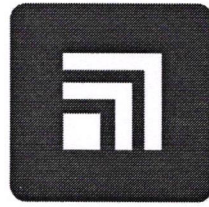**CHITKARA**
UNIVERSITY

HIMACHAL PRADESH
NAAC ACCREDITED

Report on PO Attainment

Bachelor of Engineering

(Computer Science & Engineering)

Batch 2018

Department of Computer Science & Engineering

Report on PO Attainment

Batch 2018

Department of Computer Science & Engineering

Dated: 22/07/2022

Overview

An outcome is a result of learning that reveals what the student should be able to do at the end of a course; Outcome-based curriculum is a performance-based education system which is crucial in determining the type of graduates we want. In this approach, the desired educational outcomes should be clearly specified. Having an unequivocal outcome facilitates the nature of course offered, its content and also the teaching plans. Constructive alignment is a principle used for devising teaching and learning activities and assessment tasks that directly address the course outcomes (COs) intended. The outcome-based approach provides a mechanism to ensure the accountability and quality assurance to an educational program.
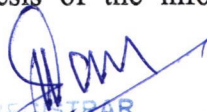
Course mapping shows the educational relationship (Level of Learning achieved) between Course Outcomes and Program Outcomes for a Course. The result strongly indicates whether the students are able to achieve the course learning objectives. The method can be used for any course and is a good way to evaluate a course syllabus.

The below mentioned steps shall address the procedure for assessing the percentage achievement of Program Outcomes.

Program Outcomes (PO)

The Program Outcomes for the BE(CSE) Program are the following:

PO1. Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. 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.

PO4. 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.

PO5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO6. 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.

PO7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Function effectively as an individual, and as a member or leader in diverse teams, and multidisciplinary settings.

PO10. 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.

PO11. 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.

PO12. Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes mapping with Program Outcomes:

The course learning outcomes were mapped with the defined program outcomes of the Department of Computer Science & Engineering on the scale of High, Medium and Low. Subsequently the mapped values were assigned with the weights i.e. High: 3; Medium: 2; and Low: 1. The subject wise result was compiled for 1st ,2nd ,3rd ,4th ,5th ,6th ,7th & 8th semester.

PO Attainment of Subjects: B.E. Computer Science and Engineering

Subject	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS176	-	-	-	-	-	-	-	-	-	-	-	-
CL101	-	-	-	-	-	-	-	59	59	59	59	59
CL104	-	-	-	-	-	-	38	-	38	38	38	-
EC102	55	55	55	-	55	55	-	-	-	-	55	-
EE102	66	66	66	-	66	66	-	-	-	-	66	-
ME153	-	88	88	-	88	88	-	-	-	-	-	-
PH103	-	54	54	54	-	-	-	-	-	-	-	-
AM101	-	-	-	-	-	-	-	-	-	-	-	-
EE101	-	62	62	62	-	62	62	-	-	-	-	-
ME102	81	81	-	81	81	-	-	-	-	81	-	-
CS101	-	41	41	41	-	-	-	-	41	-	41	41
PH101	53	53	53	-	-	-	53	-	-	-	-	-
AM102	-	-	-	-	-	-	-	-	-	-	-	-
EC101	50	50	50	-	50	-	-	-	-	-	-	-
EC106	60	60	60	-	-	-	-	-	-	-	60	-
CS111	-	33	33	33	33	-	-	-	-	-	33	-
CS110	-	42	42	42	42	-	-	-	-	-	42	42
ES101	-	0	-	-	-	0	0	0	0	0	-	-
EC105	60	60	60	-	-	-	-	-	-	-	60	-
CS501	0	0	0	0	-	-	-	-	-	-	-	0
CS115	-	99	99	-	99	-	-	-	-	-	99	99
AM103	67	67	67	-	-	-	-	-	-	-	-	-
CS109	-	0	0	0	0	-	-	-	-	-	0	0
CS112	-	87	87	87	87	-	-	-	-	-	87	-
CS116	-	88	88	-	88	-	-	-	-	-	88	88
DM101	0	0	0	0	-	-	-	-	-	-	-	0
CS117	100	100	100	-	100	-	-	-	-	-	100	-
CS114	-	88	88	88	88	-	-	-	88	-	88	88

