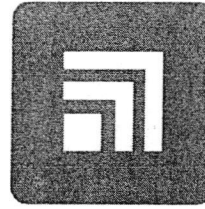


CHITKARA
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HIMACHAL PRADESH

NAAC ACCREDITED

Report on PO Attainment

Master of Engineering

Microelectronics

Batch 2016

***Department of Electronics & Communication
Engineering***

Report on PO Attainment
Master of Engineering (ME Microelectronics)
Batch 2016
Department of Electronics & Communication Engineering

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 programme.


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 Outcome

The Program Outcomes for the Master of Engineering (Microelectronics) Program are the following:

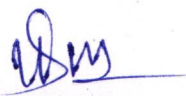
- PO-01:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization for the solution of complex engineering problems.
- PO-02:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.


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- PO-03:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
- PO-04:** 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.
- PO-05:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex.
- PO-06:** 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.
- PO-07:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO-08:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO-09:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO-010:** Communicate effectively on complex engineering activities with the engineering community and with the 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.
- PO-011:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO-012:** 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 outcomes were mapped with the program outcomes on the scale of High, Medium and Low. Thereafter, the mapped values were allocated with weights i.e., High: 3; Medium: 2; and Low: 1.


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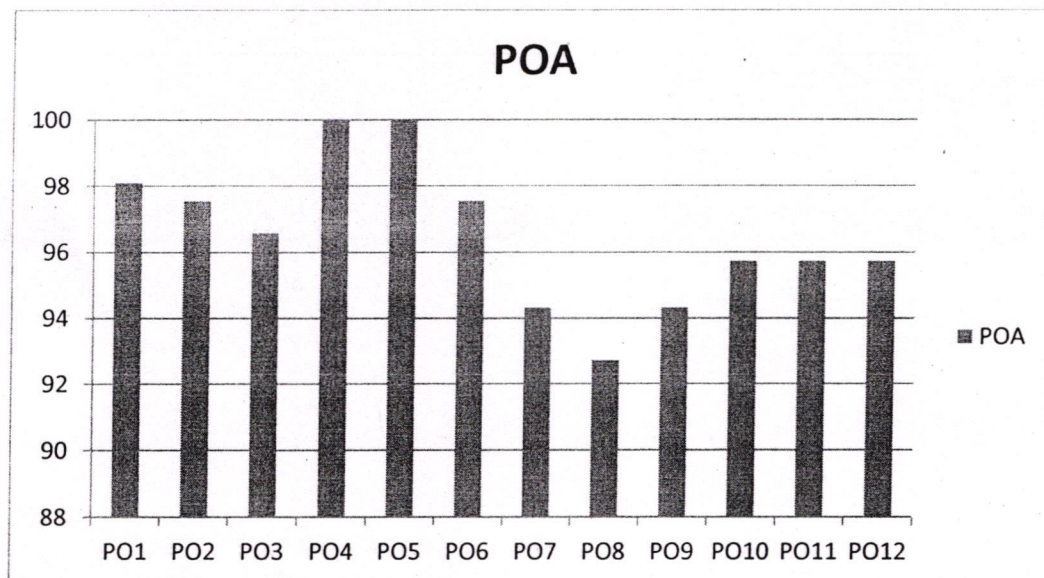


| Subject | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|---------|-------|-------|------|-----|-----|------|-------|------|-------|-------|-------|-------|
| ECL4630 | - | - | 83 | - | - | - | 83 | - | - | - | - | 83 |
| ECP1501 | - | - | - | - | - | - | - | 83 | - | - | - | - |
| ECL4501 | - | - | - | - | - | - | - | 83 | 83 | - | - | - |
| ECL4629 | - | - | 100 | - | - | 100 | - | - | 100 | 100 | 100 | 100 |
| ECL4607 | 100 | 100 | 100 | - | - | 100 | - | - | - | - | - | - |
| ECP1607 | 100 | 100 | 100 | - | - | 100 | - | - | - | - | - | - |
| ECL4606 | 83 | 83 | - | - | - | - | - | - | - | - | 83 | - |
| ECP1606 | 100 | 100 | - | - | - | - | - | - | - | - | 100 | - |
| ECL4632 | - | - | 100 | - | - | 100 | 100 | - | - | 100 | - | 100 |
| CSP1602 | - | - | - | - | - | - | - | 100 | - | - | - | - |
| CSL4602 | - | - | - | - | - | - | - | 83 | - | - | - | - |
| CSP1601 | 100 | - | - | - | 100 | - | - | - | - | - | 100 | - |
| CSL4601 | 100 | - | - | 100 | - | - | - | - | - | - | 100 | - |
| CSL4653 | - | - | - | - | - | - | - | 100 | 100 | - | - | 100 |
| ECL2601 | - | - | 83 | - | - | 83 | - | - | 83 | 83 | 83 | 83 |
| ECL4601 | - | - | 100 | - | - | - | - | 100 | 100 | - | - | 100 |
| ECL4602 | 100 | 100 | - | - | - | - | - | - | - | - | 100 | - |
| ECP1601 | - | - | 100 | - | - | - | 100 | - | 100 | - | - | 100 |
| CSL2518 | 100 | - | - | - | - | 100 | - | 100 | - | - | 100 | - |
| PRM4101 | 100 | 100 | 100 | - | - | - | - | - | - | - | - | - |
| ECT9702 | - | 100 | 100 | 100 | 100 | 100 | - | - | - | 100 | - | 100 |
| POA | 98.11 | 97.57 | 96.6 | 100 | 100 | 97.6 | 94.33 | 92.7 | 94.33 | 95.75 | 95.75 | 95.75 |

