

ಹೈದರಾಬಾದ್ ಕರ್ನಾಟಕ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯ  
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(ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಸಂಲಗ್ನತೆ ಪಡೆದ)  
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Hyderabad Karnataka Education Society's  
**S. S. Margol College of Arts,  
Science & Commerce**

SHAHABAD - 585 228 - Dist. Kalaburagi  
(Affiliated to Gulbarga University, Kalaburagi)  
NAAC ACCREDITED - B COLLEGE

## Outcome Based Education

Institution has well established processes and procedures for teaching learning and assessment which accomplish the goal of outcome-based education in UG/PG programmes. The institution continuously efforts to nurture the skills, knowledge and aptitude among the students for better employment prospectus, research and problem-solving skills, , innovation and discovery of new knowledge to achieve the said outcomes.

Programme Outcomes :

POs are statements about the knowledge, skills and attitudes (attributes) the graduate of a formal engineering program should have. POs deal with the general aspect of graduation for a particular programme, and the competencies and expertise a graduate will possess after completion of the programme.

## Course Outcomes

- The course outcomes are the statement that describes the knowledge & abilities developed in the student by the end of course (subject) teaching.
- The focus is on development of abilities rather than mere content. There can be 5 to 7 course outcomes of any course.
- These are to be written in the specific terms and not in general.
- Blooms Taxonomy : active verbs
- Focus :=> Knowledge + Skills + Aptitude

## CO/PO Mapping

- The Program Outcomes are developed through the curriculum (curricular/cocurricular-extra-curricular activities).
- The program outcomes are attained through the course implementation.
- As an educator, one must know, "to which POs his/her course in contributing?". So that one can design the learning experiences, select teaching method and design the tool for assessment. Hence, establishing the Course PO matrix is essential step in the OBE.
- The course-program outcomes matrix indicates the co-relation between the courses and program outcomes.
- The CO-PO matrix is the map of list of courses contributing to the development of respective POs.



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The Example of CO-PO Matrix is provided in the below table.

CO's due to Courses	PO1	PO2	PO3	PO4	PO5
C Porg.	x	x	x		
Data Communication			x	x	
Computer architecture	x	x	x		
Java		x	x	x	x
Python	x	x	x		
Statistical Methods		x	x	x	
Numerical Analysis	x	x	x	x	

### Course Attainment Levels:

- CO attainment is defined/set at three levels; The CO attainment is based on end term examination assessment and internal assessment;
- The Co attainment is defined at three levels for UG/PG programme in ascending order. e.g. For end term and internal examination;
  - ii. Level-1: 30% students scored more than class average
  - iii. Level-2: 40% students score more than class average;
  - iv. Level-3: 50% students score more than class average.
- The target level is set (e.g. Level-2). It indicates that, the current target is level-2; 40% students score more than class average.
- The CO attainment is measured and the results are obtained. Based on the results of attainment, the corrective measures/remedial action are taken.
- CO Attainment= 80% (Attainment level in end term examination) + 20% (Attainment level in internal examination).



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### Co Attainment

- Average Marks in External examination 61. % Students score more than 61 is 50 % i.e. Level-3
- Average Marks in Internal examination IS 15.36. % Students score more than 15 is 30%, i.e. Level-1
- A (CO) MANC-402= 80% (3) +20% (1)
- =2.4+0.2
- = 2.6
- Hence, the attainment level is Level-2 and the set target level is Level-2 and therefore the CO is fully attained.

### Programme attainment Level

- PO attainment is defined at five levels in ascending order;
- The PO attainment is based on the average attainment level of corresponding courses (Direct Method) and feed-back survey (Indirect method);
- The PO attainment levels are defined / set as stated below;
- Level-1: Greater than 0.5 and less than 1.0 (0.5>1)- Poor
- Level-2: 1.0>1.5-Average
- Level-3: 1.5>2.0-Good
- Level-4: 2.0>2.5-Very Good
- Level-5: 2.5>3.0 -Excellent

$$\text{Direct PO Attainment} = \frac{\text{Sum of the average attainment level of the course outcomes mapped to a PO}}{\text{Total number of courses}}$$

$$\begin{aligned} \Lambda(\text{PO}) 3 &= (2+2+3+3+2+2+3)/7 \\ &= 2.42 \\ &= 2.42 \text{ i.e. Level-4.} \end{aligned}$$

The Target Level is Level-3. Hence, PO is attained.



  
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