CO-PO REPORT OF STATISTICS(SF)

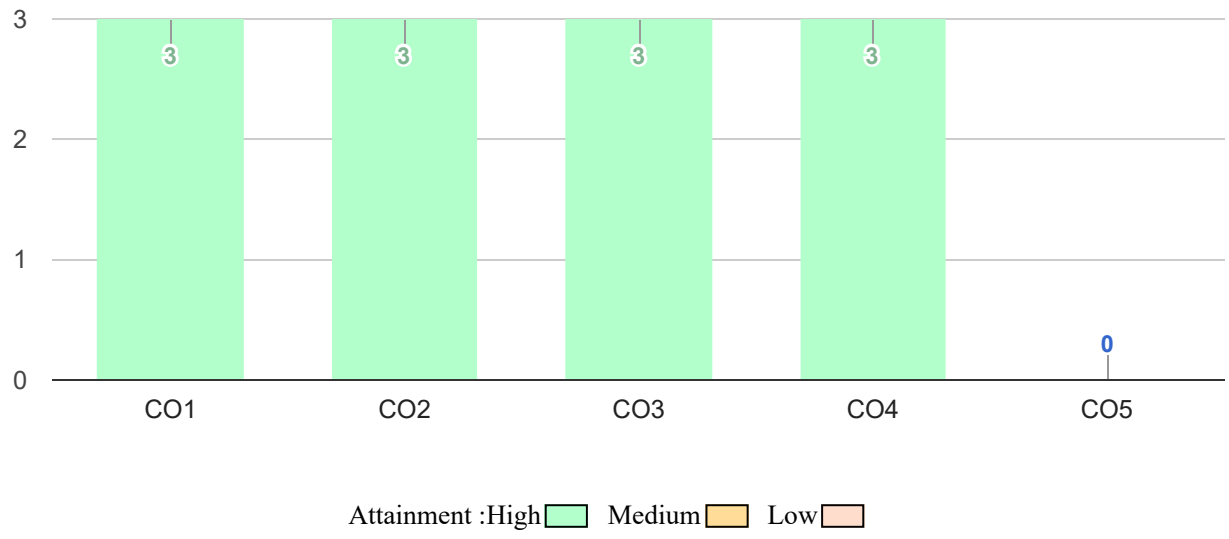
SI No	Course Code	Name of Course	Teacher -in-Charge
1	CC22PMST2C06	Design and Analysis of Experiments	Jiji M. B
2	CC22PMST2C07	Estimation Theory	Mary Priya
3	CC22PMST2C08	Sampling Theory	Geethu Gopinath
4	CC22PMST2C09	Testing of statistical Hypotheses	Dr. Davis Antony M

CHRIST COLLEGE (AUTONOMOUS)
IRINJALAKUDA.Kerala-680125

Program(s) : PG - MSC - M.Sc. Statistics (Self Financing)	**Department(s) :** STATISTICS	**Batch(s) :** MSC STAT 2022 - S2
Course Community : CC22PMST2C06 MSC STAT 2022 S2	**Faculty(s) :** Jiji M B	**Course :** Design and Analysis of Experiments

#	CO	CO1	CO2	CO3	CO4	CO5
1	Design and Analysis of Experiments	3.00	3.00	3.00	3.00	*
Attainment :High Medium Low						

CO Attainment Levels



CO List	
CO Code	**Description**
CO1	Discuss and compare different complete block designs with and without ancillary variables.
CO2	Analyze experiments with and without missing values.
CO3	Apply incomplete block designs and balanced incomplete block designs
CO4	Explain factorial experiments, total confounding and partial confounding.
CO5	Describe Response surface design and method of steepest accent.

