

ASSESSMENT OF
COs & POs
THROUGH
PROJECT WORK

DEPARTMENT OF MECHANICAL
ENGINEERING

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2.	Rubrics for Project work Assessment
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**COURSE
OUTCOMES
OF
PROJECT WORK**

Project work POs Attainment

Course Outcomes for Project Work:

1. Design/Develop sustainable solutions for societal issues with environmental considerations applying the basic engineering knowledge.[K6-Create]
2. Analyze and review research literature to synthesize research methods including design of experiments to provide valid conclusion. [K4-Analyze]
3. Utilize the new tools, algorithms, techniques to provide valid conclusion following the norms of engineering practice.[K3-Apply]
4. Test and Evaluate the performance of the developed solution using appropriate techniques and tools.[K5-Evaluate]
5. Apply management principles to function effectively in the project team for project execution. [A4-Organize]
6. Engage in learning for effective project implementation in the broadest context of technological change with consideration for public health, safety, cultural and societal needs. [A3-Value]
7. Write effective reports and make clear presentation to the engineering community and society [A2-Respond]

Rubrics for Project work Assessment

Rubrics for Project work Assessment**Rubrics for project work assessment – Review 1 sample**

Name of the student : BALAJI C Section : A
 Register Number : 2017107032

S.No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improv ement (1,2)
R 1.1 Applying Engineering knowledge for Problem Identification/Identification of Societal issues - 40 Marks						
1	Definition of the Problem	9				
2	Motivation for the Problem	9				
3	Objectives of the Project Work		8			
4	Usefulness/Relevance to the society	9				
R 1.2 Literature Survey - 30 Marks						
1	Quantum of Literature referred	9				
2	Quality of literature referred	9				
3	Inference from the Literature Survey		8			
R 1.3 Communication - Oral - 30 Marks						
1	Voice and tone	9				
2	Language		8			
3	Responsiveness		8			

Review 1 Marks:

Review Criteria	Max Marks	Marks Obtained
R 1.1	40	35
R 1.2	30	26
R 1.3	30	25
Total	100	86


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Rubrics for Project work Assessment – Review 2 sample

Name of the student : BALAJI C

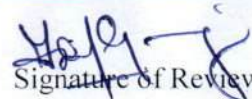
Section : A

Register Number : 2017107032

S.No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improvement (1,2)
R 2.1 Analysis of Design requirements - 30 Marks						
1	Analysis of design requirements	9				
2	Design of experiments for analyzing data/Functional Block/Architectural Design	9				
3	Meeting the Design Requirements		8			
R 2.2 Addressing public health, safety, cultural and societal and environmental needs - 20 Marks						
1	Consideration for public health, safety and cultural aspects	10				
2	Consideration for social and environmental aspects	9				
R 2.3 Team Work - 30 Marks						
1	Working with others	10				
2	Listening to others views	10				
3	Contribution to the Project Work	9				
R 2.4 Modern Engineering & IT Tools used - 20 Marks						
1	Identification of appropriate tool	10				
2	Proper usage of the Modern tool			6		

Review 2 Marks:

Review Criteria	Max Marks	Marks Obtained
R 2.1	30	26
R 2.2	20	19
R 2.3	30	29
R 2.4	20	16
Total	100	90


Signature of Reviewers

Rubrics for Project work Assessment – Review 3 sample

Name of the student : BALAJI C

Section : A

Register Number : 2017107032

S.No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improvement (1,2)
Adopting the norms of engineering practice - 20 Marks						
1	Adopting ethical norms and procedures for the design	9				
2	Acknowledgement for using other's published results or ideas	9				
Synthesis and valid conclusion of the project - 30 Marks						
1	Experimental Results	9				
2	Analysis/Interpretation of Results	9				
3	Conclusion of the Project Work	10				
Project Management and Finance - 30 Marks						
1	Time management	10				
2	Finance management/Cost Analysis	10				
3	Sharing of Work among the members	10				
Novelty - 20 Marks						
1	Extent of advanced learning to carry out the project	9				
2	Novelty of the Project Work & Scope for Extension			5		

Review 3 Marks:

Review Criteria	Max Marks	Marks Obtained
R 3.1	20	18
R 3.2	30	28
R 3.3	30	30
R 3.4	20	14
Total	100	90