Course												
CS107	-	99	99	99	99	-	-	-	-	-	-	99
CS118	89	89	89	-	89	-	-	-	-	-	-	89
CS254A	-	-	-	-	-	-	-	-	-	-	-	-
CS113	-	76	-	-	76	-	-	-	-	-	-	76
CS170	-	-	-	-	-	-	-	-	-	-	-	-
CS130	-	39	39	39	39	39	-	39	39	39	39	-
CS131	37	39	39	39	39	-	-	-	-	-	-	-
CS132	37	37	37	37	37	-	-	-	-	-	-	-
CS133	-	41	41	41	41	41	-	-	-	-	34	-
CS135	-	-	39	39	39	39	-	-	-	-	-	-
CS141	-	-	34	34	34	34	34	34	34	34	34	-
CS168	41	41	41	41	-	-	41	-	41	-	-	-
CS169	-	-	-	40	40	40	40	40	40	40	-	-
CS171	-	-	40	40	-	-	40	-	40	40	-	-
CS175	-	-	40	40	40	40	-	40	40	40	-	-
CS174	-	-	36	36	36	36	36	36	-	-	-	-
GE101	76	76	-	76	76	-	-	-	76	76	76	76
CS203	100	100	100	100	100	-	-	-	100	100	100	100
CS126	76	76	76	-	76	76	-	-	-	76	76	76
CS145	-	-	-	76	76	76	-	-	-	-	-	-
CS146	-	78	78	78	78	78	-	-	-	-	-	-
CS159	-	75	75	75	75	-	-	-	-	-	-	-
CS108	-	65	65	65	65	-	-	-	-	-	-	-
CS134	-	55	55	-	55	-	-	-	-	-	-	55
CS138	-	58	58	58	58	58	-	-	-	-	-	-
CS129	-	39	39	39	39	39	39	-	-	-	-	-
CS251	71	71	71	71	71	-	-	-	71	71	71	71
CS182	59	59	59	59	-	-	-	-	-	-	-	-
CS181	-	-	48	48	48	48	-	-	48	-	-	-
CS162	-	-	-	-	-	50	50	50	50	50	-	-
CS161	-	-	-	-	50	50	50	50	50	50	-	-
CS154	42	42	42	42	-	-	-	-	-	42	42	-
CS149	-	39	39	39	39	-	-	-	-	-	-	-
CS253	73	73	73	73	73	-	-	-	73	73	73	73
CS252	79	79	79	79	79	-	-	-	79	79	79	-
POA	75.42	62.43	73.74	69.27	71.74	59.94	59.25	62.83	68.24	68.85	65.77	73.73

Representation of PO attainment

PO Attainment (%)
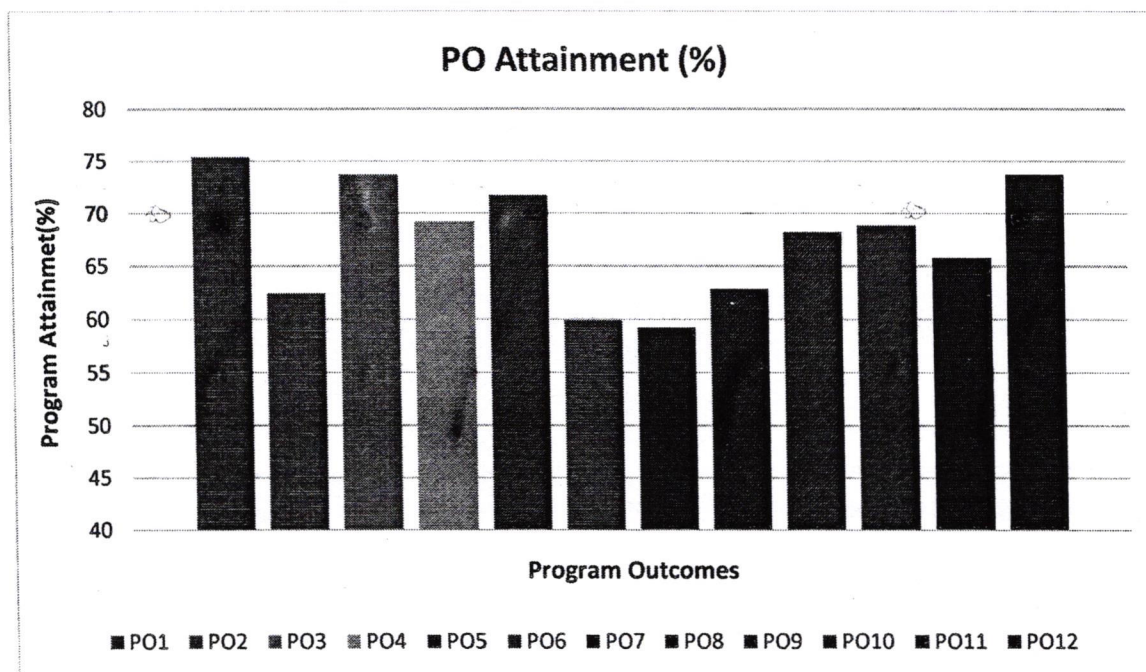
Analysis: -

The above representation shows that the students of batch 2018 have successfully attained a minimum of 68%. The overall PO target was achieved. Based on the course exit Survey and discussion with students , some technical events will be planned in order to develop skills on solving real world problems. More Emphasis on Project Based Learning will be given Conducted research / innovation awareness program among students and faculty members. The further change in the pattern may be observed when more EPICs related projects will be given to the students.

