



(ESTD.1956)

(NAAC Accredited 'B+')

C.M.DUBEY POST GRADUATE COLLEGE

BILASPUR (C.G.)

(Accredited 'B+' by NAAC)

An Affiliated College of Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur(C.G.)

Mobile: 8269333155

Mobile: 9755982500


Website: www.cmdpgcollege.ac.in

E-Mail :principal@cmdpgcollege.ac.in

2.6.1 – Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers

ADDITIONAL INFORMATION

OBE MANUAL


Incharge Principal
C.M. Dubey P.G. College
Bilaspur (C.G.)

C.M. Dubey P.G College

Outcome Based Education (OBE)

The institution is in a formative stage of implementing OBE. This manual will help teachers and students to familiarize themselves with OBE. OBE is an educational approach which aligns each part of the education system around predetermined goals or outcome. This approach ensures that each student, on completion of a course or programme, should be able to know or do what the course or programme has set as a goal or outcome. OBE is a model of education that rejects the traditional attention on what the programme provides to the student. Instead, it focuses on making the student demonstrate what the student is able to do on successful completion of the learning experience.

- OBE is an educational process that focuses on what students **can do** or the **qualities** they should develop after they are taught.
- OBE involves the restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of high order learning and mastery rather than accumulation of course credits.
- Both structures and curricula are designed to achieve those **capabilities** or **qualities**.
- Discourages traditional education approaches based on direct instruction of facts and standard methods.
- It requires that the students demonstrate that they have learnt the required skills and content.

Why OBE - Deficiencies of Traditional Education

- Provides students with a learning environment with little attention to whether or not students ever learn the material.
- Students are given grades and rankings compared to each other – students become **exam oriented** or **CGPA driven**.
- Graduates are not completely prepared for the workforce.
- Lack of emphasis on soft skills needed in jobs e.g. communication skills, interpersonal skills, analytical skills, working attitude etc.

Focus and Benefits of OBE

OBE addresses the following key questions:

- What do we want the students to have or be able to do?
- How can we best help students achieve it?
- How will we know whether the students have achieved it?
- How do we close the loop for further improvement (Continuous Quality Improvement (CQI))?

Benefits of OBE:

1. More directed & coherent curriculum.
2. Graduates will be more “relevant” to industry & other stakeholders (more well rounded graduates)
3. Continuous Quality Improvement (CQI) is in place.

Expectations on Students under OBE – the Outcomes

- Students are expected to be able to do more challenging tasks other than memorize and reproduce what was taught.
- Students should be able to: write project proposals, complete projects, analyze case studies, give case presentations, show their abilities to think, question, research, and make decisions based on the findings.
- Be more creative, able to analyze and synthesize information.
- Able to plan and organize tasks, able to work in a team as a community or in entrepreneurial service teams to propose solutions to problems and market their solutions.

Psychological significance of OBE

One of the basic principles of OBE is to provide expanded opportunities to the learner. This is based on the psychological perspective that anyone can learn, provided that the activities provided suits the learner’s level of capabilities. Positively, OBE caters to the individual difference of the learner.

Moreover, in an OBE-approach, a student is not a passive recipient but an active and focused participant in the process of constructing knowledge and skills in the lines of the outcome. Frequent feedback about their performance will be a motivating factor which boosts up their future learning endeavour. Hence, OBE is a clear system which is rooted in a learner-centred approach with a sound psychological backup.

COs are needed for a course

There is no definite number. The Course Outcomes are the end product of a course. So the number of COs should depend on the nature of the course. It may not be a good idea to fix the number of COs to a constant number as the nature and scope of each course vary. But it may be a better practice to keep the number to an optimal range like 5 to 6, based on the generic nature of courses within a programme.