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Course Community : CC22PMST2C06 MSC STAT 2022 S2	**Faculty(s) :** Jiji M B	**Course :** Design and Analysis of Experiments

CO PO ATTAINMENT Report

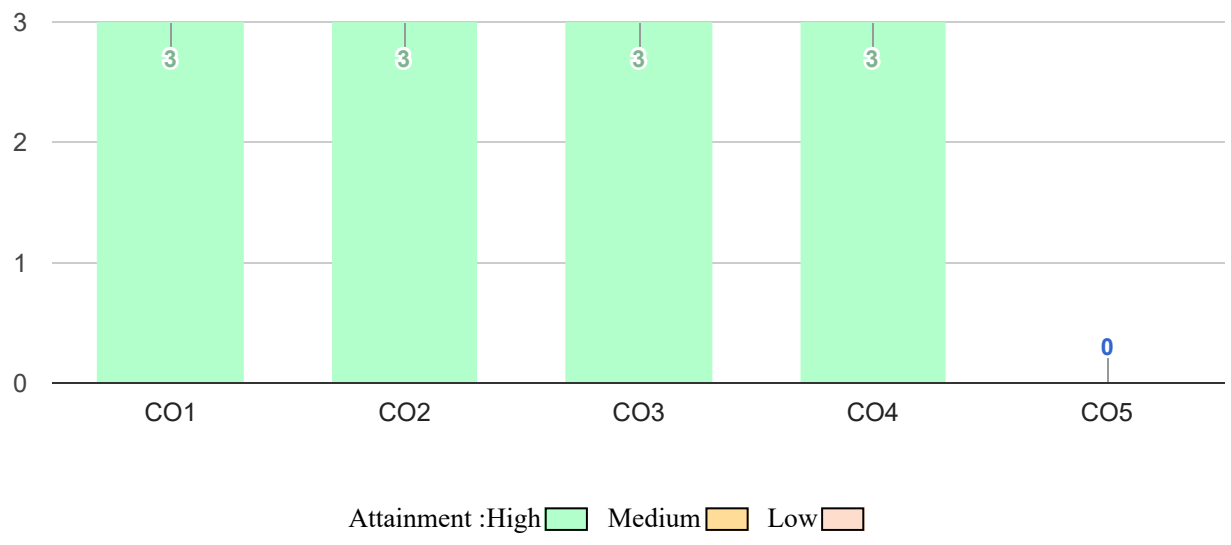
Above Target Percentage : **Below Target Percentage:**

#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
1	CCAWMST001	AISWARYA P S	98.4	98.4	90.72	85.6	60
2	CCAWMST002	ALWIN. P.P	94.09	100	100	79.52	100
3	CCAWMST003	ARIFA A S	87.59	73.12	79.09	34.72	73.12
4	CCAWMST004	GURUSAMY L	29.12	9.92	13.58	9.92	9.92
5	CCAWMST005	MALAVIKA P	99.04	99.04	99.04	99.04	35.04
6	CCAWMST006	NAMRUTHA T U	95.96	98.4	93.28	85.6	34.4
7	CCAWMST007	PARVATHY GOPALAKRISHNAN	94.6	99.04	74.65	79.57	28.37
8	CCAWMST008	PRANAV A P	82.39	90.13	77.6	69.6	26.13
9	CCAWMST009	RIYAN MOHAMMAD	87.49	96.8	66.55	76.32	45.6
10	CCAWMST013	ROSMIYA JOSEPH	77	30.24	64.7	86.24	36.37
11	CCAWMST010	SAMIA A A	86.37	96.8	96.8	96.8	32.8
12	CCAWMST011	SELIN STELVIA RODRIGUES	94.61	98.4	93.07	72.8	34.4

CO PO ATTAINMENT Report							
Above Target Percentage : Below Target Percentage:							
#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
13	CCAWMST012	VISHNUPRIYA V	99.04	99.04	95.63	99.04	35.04

Class Strength	15				
Course Outcomes addressed	CO1	CO2	CO3	CO4	CO5
Target of Course Outcome	60	60	60	60	60
No of students with CO value greater than or equal to 60	12	11	12	11	3
Percentage of students with CO value greater than 60	92.31	84.62	92.31	84.62	23.08
Average	86.59	83.79	80.36	74.98	42.4
Attainment Level	3.00	3.00	3.00	3.00	0
Attainment :High Medium Low					