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HOD CSE

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Course Outcome Attainment Report

CHITKARA UNIVERSITY

Programme	B.E. [Computer Science and Engineering]		Batch 2018	
Subject	Advanced Programming Concepts		Code CS113	Semester 5

Subject Assessment: Advanced Programming Concepts

#	Tools	Task	Task-Id	Marks	Wt (%)	Weighted Marks (%)
1	Internal	1	341	40	100	40
2	External	1	342	60	100	60

Course Outcome: Advanced Programming Concepts

SNo	Course Outcome	Wt(%)
CO1	Versed with pointers and structures in C.	20
CO2	Apply linear data structure.	20
CO3	Choose the appropriate searching and sorting technique.	20
CO4	Demonstrate the advantages and disadvantages of specific techniques to be used.	20
)5	Develop programs using basic data structures like stack and queue.	20

CO-PO Map: Advanced Programming Concepts

Course Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Versed with pointers and structures in C.	-	H	M	-	-	-	-	-	-	-	-	H
Apply linear data structure.	-	H	M	-	-	-	-	-	-	-	-	-
Choose the appropriate searching and sorting technique.	-	H	M	-	-	-	-	-	-	-	-	-
Demonstrate the advantages and disadvantages of specific techniques to be used.	-	H	M	-	M	-	-	-	-	-	-	M
Develop programs using basic data structures like stack and queue.	-	H	M	-	-	-	-	-	-	-	-	-

Course Outcome Contribution in Each Question

Tool	Task No.	QNo	Marks	DL	BT Level	Percentage Contribution of Course Oucome
Internal	1	1	40	Average	Applying	CO1 [20],CO2 [20],CO3 [20],CO4 [20],CO5 [20],
External	1	1	60	Average	Understanding	CO1 [20],CO2 [20],CO3 [20],CO4 [20],CO5 [20],

CO-Assessment-Marks: Advanced Programming Concepts

We would consider 40% weightage for Internal Marks and 60% weightage for external marks for calculating attainment level of Student Course Outcome. In case of 'ther only internal or external components, we would consider 100%.

CO1: Versed with pointers and structures in C.

#	RollNo	Internal-1[8]	External-1[12]	Total [20]	MO(%)	Scale
1		4.2	8.6	12.8	64	3
2	1811981001	0	0	0	0	1
3	1811981002	6.2	10	16.2	81	3
4	1811981003	0	0	0	0	1
5	1811981375	6.6	9.2	15.8	79	3
6	1811981005	7.8	9.2	17	85	3
7	1811981006	7	9.8	16.8	85	3
8	1811981007	1	3.2	4.2	22	1
9	1811981008	0	0	0	0	1
10	1811981009	6.2	9.6	15.8	79	3
11	1811981010	6.6	10.2	16.8	85	3
12	1811981011	0	0	0	0	1
13	1811981012	7	9	16	80	3
14	1811981013	6.2	8.4	14.6	73	3
15	1811981014	7	9.2	16.2	81	3
16	1811981016	6.8	8.4	15.2	76	3

321	1811981330	6.8	8.8	15.6	78	3
322	1811981331	7.2	10.2	17.4	87	3
323	1811981332	0	0	0	0	1
324	1811981333	7	9.6	16.6	83	3
325	1811981334	5.8	9.2	15	75	3
326	1811981335	7.2	8.8	16	80	3
327	1811981338	6.4	10.6	17	85	3
328	1811981339	7.4	9.6	17	85	3
329	1811981341	0	0	0	0	1
330	1811981342	0	0	0	0	1
331	1811981343	0	0	0	0	1
332	1811981344	0	0	0	0	1
333	1811981401	0	0	0	0	1
334	1811981346	6.4	8	14.4	72	3
335	1811981356	0	0	0	0	1
336	1811981347	6.4	7.2	13.6	68	3
337	1811981348	0	0	0	0	1
338	1811981349	7	10.6	17.6	89	3
339	1811981350	0	0	0	0	1
340	1811981352	0	0	0	0	1
341	1811981353	7.2	10	17.2	86	3
342	1811981354	0	0	0	0	1
343	1811981355	0	0	0	0	1

CO Attainment on Scale of 3	Percentage of Students Scored above 60%
2.27	63.56

Attainment on Scale of 3	Percentage Attainment
2.27	75.67

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