives, or the methods they use to achieve them.

The outcome-based curriculum is structured around different levels: the Institution Level, which includes the Institution's Vision and Mission and Curriculum Framework; and the Programme Level, which involves defining POs, PSOs, COs, and determining how content is delivered (through theory, practical work, projects, assignments, tutorials, etc.).

OUTCOME BASED LEARNING AND TEACHING

Outcome-based Teaching and Learning (OBTL) is an educational approach that prioritizes students by clearly defining the learning outcomes they are expected











to achieve. Teaching and learning methods are then tailored to help students reach these outcomes. The effectiveness of OBTL is measured through assessment results and student feedback to constantly enhance the quality of the program through regular evaluations.

The Outcome-based Teaching and learning approach concentrates on aligning desired graduate attributes, program-intended learning outcomes, and moduleintended learning outcomes. It also involves creating teaching and learning activities to improve student learning experiences, designing assessment processes to track students' progress and achievement of desired outcomes and attributes, and gathering stakeholders' feedback for ongoing enhancement.

Teaching students using an Outcome Based Curriculum involves providing them with the syllabus, course plan, lecture notes, and accommodating different learning styles.

OUTCOME BASED ASSESSMENT

Assessment involves processes conducted by the institution to gather and analyze data in order to assess the achievement of course and program outcomes. Attainment refers to reaching a desired standard or goal, typically in academic performance as measured by tests and exams.

Two types of CO assessment methods are employed in Outcome Based Assessment:

- ➤ Direct Assessment
- ➤ Indirect Assessment





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Mark-based assessments, such as continuous internal assessments, semester exams, and additional activities like seminars, assignments, and group discussions, showcase students' knowledge and skills. These methods offer a glimpse into students' capabilities and serve as compelling proof of their learning progress.

Survey based assessments are conducted using the indirect method, which involves gathering feedback from stakeholders regarding students' learning. The institute collects opinions from various stakeholders about the knowledge and skills of graduates.

GRADUATE ATTRIBUTES (GAs)

Upon completion of the program, graduates will possess the following attributes:

- Proficiency in domain knowledge, enabling application in arts, science, and management fields.
- Ability to identify and analyze complex problems using acquired knowledge.
- Capability to design solutions for intricate problems, considering public health, safety, and cultural, societal, and environmental factors.
- Competence in conducting research and experiments to investigate complex issues.
- Application of contextual knowledge for societal welfare and adherence to professional ethics.
- Understanding of environmental factors and commitment to sustainable development.
- Knowledge of project management principles and ability to lead effectively and work in a team.
- Effective communication skills for interaction and presentations.
- Cultivation of innovative thinking for identifying business opportunities and developing entrepreneurial skills.
- Recognition of the importance of lifelong learning with moral values.





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Institute Vision and Misson

Faculty

Defining of PSOs, Pos, COs

Graduate Attributes

Collect Views

Professional / Expert Members

CDC Members

Review and Analysis

Accept

Validation – National **Institutes Professors** of Eminence

BoS

Finalize of PSOs, Pos, COs





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LAVELS OF QUESTION PAPER

Question Paper Pattern for UG Courses:

Section	Knowledge Lavel
Section A	K1 level only
Section B	K1 & K2 level
Section C	K2 & K3 lavel

Mark Allotted 70	Pattern		
05 * 01 = 05 marks	Section A: 05 MCQ Questions each Question		
03 01 = 03 marks	carry one m <mark>ark</mark>		
05 * 05 - 25 manks	Section B: 05 Short Questions each		
05 * 05 = 25 marks	Question carry 05 mark		
04 * 10 = 40 marks	Section C: 04 Long question each question		
	carries 10 marks		

Question paperpattern for PG Courses End Semester Pattersn

Section	Knowledge Level
Section A	
Section B	

Mark Allotted 40	Pattern
05 * 02 = 10 marks	Section A : 05 Short Questions each
03 02 = 10 marks	Question carry 02 mark
05 * 06 = 30 marks	Sect <mark>i</mark> on B : 05 S <mark>h</mark> ort Questions each
05 00 = 30 marks	Question <mark>carr</mark> y 06 mark

Assessment of programme outcomes

Assessment of Pos is done in two different methods as given in table.