CO Attainment Levels



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CO1	Discuss and compare different complete block designs with and without ancillary variables.
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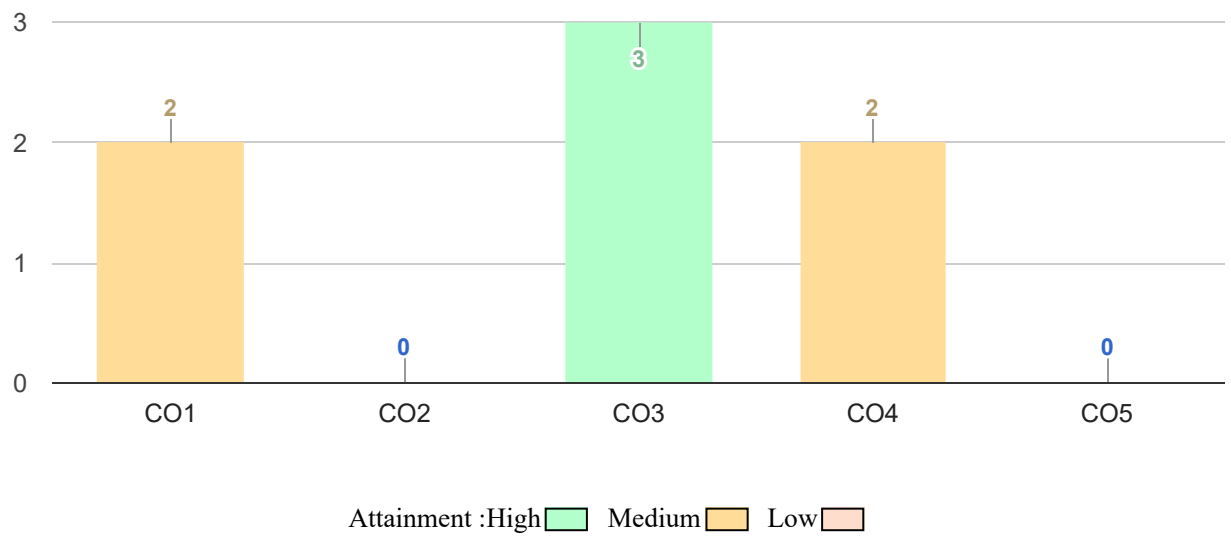
Program(s) : PG - MSC - M.Sc. Statistics (Self Financing)	**Department(s) :** STATISTICS	**Batch(s) :** MSC STAT 2022 - S2
Course Community : CC22PMST2C07 MSC STAT 2022 S2	**Faculty(s) :** Mary Priya	**Course :** Estimation Theory

#	CO	CO1	CO2	CO3	CO4	CO5
1	Estimation Theory	2.00	*	3.00	2.00	*
Attainment :High Medium Low						

CO Attainment Levels



CO List	
CO Code	**Description**
CO1	Describe the properties of estimators: unbiasedness, consistency and sufficiency and Explain exponential family and Pitman family of distributions, with illustrations.
CO2	Describe the method of finding sufficient statistics, minimum variance unbiased estimators, consistent estimators and consistent and asymptotically normal estimators.
CO3	Relate sufficient statistic and ancillary statistic using Basu's thorem and Determine UMVUE using complete sufficient statistic using Rao- Blackwell, and Lehmann-Scheffe theorems.
CO4	Determine the estimators using method of moments, method of percentiles, maximum likelihood method and Bayesian method.
CO5	Explain the concept of interval estimation- SELCI, Bayesian and Fiduicial Intervals.