Signature of Reviewers

Assessment of Attainment of COs based on Review Rubrics

Overall COs Assessment based on review rubrics

Course Outcomes	Review 1			Review 2				Review 3			
	R 1.1	R 1.2	R 1.3	R 2.1	R 2.2	R 2.3	R 2.4	R 3.1	R 3.2	R 3.3	R 3.4
CO 1	√				√						
CO 2		√		√					√		
CO 3							√	√			
CO 4		√		√			√				
CO 5						√				√	
CO 6	√				√						√
CO 7			√								

Sample:

Name of the student :BALAJI C

Section: A

Register Number : 2017107032

Course Outcomes	Review 1			Review 2				Review 3				Max Mark	Obtained Mark	Convert to 100
	R 1.1	R 1.2	R 1.3	R 2.1	R 2.2	R 2.3	R 2.4	R 3.1	R 3.2	R 3.3	R 3.4			
CO 1	35				19							60	54	90
CO 2		26		26					28			90	80	89
CO 3							16	18				40	34	85
CO 4		26		26			16					80	68	85
CO 5						29				30		60	59	98
CO 6	35				19						14	80	68	85
CO 7			25									30	25	83

Project Review

Over all class performance

Review 1 :

Assessment of COs based on Review 1 Rubrics										
Review Criteria No	R1.1.1	R1.1.2	R1.1.3	R1.1.4	R1.2.1	R1.2.2	R1.2.3	R1.3.1	R1.3.2	R1.3.3
Criteria	Definition of the Problem	Motivation for the Problem	Objectives of the Project Work	Usefulness/ Relevance to the society	Quantum of Literature referred	Quality of literature referred	Inference from the Literature Survey	Voice and tone	Language	Responsiveness
Marks	91	90	97	90	90	90	89	84	77	80

Review 2:

Assessment of COs based on Review 2 Rubrics										
Review Criteria No	R2.1.1	R2.1.2	R2.1.3	R2.2.1	R2.2.2	R2.3.1	R2.3.2	R2.3.3	R2.4.1	R2.4.2
Criteria	Analysis of Design requirements	Design of experiments for analyzing data / functional block / architectural design	Meeting the design requirements	Consideration for public health, safety and cultural aspects	Consideration for social and environmental aspects	Working with others	Listening to others views	Contribution to the Project work	Identification of appropriate tool	Proper usage of the Modern tool
Marks	89	83	83	95	89	95	94	93	89	86

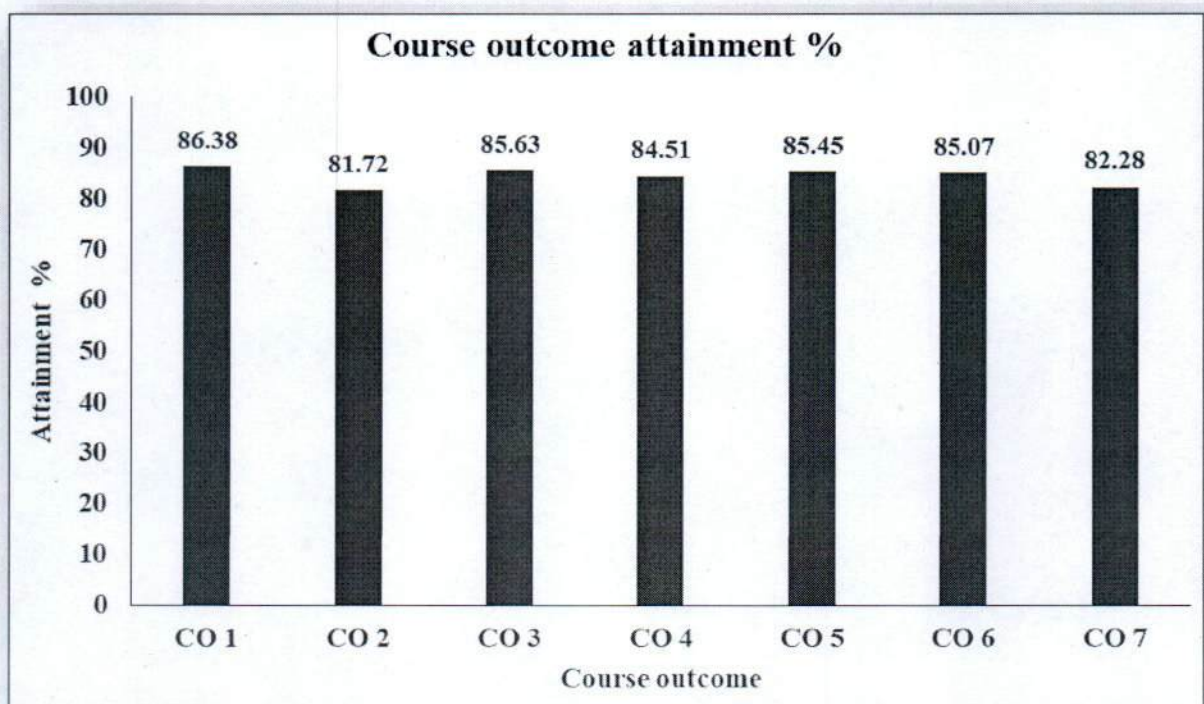
Review 3:

Assessment of COs based on Review3 Rubrics										
Review Criteria No	R3.1.1	R3.1.2	R3.2.1	R3.2.2	R3.2.3	R3.3.1	R3.3.2	R3.3.3	R3.4.1	R3.4.2
Criteria	Adopting ethical norms and procedures for the design	Acknowledgement for using other's published results or ideas	Experimental Results	Analysis / Interpretation of Results	Conclusion of the Project work	Time Management	Finance management / Cost Analysis	Sharing of Work among project members	Extent of advanced learning to carry out the project	Novelty of the project work & Scope for extension
Marks	93	91	90	91	92	91	87	89	92	89

Course Outcome Attainment of Project work

Project work course outcome Attainment - Batch 2017-2021

Course Outcome	Attainment %
CO 1	86.38
CO 2	81.72
CO 3	85.63
CO 4	84.51
CO 5	85.45
CO 6	85.07
CO 7	82.28

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Mapping of COs with POs

Mapping of COs with POs

Course Outcomes	Program Outcomes (POs)												PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO 1	3		3				3						3	3
CO 2		3		3									3	3
CO 3					3			3					3	3
CO 4		3			3								3	3
CO 5									3		3		3	3
CO 6						3	3					3	3	3
CO 7										3			3	3
	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Attainment of
POs & PSO
for
Project work

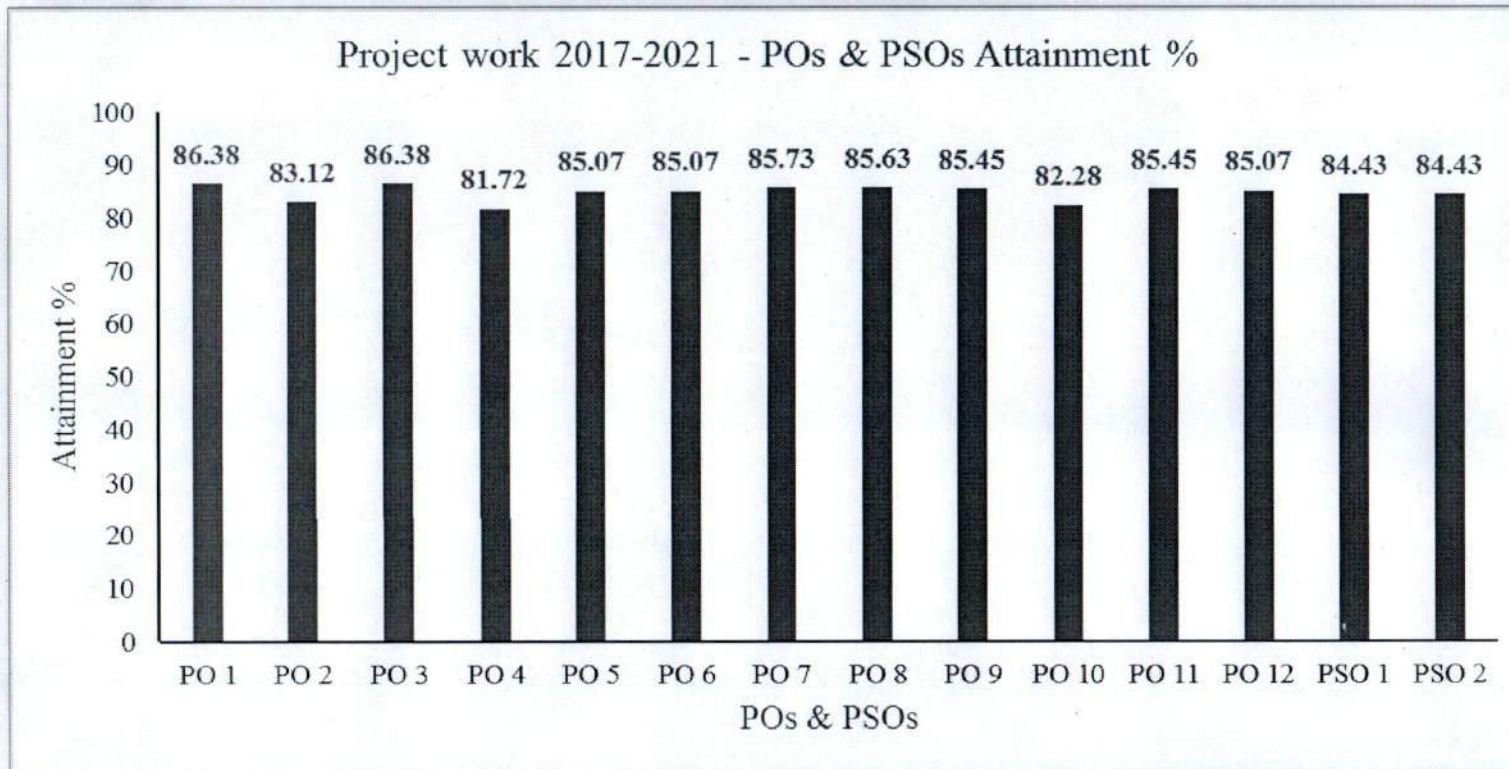
POs & PSOs Attainment for Project work Batch 2017-2021