PO Attainment of subjects: M.E. Microelectronics Engineering


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Representation of PO attainment:



Analysis -

The representation shows that the students of ME Microelectronics of batch 2016 have successfully attained a minimum of 80% in all of the program outcomes. However, the achieved attainment is above 90% in all.

HOD

Department of ECE

Head of Department
Department of Electronics &
Communication Engineering
School of Engineering & Technology
Chitkara University, Himachal Pradesh

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Course Outcome Attainment Report

Programme **ME Microel [Microelectronics]**
Subject **IPR**

Batch **2016**
Code **CSL2518** Semester **5**

Subject Assessment: IPR

| # | Tools | Task | Task-Id | Marks | Wt (%) | Weighted Marks (%) |
|---|----------|------|---------|-------|--------|--------------------|
| 1 | Internal | 1 | 434 | 40 | 100 | 40 |
| 2 | External | 1 | 436 | 60 | 100 | 60 |

Course Outcome: IPR

| SNo | Course Outcome | Wt(%) |
|-----|---|-------|
| CO1 | Understand the Basics and Need of IPRs | 25 |
| CO2 | Fill the invention disclosure form for patenting of an idea. | 25 |
| CO3 | Conduct the prior art to decide the patentability of the idea | 25 |
| CO4 | Draft provisional complete specifications of the patent application that will enhance their skill as an entrepreneurship. | 25 |

CO-PO Map: IPR

| Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Understand the Basics and Need of IPRs | H | - | - | - | - | - | - | - | - | - | - | - |
| Fill the invention disclosure form for patenting of an idea. | - | - | - | - | - | M | - | - | - | - | - | - |
| Conduct the prior art to decide the patentability of the idea | - | - | - | - | - | - | - | - | - | - | M | - |
| Draft provisional complete specifications of the patent application that will enhance their skill as an entrepreneurship. | - | - | - | - | - | - | - | M | - | - | - | - |

Course Outcome Contribution in Each Question

| Tool | Task No. | QNo | Marks | DL | BT Level | Percentage Contribution of Course Outcome |
|----------|----------|-----|-------|---------|---------------|---|
| Internal | 1 | 1 | 40 | Average | Understanding | CO1 [25], CO2 [25], CO3 [25], CO4 [25]. |
| External | 1 | 1 | 60 | Average | Applying | CO1 [25], CO2 [25], CO3 [25], CO4 [25]. |

CO-Assessment-Marks: IPR

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 either only internal or external components, we would consider 100%.

CO1: Understand the Basics and Need of IPRs

| # | RollNo | Internal-1[10] | External-1[15] | Total [25] | MO(%) | Scale |
|---|------------|----------------|----------------|------------|-------|-------|
| 1 | 1610981053 | 9 | 13 | 22 | 88 | 3 |
| 2 | 1610981055 | 8.25 | 10 | 18.3 | 74 | 3 |

CO Attainment on Scale of 3

3

Percentage of Students Scored above 60%

100

CO2: Fill the invention disclosure form for patenting of an idea.

| # | RollNo | Internal-1[10] | External-1[15] | Total [25] | MO(%) | Scale |
|---|------------|----------------|----------------|------------|-------|-------|
| 1 | 1610981053 | 9 | 13 | 22 | 88 | 3 |
| 2 | 1610981055 | 8.25 | 10 | 18.3 | 74 | 3 |

CO Attainment on Scale of 3

3

Percentage of Students Scored above 60%

100

CO3: Conduct the prior art to decide the patentability of the idea

| # | RollNo | Internal-1[10] | External-1[15] | Total [25] | MO(%) | Scale |
|---|------------|----------------|----------------|------------|-------|-------|
| 1 | 1610981053 | 9 | 13 | 22 | 88 | 3 |
| 2 | 1610981055 | 8.25 | 10 | 18.3 | 74 | 3 |

CO Attainment on Scale of 3

3

Percentage of Students Scored above 60%

100

CO4: Draft provisional complete specifications of the patent application that will enhance their skill as an entrepreneurship.

| # | RollNo | Internal-1[10] | External-1[15] | Total [25] | MO(%) | Scale |
|---|------------|----------------|----------------|------------|-------|-------|
| 1 | 1610981053 | 9 | 13 | 22 | 88 | 3 |
| 2 | 1610981055 | 8.25 | 10 | 18.3 | 74 | 3 |

CO Attainment on Scale of 3

3

Percentage of Students Scored above 60%


100

Attainment on Scale of 3

3.00

Percentage Attainment

100.00


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