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Course Community : CC22PMST2C07 MSC STAT 2022 S2	**Faculty(s) :** Mary Priya	**Course :** Estimation Theory

CO PO ATTAINMENT Report

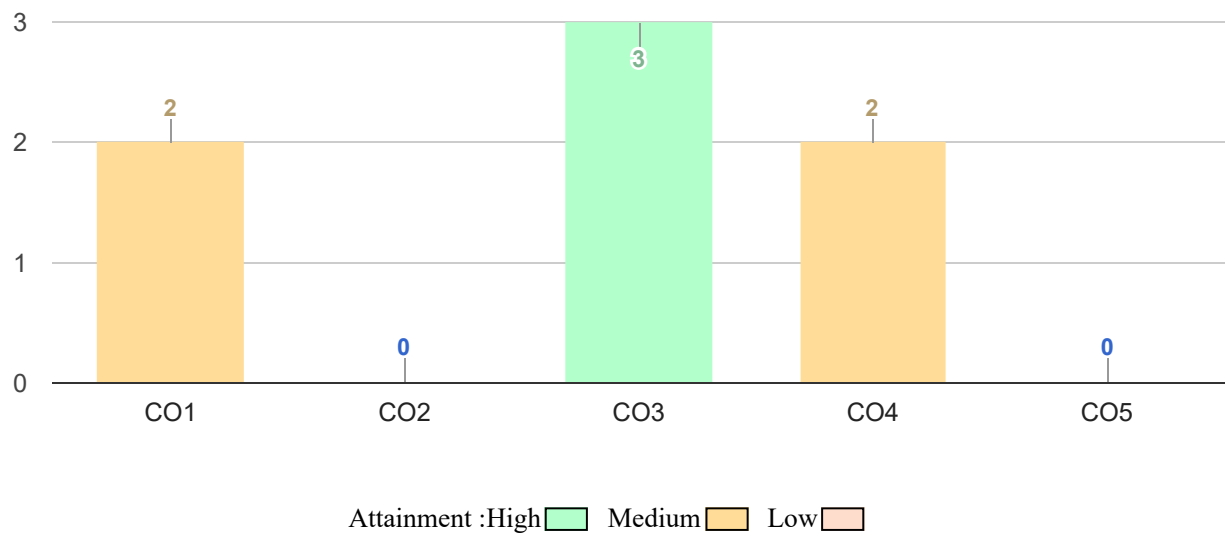
Above Target Percentage : **Below Target Percentage:**

#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
1	CCAWMST001	AISWARYA P S	97.44	100	92	87.2	100
2	CCAWMST002	ALWIN. P.P	84.62	34.4	85.6	85.6	47.2
3	CCAWMST003	ARIFA A S	82.51	34.72	90.72	74.95	34.72
4	CCAWMST004	GURUSAMY L	11.2	11.2	11.2	11.2	11.2
5	CCAWMST005	MALAVIKA P	90.87	34.72	90.72	89.86	34.72
6	CCAWMST006	NAMRUTHA T U	67.83	56.8	48.8	55.38	31.2
7	CCAWMST007	PARVATHY GOPALAKRISHNAN	87.71	97.44	77.97	92.52	26.77
8	CCAWMST008	PRANAV A P	48	31.2	72.53	53.14	24.53
9	CCAWMST009	RIYAN MOHAMMAD	59.25	30.56	73.76	43.36	30.56
10	CCAWMST013	ROSMIYA JOSEPH	47.95	43.68	54.61	56.48	62.61
11	CCAWMST010	SAMIA A A	78.95	33.12	89.12	65.61	33.12
12	CCAWMST011	SELIN STELVIA RODRIGUES	79.73	32.8	61.6	80.34	84

CO PO ATTAINMENT Report							
Above Target Percentage : Below Target Percentage:							
#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
13	CCAWMST012	VISHNUPRIYA V	86.45	34.4	72.8	89.26	60

Class Strength	15				
Course Outcomes addressed	CO1	CO2	CO3	CO4	CO5
Target of Course Outcome	60	60	60	60	60
No of students with CO value greater than or equal to 60	9	2	10	8	4
Percentage of students with CO value greater than 60	69.23	15.38	76.92	61.54	30.77
Average	70.96	44.23	70.88	68.07	44.66
Attainment Level	2.00	0	3.00	2.00	0
Attainment :High Medium Low					