Program Outcomes (POs)	Attainment %
PO 1	86.38
PO 2	83.12
PO 3	86.38
PO 4	81.72
PO 5	85.07
PO 6	85.07
PO 7	85.73
PO 8	85.63
PO 9	85.45
PO 10	82.28
PO 11	85.45
PO 12	85.07
PSO 1	84.43
PSO 2	84.43




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Department of Mechanical Engineering
Sethu Institute of Technology
Pulloor, Kariapatti (Tk.)
Virudhunagar Dist - 626 115

POs & PSOs Attainment for Project work Batch 2017-2021



Sethu Institute of Technology, Pulloor, Kariapatti – 626 115. Tamil Nadu.


HEAD OF THE DEPARTMENT
Department of Mechanical Engineering
Sethu Institute of Technology
Pulloor, Kariapatti (Tk.)
Virudhunagar Dist - 626 115

**ASSESSMENT OF
COs & POs
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PROJECT WORK**

**DEPARTMENT OF INFORMATION
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**COURSE
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Project work POs Attainment

Course Outcomes for Project Work:

1. Design/Develop sustainable solutions for societal issues with environmental considerations applying the basic engineering knowledge.[K6-Create]
2. Analyze and review research literature to synthesize research methods including design of experiments to provide valid conclusion. [K4-Analyze]
3. Utilize the new tools, algorithms, techniques to provide valid conclusion following the norms of engineering practice.[K3-Apply]
4. Test and Evaluate the performance of the developed solution using appropriate techniques and tools.[K5-Evaluate]
5. Apply management principles to function effectively in the project team for project execution. [A4-Organize]
6. Engage in learning for effective project implementation in the broadest context of technological change with consideration for public health, safety, cultural and societal needs. [A3-Value]
7. Write effective reports and make clear presentation to the engineering community and society [A2-Respond]

Rubrics for Project work Assessment

Rubrics for Project work Assessment**Rubrics for project work assessment – Review 1 sample**

Name of the student : ATSHAYA G Section : A
 Register Number : 2017108010

S. No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improv ement (1,2)
R 1.1 Applying Engineering knowledge for Problem Identification/Identification of Societal issues - 40 Marks						
1	Definition of the Problem	9				
2	Motivation for the Problem		8			
3	Objectives of the Project Work	9				
4	Usefulness/Relevance to the society		8			
R 1.2 Literature Survey - 30 Marks						
1	Quantum of Literature referred	9				
2	Quality of literature referred	9				
3	Inference from the Literature Survey	9				
R 1.3 Communication - Oral - 30 Marks						
1	Voice and tone	9				
2	Language		8			
3	Responsiveness	9				

Review 1Marks:

Review Criteria	Max Marks	Marks Obtained
R 1.1	40	34
R 1.2	30	27
R 1.3	30	26
Total	100	87


 Signature of Reviewers

Rubrics for Project work Assessment – Review 2 sample

Name of the student : ATSHAYA G Section : A

Register Number : 2017108010

S.No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improvement (1,2)
R 2.1 Analysis of Design requirements - 30 Marks						
1	Analysis of design requirements	9				
2	Design of experiments for analyzing data/Functional Block/Architectural Design	9				
3	Meeting the Design Requirements	9				
R 2.2 Addressing public health, safety, cultural and societal and environmental needs - 20 Marks						
1	Consideration for public health, safety and cultural aspects	9				
2	Consideration for social and environmental aspects	9				
R 2.3 Team Work - 30 Marks						
1	Working with others	9				
2	Listening to others views	9				
3	Contribution to the Project Work	9				
R 2.4 Modern Engineering & IT Tools used - 20 Marks						
1	Identification of appropriate tool	9				
2	Proper usage of the Modern tool		8			

Review 2 Marks:

Review Criteria	Max Marks	Marks Obtained
R 2.1	30	27
R 2.2	20	18
R 2.3	30	27
R 2.4	20	17
Total	100	89



Signature of Reviewers

Rubrics for Project work Assessment – Review 3 sample

Name of the student : ATSHAYA G

Section : A

Register Number : 2017108010

S.No.	Review Criteria	Excellent (9,10)	Very Good (7,8)	Good (5,6)	Satisfactory (3,4)	Needs Improvement (1,2)
Adopting the norms of engineering practice - 20 Marks						
1	Adopting ethical norms and procedures for the design	9				
2	Acknowledgement for using other's published results or ideas	9				
Synthesis and valid conclusion of the project - 30 Marks						
1	Experimental Results	9				
2	Analysis/Interpretation of Results	9				
3	Conclusion of the Project Work		8			
Project Management and Finance - 30 Marks						
1	Time management	9				
2	Finance management/Cost Analysis	9				
3	Sharing of Work among the members		8			
Novelty - 20 Marks						
1	Extent of advanced learning to carry out the project	9				
2	Novelty of the Project Work & Scope for Extension	9				

Review 3 Marks:

Review Criteria	Max Marks	Marks Obtained
R 3.1	20	18
R 3.2	30	26
R 3.3	30	26
R 3.4	20	18
Total	100	88



Signature of Reviewers

Assessment of Attainment of COs based on Review Rubrics

Overall COs Assessment based on review rubrics

Course Outcomes	Review 1			Review 2				Review 3			
	R 1.1	R 1.2	R 1.3	R 2.1	R 2.2	R 2.3	R 2.4	R 3.1	R 3.2	R 3.3	R 3.4
CO 1	√				√						
CO 2		√		√					√		
CO 3							√	√			
CO 4		√		√			√				
CO 5						√				√	
CO 6	√				√						√
CO 7			√								

Sample:

Name of the student : **BALAJI C** Section : **A** Register Number : **2017107032**

Course Outcomes	Review 1			Review 2				Review 3				Max Mark	Obtained Mark	Convert to 100
	R 1.1	R 1.2	R 1.3	R 2.1	R 2.2	R 2.3	R 2.4	R 3.1	R 3.2	R 3.3	R 3.4			
CO 1	34				18							60	52	87
CO 2		27		27					26			90	80	89
CO 3							17	18				40	35	88
CO 4		27		27			17					80	71	89
CO 5						27				26		60	53	88
CO 6	34				18						18	80	70	88
CO 7			26									30	26	87

Project Review

Over all class performance

Review 1:

Assessment of COs based on review 1 rubrics										
Review Criteria No	R1.1.1	R1.1.2	R1.1.3	R1.1.4	R1.2.1	R1.2.2	R1.2.3	R1.3.1	R1.3.2	R1.3.3
Criteria	Definition of the Problem	Motivation for the Problem	Objectives of the Project Work	Usefulness/ Relevance to the society	Quantum of Literature referred	Quality of literature referred	Inference from the Literature Survey	Voice and tone	Language	Responsiveness
Marks	81	82	82	81	79	81	79	83	83	83

Review 2:

Assessment of COs based on review 2 rubrics										
Review Criteria No	R2.1.1	R2.1.2	R2.1.3	R2.2.1	R2.2.2	R2.3.1	R2.3.2	R2.3.3	R2.4.1	R2.4.2
Criteria	Analysis of Design requirements	Design of experiments for analyzing data / functional block / architectural design	Meeting the design requirements	Consideration for public health, safety and cultural aspects	Consideration for social and environmental aspects	Working with others	Listening to others views	Contribution to the Project work	Identification of appropriate tool	Proper usage of the Modern tool
Marks	81	81	81	85	85	83	84	84	83	83

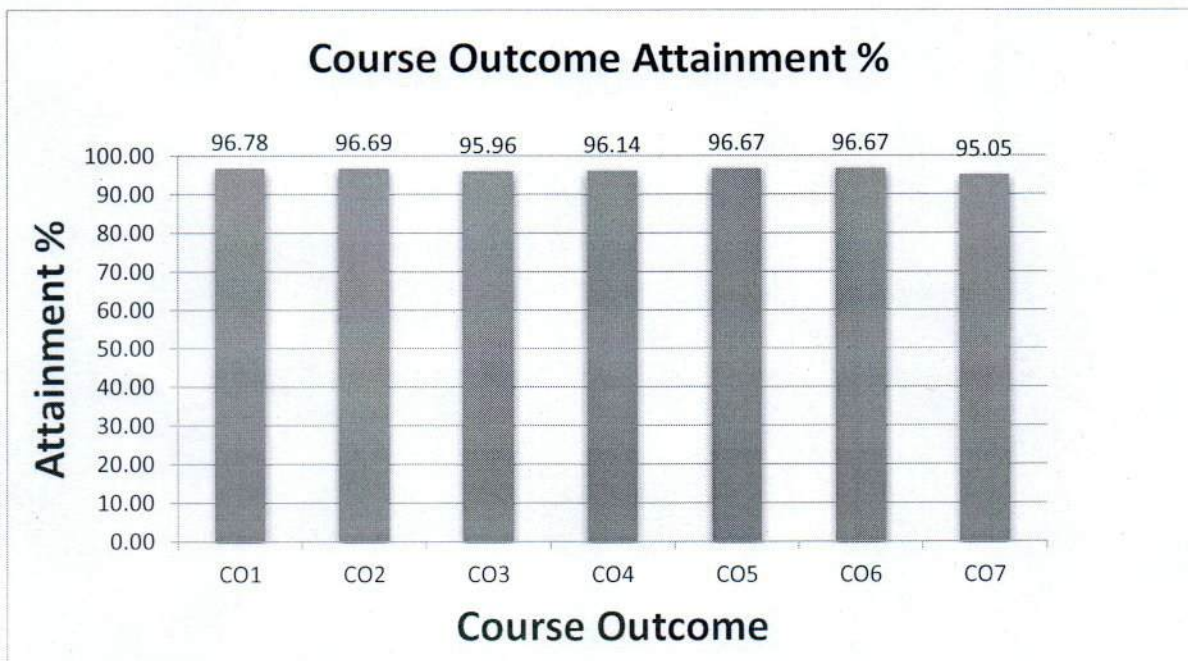
Review 3:

Assessment of COs based on review3 rubrics										
Review Criteria No	R3.1.1	R3.1.2	R3.2.1	R3.2.2	R3.2.3	R3.3.1	R3.3.2	R3.3.3	R3.4.1	R3.4.2
Criteria	Adopting ethical norms and procedures for the design	Acknowledgement for using other's published results or ideas	Experimental Results	Analysis / Interpretation of Results	Conclusion of the Project work	Time Management	Finance management / Cost Analysis	Sharing of Work among project members	Extent of advanced learning to carry out the project	Novelty of the project work & Scope for extension
Marks	85	85	85	87	85	85	85	85	86	87

Course Outcome Attainment of Project work

Project work course outcome Attainment - Batch 2017-2021

Course Outcome	Attainment %
CO 1	96.78
CO 2	96.69
CO 3	95.96
CO 4	96.14
CO 5	96.67
CO 6	96.67
CO 7	95.05



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Mapping of COs with POs

Mapping of COs with POs

Course Outcomes	Program Outcomes (POs)												PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO 1	3		3				3						3	3
CO 2		3		3									3	3
CO 3					3			3					3	3
CO 4		3			3								3	3
CO 5									3		3		3	3
CO 6						3	3					3	3	3
CO 7										3			3	3
	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Attainment of
POs & PSO
for
Project work