Blooms Taxonomy for defining outcomes

Implementation of OBE in India has its root from WA (Washington Accord). As per the agreement, all the nations have decided to adopt OBE with Bloom's taxonomy as the standard for scaling the levels of learning. Regarding the methodology in the formulation of an outcome, we need an action verb to make the outcome observable. If this action verb is in a standardized format (as per Bloom's Taxonomy) it will be easy for anyone to understand the cognitive challenge expected from the part of the learner. Obviously, it will be cool to estimate the strength of mapping; an outcome has with the Outcomes of higher-order in the (OBE architecture). Moreover, Blooms Taxonomy is a widely accepted classification worldwide, with appropriate variability to identify the level of learning from the basic level of rote memorization to the highest order of creativity.

Evaluating CO for activities

For the Assessment of CO of activities like Assignments, Projects, Industrial visits etc, we have to prepare Rubrics for evaluation. Rubrics are just criteria for valuation where we grade the students as per the stated criteria. In order to eliminate subjectivity in the evaluation process, it is a good practice to state the quality statements for each criterion in advance. For the assessment of the COs, we have to point each criterion to the corresponding outcomes with the strength of mapping. Obviously, when we proceed with the evaluation of the work automatically the assessment of COs could be estimated with respect to the attainment of the students with respect to each criterion.

PO DEFINITION

Programme Outcomes (PO) are the Knowledge, Skills and Attitude students should possess during graduation.

LIST of POs

List of POs can be found in the: Disseminated in Classrooms, Departments, College web-site.

IMPORTANT FOR FACULTY TO KNOW THE POs

The POs are important as a guideline when developing or revising the course outcomes. Knowing the POs helps the faculty in designing the appropriate delivery and assessment methods.

COs DEFINITION

COs are the statements of Knowledge/ Skills/ Attitude that students are expected to know, understand and perform, as a result from their learning experiences.

RELATION BETWEEN POs AND COs

The COs are mapped to at least one of the POs. When designing the COs, faculty handling the course should map their COs to the appropriate PO in order to ensure that all POs are delivered throughout the period of study.

WELL WRITTEN COs

Well written CO facilitates the faculty in measuring the achievement of the CO at the end of the semester. It also helps the faculty in designing suitable delivery and assessment methods to achieve the designed COs.

TO DEVELOP OR REVISE COs

New COs are developed when a new course is offered. Existing COs are revised upon feedback from stakeholders or during the 2 or 3 years cycle of Curriculum Review.

RULES TO DEVELOP COs

The rules to develop COs are SMART.

S – Specific: Student can state what they should be able to achieve from reading the outcomes.

M – Measurable: Student can be able to recognize when they have achieved through the outcomes.

A – Achievable: It is genuinely possible to complete the outcomes in the time and with the resources available.

R – Realistic: Outcomes are appropriate for the student.

T – Time bounded: Outcomes have a time limit for completion.

To follow the SMART rules, COs are constructed as follows;

Selection of behavior elements is important. There are three types of behavior elements or also known as educational activities: Knowledge, Skills and Attitude . Appropriate behavior elements are selected from the Bloom's Taxonomy. Bloom's Taxonomy primarily provides course

coordinator with a focus for developing their course learning objectives. It can be used to increase student understanding of the learning process. Faculty can understand the complex cognitive development and how lower - level skills build into higher-order thinking (e.g., recalling facts and comprehending previous problems allows a student to apply their experience to similar problems). The domains are classified into three levels and numbered from Level 1 to 3 depending on the ability expected from the students. For example, L1 – Base Level is the lowest level, L2 – Application Level is the medium level and L3 – Advance thinking level is the high level of ability expected from the students.

EVALUATION PROCESS (EP)

All Question Papers should follow the given levels

- Base Level (Remembering and Understanding)
- Application Level (Applying)
- Advance Thinking Level (Analyzing, Evaluating and Creating)

Base Level (Remembering and Understanding)

The lowest level of questions requires students to recall information from the course content. Knowledge questions usually require students to identify information in basically the same form it was presented.