CO Attainment Levels



CO List	
CO Code	**Description**
CO1	Describe the properties of estimators: unbiasedness, consistency and sufficiency and Explain exponential family and Pitman family of distributions, with illustrations.
CO2	Describe the method of finding sufficient statistics, minimum variance unbiased estimators, consistent estimators and consistent and asymptotically normal estimators.
CO3	Relate sufficient statistic and ancillary statistic using Basu's thorem and Determine UMVUE using complete sufficient statistic using Rao- Blackwell, and Lehmann-Scheffe theorems.
CO4	Determine the estimators using method of moments, method of percentiles, maximum likelihood method and Bayesian method.
CO5	Explain the concept of interval estimation- SELCI, Bayesian and Fiduicial Intervals.

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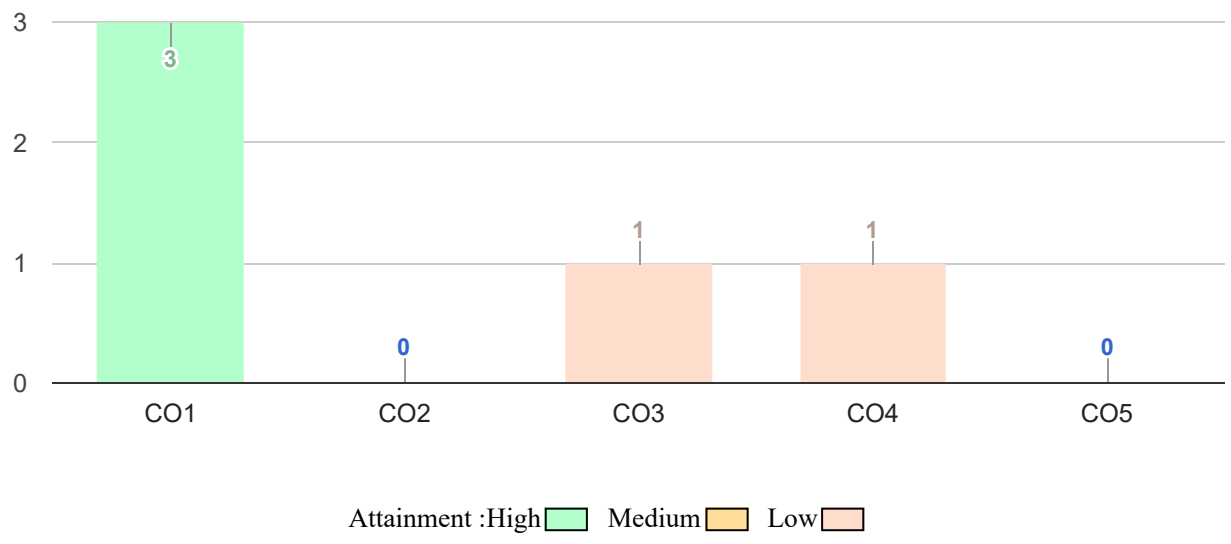
Program(s) : PG - MSC - M.Sc. Statistics (Self Financing)	**Department(s) :** STATISTICS	**Batch(s) :** MSC STAT 2022 - S2
Course Community : CC22PMST2C08 MSC STAT 2022 S2	**Faculty(s) :** Geethu Gopinath	**Course :** Sampling Theory

#	CO	CO1	CO2	CO3	CO4	CO5
1	Sampling Theory	3.00	*	1.00	1.00	*
Attainment :High Medium Low						

CO Attainment Levels



CO List	
CO Code	**Description**
CO1	Apply the sampling methods: simple random sampling, systematic sampling, stratified sampling and cluster sampling and ; Estimate the population parameters for variables and attributes under each methods.
CO2	Estimate the population parameters concerning the study variables under auxiliary information.
CO3	Explain the concepts of ordered and unordered estimators and its properties.
CO4	Discuss probability proportional to size (PPS) sampling strategies.
CO5	Discuss the multi stage and multiphase sampling, Describe non-sampling errors.