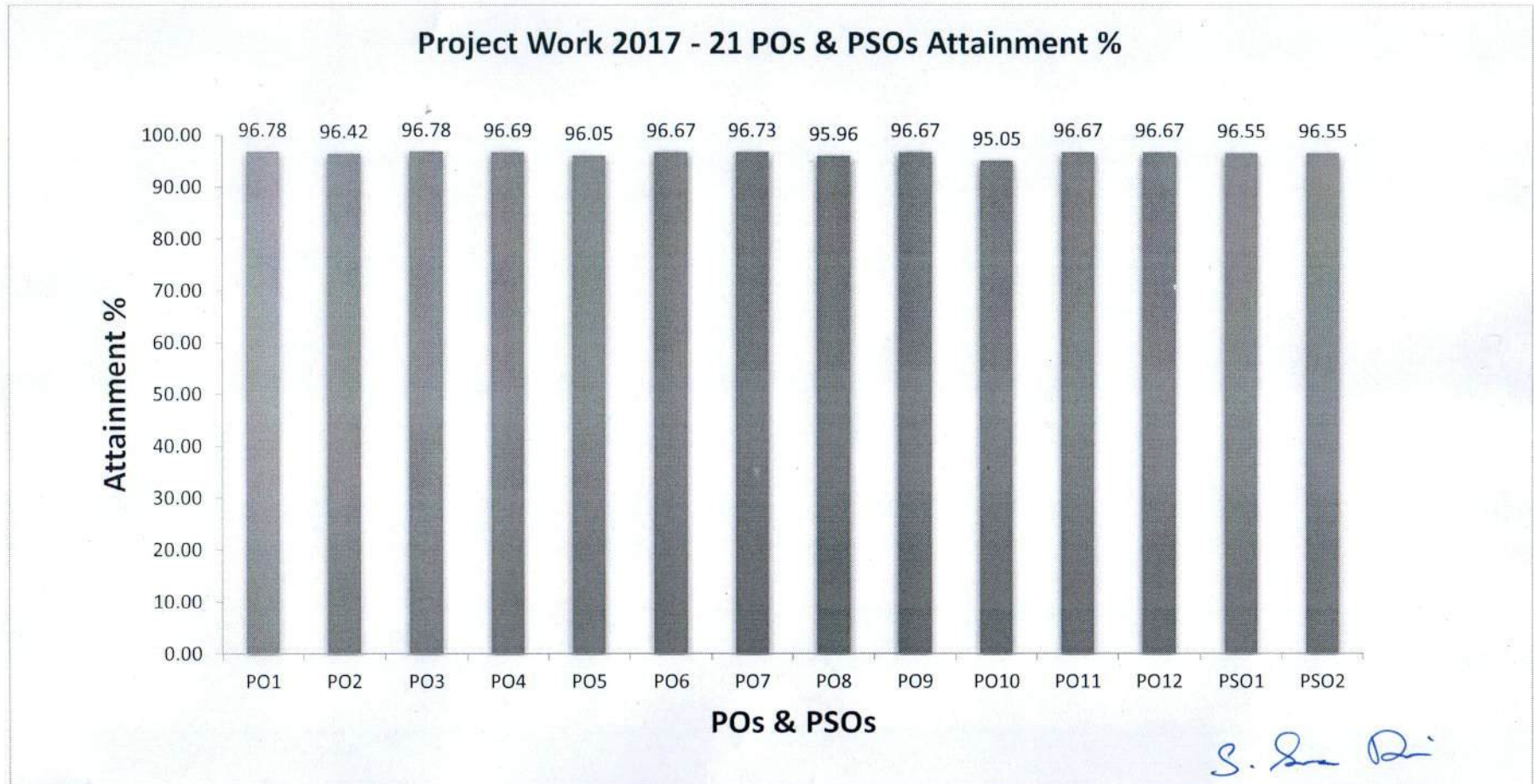
POs & PSOs Attainment for Project work Batch 2017-2021

Program Outcomes (POs)	Attainment %
PO 1	96.78
PO 2	96.42
PO 3	96.78
PO 4	96.69
PO 5	96.05
PO 6	96.67
PO 7	96.73
PO 8	95.96
PO 9	96.67
PO 10	95.05
PO 11	96.67
PO 12	96.67
PSO 1	96.55
PSO 2	96.55



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POs & PSOs Attainment for Project work Batch 2017-2021



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