Keywords for Question types

Who	Where	Define	Match	Omit
What	Which	Label	Name	How
Why	Choose	Show	Relate	List
When	Find	Spell	Tell	Recall

Understanding

Understanding of facts and ideas by Comprehending, organizing, comparing, translating, interpolating and interpreting in their own words.

The questions go beyond simple recall and require students to combine data together.

Keywords for Question types

Compare	Explain	Outline	Summarize
Contrast	Extend	Relate	Show
Demonstrate	Illustrate	Rephrase	Classify
Interpret	Infer	Translate	Select

Application Level (Applying)

Students have to solve problems by using/applying a concept learned in the classroom. Students must use their knowledge to determine a correct response. Keywords for Question types

Compare	Function	Motive	Take part in
Conclusion	Interference	Relationships	Test for
Contrast	Inspect	Simplify	Theme
Discover	List out	Survey	Tell

Advanced Thinking Level (Analyzing, Evaluating and Creating)

Analyzing asks the students to break down something into its component parts. Analyzing requires students to identify reasons, causes, or motives and reach conclusions or generalizations.

Keywords for Question types

Analyze	Dissect	Agree	Function
Assume	Distinguish	Appraise	Interference
Categorize	Divide	Assess	Inspect
Classify	Examine	Award	List out

Evaluating

Evaluation requires an individual to make a judgment about something. Questions to be asked to judge the value of an idea, a character, a work of art, or a solution to a problem.

Students are engaged in decision-making and problem-solving at this level. Evaluation questions do not have single right answers.

Keywords for Question types

Choose	Decide	Disprove	Explain	Prove	Judge
Measure	Deduct	Dispute	Importance	Rate	Justify
Conclude	Defend	Estimate	Influence	Opinion	Recommend
Criteria	Determine	Evaluate	Prioritize	Perceive	Value

Creating

The questions of this category challenge students to get engaged in creative and original thinking.

Developing original ideas and problem solving skills are developed at this stage. Various potential responses for creating type questions. Keywords for Question types

Adapt	Compose	Develop	Imagine	Modify	Predict
Build	Construct	Elaborate	Improve	Original	Propose
Change	Create	Formulate	Invent	Originate	Solution
Combine	Design	Happen	Maximize	Test	Solve

COs AND POs MAPPING

The various correlation levels for the measurement of COs and POs mapping is measured in four scale: 0 is No Correlation, 1 is Low Correlation, 2 is Moderate Correlation and 3 is High Correlation.

The format for CO and PO mapping as follows:

**Name of the
Program:**

PROGRAM MATRIX (PROGRAM OUTCOME)

Sl No	Course Code	Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
1		CO1										
2		CO2										
3		CO3										
4		CO4										
5		CO5										
6		CO6										
7		CO7										
8		CO8										
9		CO9										

MAPPING STRENGTH	
NO	0
LOW	1
MODERATE	2
HIGH	3

Mapping analysis of each course should be maintained in the department. The questions are framed in such a way that it should satisfy Bloom's Taxonomy, wherein each question is mapped to the appropriate course outcome of the respective course, which is evaluated based on the set attainment levels by the department.

Assessment and Attainment methods

Assessment methods are categorized into two as direct method and indirect method to access COs and POs.

Direct assessment method and indirect assessment method are considered for 80% and 20% weightages respectively.

Course End Analysis (**Direct method**) is a technique to measure the attainment of COs and POs directly from levels of internal components. The direct methods display the student's knowledge and skills from their performance in the continuous internal assessment tests, semester examinations and supporting activities such as seminars, assignments, case study, group discussion, online quiz, etc. These methods provide a sampling of what students know and can do and provide strong evidence of student learning.

Indirect Assessment method – Course End Survey

Course End Survey Analysis is a technique to measure the attainment of COs and POs indirectly from the components of course outcomes. The indirect method done through surveys from the stakeholders (Students, Alumni, Parents and Employers) to reflect their views on student's learning after 2 or 3 years of graduation. The institute assesses opinions or thoughts about graduate's knowledge or skills by different stakeholders.