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Course Community : CC22PMST2C08 MSC STAT 2022 S2	**Faculty(s) :** Geethu Gopinath	**Course :** Sampling Theory

CO PO ATTAINMENT Report

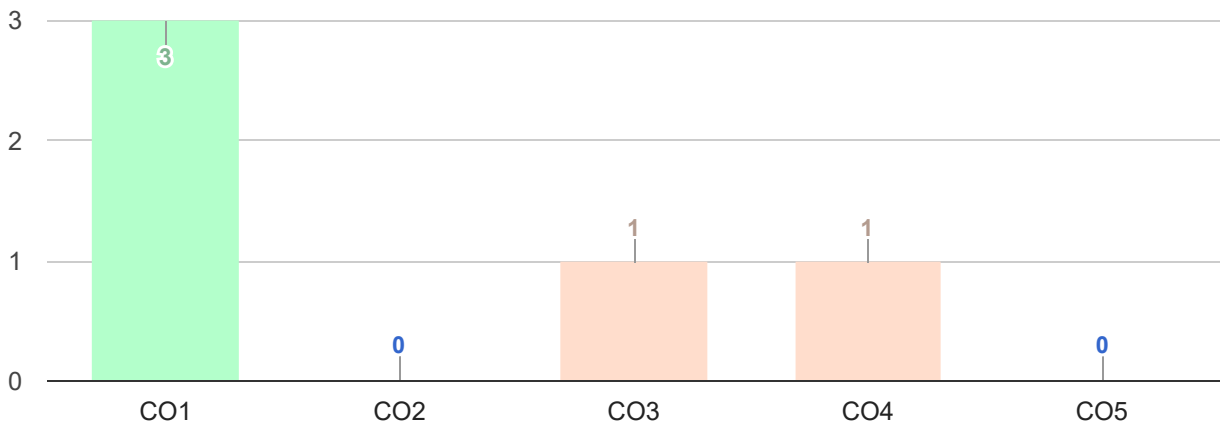
Above Target Percentage : **Below Target Percentage:**

#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
1	PGST8	NEETHU KRISHNAN	0	0	0	0	0
2	PGST3	SUNITHRAKUMARI T S	0	0	0	0	0
3	CCAWMST001	AISWARYA P S	90.72	98.4	98.4	98.4	34.4
4	CCAWMST002	ALWIN. P.P	89.12	85.6	34.4	98.4	67.11
5	CCAWMST003	ARIFA A S	82.69	60	85.6	34.4	34.4
6	CCAWMST004	GURUSAMY L	9.41	6.72	6.72	6.72	6.72
7	CCAWMST005	MALAVIKA P	96.8	100	100	100	36
8	CCAWMST006	NAMRUTHA T U	79.15	46.24	97.44	33.44	46.24
9	CCAWMST007	PARVATHY GOPALAKRISHNAN	99.04	92.37	66.77	92.37	99.04
10	CCAWMST008	PRANAV A P	60.42	32.8	45.6	32.8	45.6
11	CCAWMST009	RIYAN MOHAMMAD	69.74	31.52	31.52	82.72	58.58

CO PO ATTAINMENT Report							
Above Target Percentage : Below Target Percentage:							
#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
12	CCAWMST013	ROSMIYA JOSEPH	44.66	29.6	48.53	22.93	37.33
13	CCAWMST010	SAMIA A A	71.58	46.56	84.96	97.76	33.76
14	CCAWMST011	SELIN STELVIA RODRIGUES	86.52	45.6	96.8	96.8	61.24
15	CCAWMST012	VISHNUPRIYA V	85.6	34.4	98.4	93.28	72.8