Assessment Type	Weightage (%)	Tool
Direct	80%	Assegnment, Seminar, Unit Test, CCE, ESE, Written Exam
Indirect	20%	Course End Survey, Stakeholder Feedbaack, Program Exit Survey, Alumni Survey





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COURSE END SURVEY (INDIRECT ANALYSIS):

Degree & Branch	Regulation	
Course Name	Course Code	
Course Instructor	Semester &Class	
Designation	Academic Year	

S. No.	Register No	Name	COI	CO2	CO3	CO4	COS
		SUM					
	PERCEN	AVERAGE FAGE OF COURSE OUTCOME					









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COURSE END SURVEY

SAMPLE:

Degree & Branch	Regulation	
Course Name	Course Code	
Course Instructor	Semester &Class	
Designation	Academic Year	

Course Outcome:

CO1Average:

CO1: Understand basics of PHP

CO2: Learn functions and objects in PHP.

CO3: Understand working with MySQL database using PHP.

CO4: Learn fundamental concepts of Python language

CO2Average:

CO5: Remember the core functions and techniques used in Python

Rate the understanding level of the following (Tick the appropriate box)

S. No	co	Questions	Excellent(4)	Good(3)	Moderate(2)	Fair(1)
1	COLI					
2	CO1.2					
3	CO2.1					
4	CO2.2					
5	CO3.1					
6	CO3.2					
7	CO4.1					
8	CO4.2					
9	CO5.1					
10	CO5.2					
ny othe	r feedback/S	uggestions				

CO1.1	CO1.2	CO2.1	CO2.2	CO3.1	CO3.2	CO4.1	CO4.2	CO5.1	CO5.2

CO3Average:

CO4 Average:

CO5Average:











Continuous Improvement

Action Taken Report (ATR)

Actions taken based on the results of evaluation of each of the POs

		Department	
Batch		Academic Year	
POs	Target Level	ainmentLevel	Observations
PO1	3	2.9	PO Attained
PO1: Actions/Suggestion	s:		
PO2	3	2.8	PO Attained
Actions/Suggestion PO3	s: 3	2.5	PO Attained
PO3:	s:		
PO3: Actions/Suggestion PO4	s: 3	2.7	PO Attained
PO3: Actions/Suggestion	3	2.7	PO Attained







CO - PO ASSESSMENT TOOLS

The various direct and indirect assessment tools used to evaluate COs & POs and thefrequency with which the assessment processes are carried out are detailed in Table.

Direct Assessment Tools Used for the Evaluation of CO and PO Assessment:

	со	and PO AS	SESSMENT T	OOLS		
		Course Type	Assessment Tools		Minimum Frequency	
			Regular Class Evaluation	Class Test,Group Discussion, MCQ	Minimum of	
		Theory	Internal	Best of Two Mark of CCE-I, CCE - II, & CCE-III	CCE Three per course	
			Evaluation	Seminar/ Assignments	One per course	
Direct (80% CO Weightage) Assessment			End Semester Exam		One per course	
			During Practical Days	Every practical Class		
		Practical	Internal Evaluation	Model PracticalExam	One per course	
			End Semester Exam		One per course	
		Project	Internal Evaluation - Reviews		Twice per program	
			End Semester Viva- Voce		One per program	
		Internship Program/ Industrial Training	End Semester Viva		One per program	
		Lab on Project	Group Project		One per program	











PO ATTAINMENT THROUGH PROGRAMME EXIT SURVEY

Sample:

PROGRAMME EXIT SURVEY FORM (To assess POs)

Student Name		Roll/Reg. No		
Programme	M.SC Physics	Batch	2020-2022	

SI. No.	To what extent do you feel have learnt and will be able to do the following (which are the POs and PSO of the Program)	Very Good (4)	Good(3)	Average(2)	Poor(1)
1	Question related to PO 1				
2	Question related to PO 2				
3	Question related to PO 3				
4	Question related to PO 4				
5	Question related to PO 5				
Any other	r feedback/Suggestions				





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Suggested actions from the PO CO committee

Achieving the Programme Outcome relies on both the direct and indirect assessment methods. Typically, the direct method holds more importance, with around 80% weightage, while the indirect methods carry about 20%. The indirect approach includes students completing an 'Exit Survey,' where questions may directly link to the Programme Outcomes. Through the direct method, the achievement of course outcomes, already aligned with Programme Outcomes, are compiled and averaged to determine Programme Outcome attainment. An alternative approach could involve designating certain courses as culminating and others as enabling to simplify the process.

Merely achieving the course outcomes in culminating courses is not sufficient for evaluating the Programme Outcome. A thorough mapping of questions to course outcomes is essential for accurate calculation. Relying solely on this mapping may not be effective in determining Programme Outcome attainment through the direct method. As Outcome-based Education is still in its early stages, it is advisable to utilize both direct and indirect methods (such as Exit Surveys) for a comprehensive evaluation. It is suggested that during the upcoming academic year 2022-2023, detailed mapping of questions to course outcomes, assessment of course outcome achievement, and classification of culminating courses should be carried out at a micro-level.