Class Strength	15				
Course Outcomes addressed	CO1	CO2	CO3	CO4	CO5
Target of Course Outcome	60	60	60	60	60
No of students with CO value greater than or equal to 60	11	5	8	8	4
Percentage of students with CO value greater than 60	73.33	33.33	53.33	53.33	26.67
Average	64.36	47.32	59.68	59.33	42.21
Attainment Level	3.00	0	1.00	1.00	0
Attainment :High Medium Low					

CO Attainment Levels



Attainment :High Medium Low

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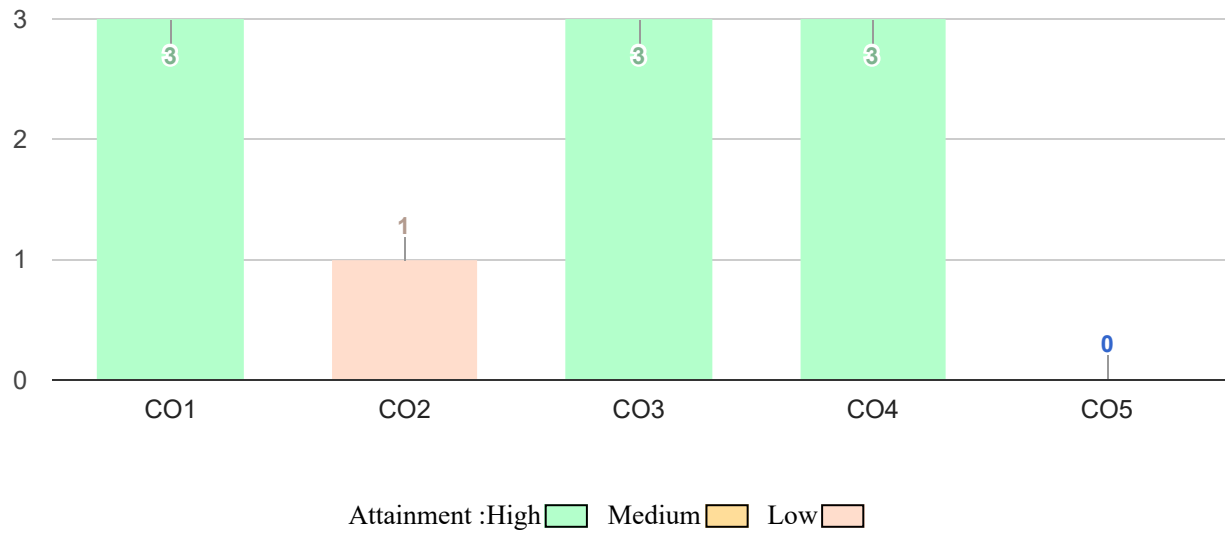
Course Community : CC22PMST2C09 MSC STAT 2022 S2	**Faculty(s) :** Dr. Davis Antony Mundassery	**Course :** Testing of Statistical Hypotheses

#	CO	CO1	CO2	CO3	CO4	CO5
1	Testing of Statistical Hypotheses	3.00	1.00	3.00	3.00	*
Attainment :High Medium Low						

CO Attainment Levels



CO List	
CO Code	**Description**
CO1	Explain the problem of testing of hypotheses and the concept of p value.
CO2	Construct most powerful tests using Neyman-Pearson lemma, one-sided and two-sided UMP tests and UMP unbiased tests.
CO3	Describe the concept of α-similar tests and construct such tests.
CO4	Apply nonparametric tests for testing goodness of fit, homogeneity and independence.
CO5	Develop SPRT for different problems.

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Course Community : CC22PMST2C09 MSC STAT 2022 S2	**Faculty(s) :** Dr. Davis Antony Mundassery	**Course :** Testing of Statistical Hypotheses

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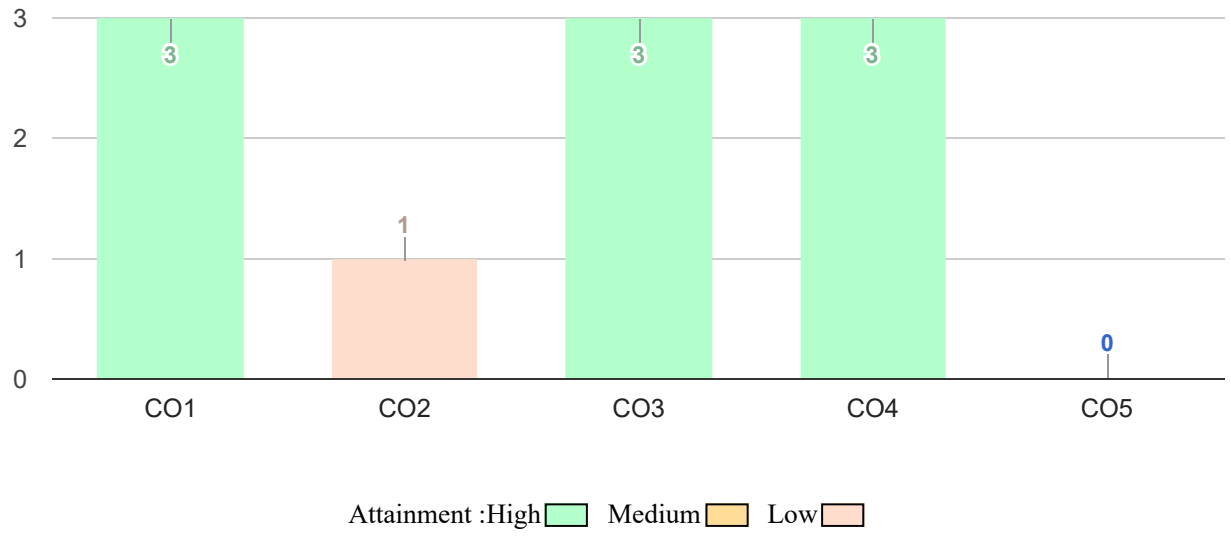
Above Target Percentage : **Below Target Percentage:**

#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
1	CCAWMST001	AISWARYA P S	98.4	98.4	86.51	98.4	60
2	CCAWMST002	ALWIN. P.P	99.52	99.52	89.92	99.52	35.52
3	CCAWMST003	ARIFA A S	91.57	73.44	84.64	86.24	47.84
4	CCAWMST004	GURUSAMY L	9.6	22.4	9.6	9.6	16
5	CCAWMST005	MALAVIKA P	86.72	35.52	90.48	96.32	35.52
6	CCAWMST006	NAMRUTHA T U	85.28	72.48	79.37	77.6	46.88
7	CCAWMST007	PARVATHY GOPALAKRISHNAN	91.36	86.24	90.24	99.04	35.04
8	CCAWMST008	PRANAV A P	45.6	32.8	69.65	75.73	32.8
9	CCAWMST009	RIYAN MOHAMMAD	62.72	14.08	45.01	71.68	14.08
10	CCAWMST013	ROSMIYA JOSEPH	50.77	57.44	59.27	51.04	50.77
11	CCAWMST010	SAMIA A A	77.6	71.2	71.2	90.4	96.8
12	CCAWMST011	SELIN STELVIA RODRIGUES	63.64	71.52	69.69	92.32	33.12

CO PO ATTAINMENT Report							
Above Target Percentage : Below Target Percentage:							
#	Reg No	Student Name	CO1	CO2	CO3	CO4	CO5
13	CCAWMST012	VISHNUPRIYA V	98.4	34.4	87.57	95.2	60

Class Strength	15				
Course Outcomes addressed	CO1	CO2	CO3	CO4	CO5
Target of Course Outcome	60	60	60	60	60
No of students with CO value greater than or equal to 60	10	7	10	11	3
Percentage of students with CO value greater than 60	76.92	53.85	76.92	84.62	23.08
Average	73.94	59.19	71.78	80.24	43.41
Attainment Level	3.00	1.00	3.00	3.00	0
Attainment :High Medium Low					

CO Attainment Levels



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