



## DEPARTMENT OF MECHANICAL ENGINEERING

### Course Outcomes and Program Outcomes

Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs)

#### Program Specific Outcomes

<b>PSO1</b>	Ability to design, analysis and problem-solving skills using basic principles of Mechanical engineering.
<b>PSO2</b>	Ability to impart technical and professional skills through industry institute interaction.
<b>PSO3</b>	Develop practical skills for the benefits of society.

#### Course Outcomes (COs)

**Course: - Material Science Course code: -C205 A.Y. -2019-20 SEM-3<sup>rd</sup>**

**Students will be able**

C205.1	To describe the fundamentals of crystal structure and determine the Miller indices.
C205.2	To identify defects in crystal structure and discuss work hardening theory.
C205.3	To demonstrate destructive and nondestructive testing methods.
C205.4	To describe corrosion and preventive techniques.
C205.5	To discuss surface modification techniques.
C205.6	To apply powder metallurgy process for industrial applications.

**Course: - Theory of Machines-I Course code: - C209 A.Y. -2019-20 SEM-4<sup>th</sup>**

**Students will be able**

C209.1	To demonstrate mechanisms in real life applications and calculate the degrees of freedom
C209.2	To analyze static and dynamic force of slider crank mechanism and determine moment of inertia of rigid bodies experimentally and analytically

C209.3	To analyze clutches, brakes and dynamometers
C209.4	To analyze velocity and acceleration of mechanisms by analytical methods and to analyze Hook's joint
C209.5	To analyze velocity and acceleration of mechanisms by relative velocity and ICR graphically.
C209.6	To analyze velocity and acceleration of mechanisms involving coriolis component of acceleration graphically and slider crank mechanism by using Klien's construction

**Course: - Theory of Machines-II Course code: - C303 A.Y. -2019-20 SEM-5<sup>th</sup>**

**Students will be able**

C303.1	To analyze spur gears kinematically.
C303.2	To analyze helical. Spiral. Bevel, and worm and worm gears.
C303.3	To analyze epi-cyclic gear trains
C303.4	To construct cam profile and analyze cam jump phenomenon for eccentric cam with flat faced follower.
C303.5	To synthesize four bar and slider crank mechanism by analytical and graphical methods.
C303.6	To determine the gyroscopic couple and its effect for Ship, Aero plane and automobile and able to choose appropriate drive for given application (stepped / stepless)

**Course: - Refrigeration and Air-conditioning Course code: - C309 A.Y. -2019-20 SEM-6<sup>th</sup>**

**Students will be able**

C309.1	To illustrate applications of refrigeration and air conditioning and describe different types of refrigerants
C309.2	To analyze vapour compression and vapour absorption refrigeration systems
C309.3	To analyze multiple pressure refrigeration systems
C309.4	To analyze psychrometric processes and discuss human comfort.
C309.5	To describe construction and working of air conditioning systems
C309.6	To design and analyze the duct system

**Course: - Dynamics of Machinery Code: - C403A.Y. -2019-20 SEM- 7<sup>th</sup>**

**Students will be able**

C403.1	To determine the natural frequency of a single degree of freedom free vibration system.
--------	---

C403.2	To analyze vibration parameters of the forced vibration single degree of freedom system.
C403.3	To estimate natural frequencies and mode shapes for free undamped two degree of freedom vibratory systems.
C403.4	To apply balancing techniques for balancing problems of rotating and reciprocating machines.
C403.5	To measure vibration characteristics and various methods of vibration control for real life problems.
C403.6	To measure and control noise for industry and day today life problems.

**Course: - Energy Engineering code: - C407 A.Y. -2019-20 SEM- 8<sup>th</sup>**

**Students will be able**

C407.1	To describe power generation scenario and analyze Rankine cycle and Cogeneration cycle.
C407.2	To analyze steam condensers and illustrate the methods to control environmental impact of thermal power plant
C407.3	To analyze hydroelectric power plant and explain nuclear power plant
C407.4	To analyze the performance of diesel power plant and gas power plant
C407.5	To discuss various non-conventional power plants
C407.6	To describe power plant instruments and to estimate the power plant economics

**3.1.1 CO-PO matrices of courses selected in 3.1.1 (six matrices to be mentioned; one per semester from 3<sup>rd</sup> to 8<sup>th</sup> semester) (05)**

**Course: -Material Science Course code: - C205 A.Y. -2019-20 SEM-3<sup>rd</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205.1	2	1	--	--	--	--	--	--	2	1	--	1
C205.2	2	-	--	--	--	--	--	--	2	1	--	1
C205.3	2	-	--	--	--	--	--	--	2	1	--	1
C205.4	2	-	--	--	--	--	1	--	2	1	--	1
C205.5	2	-	--	--	--	--	--	--	2	1	--	1

C205.6	2	-	--	--	--	--	--	--	2	1	--	1
<b>C205</b>	<b>2</b>	<b>1</b>	--	--	--	--	<b>1</b>	--	2	1	--	<b>1</b>

Course Outcomes	PSO1	PSO2	PSO3
C205.1	1	--	--
C205.2	1	--	--
C205.3	1	--	1
C205.4	1	--	--
C205.5	1	1	--
C205.6	1	--	1
C205	1	1	1

**Course: - Theory of Machines-I Course code: - C209 A.Y. -2019-20 SEM-4<sup>th</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C209.1	2	--	--	--	--	--	--	--	2	2	--	1
C209.2	3	3	--	--	--	--	--	--	2	2	--	1
C209.3	3	3	--	--	--	--	--	--	2	2	--	1
C209.4	3	3	--	--	--	--	--	--	2	2	--	1
C209.5	3	3	--	--	--	--	--	--	2	2	--	1
C209.6	3	3	--	--	--	--	--	--	2	2	--	1
C209	2.83	3	--	--	--	--	--	--	2	2	--	1

Course Outcomes	PSO1	PSO2	PSO3
C209.1	2	2	1
C209.2	2	--	1
C209.3	2	2	1
C209.4	2	--	--

C209.5	2	--	--
C209.6	2	--	--
C209	2	2	1

**Course: - Theory of Machines-II Course code: - C303 A.Y. -2018-19 SEM-5<sup>th</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	3	3	--	--	--	--	--	--	2	2	--	1
C303.2	3	3	--	--	--	--	--	--	--	2	--	1
C303.3	3	3	--	--	--	--	--	--	1	2	--	1
C303.4	3	2	1	--	--	--	--	--	2	2	--	1
C303.5	3	2	--	--	--	--	--	--	2	2	--	1
C303.6	3	3	--	--	--	--	--	--	1	2	--	1
C303	3	2.67	1	--	--	--	--	--	1.33	2	--	1

Course Outcomes	PSO1	PSO2	PSO3
C303.1	2	1	1
C303.2	2	1	--
C303.3	2	--	1
C303.4	2	--	1
C303.5	2	--	--
C303.6	2	--	1
C303	2	1	1

**Course: - Refrigeration and Air-conditioning Course code: - C309 A.Y. -2019-20 SEM-6<sup>th</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C309.1	2	--	-	-	-	-	2	-	2	2	-	2
C309.2	3	2	-	-	2	-	-	-	2	2	-	-
C309.3	3	2	-	-	-	-	-	-	-	2	-	-
C309.4	3	2	-	-	-	2	-	-	2	2	-	2

C309.5	2	--	-	-	-	-	-	-	-	2	-	2
C309.6	3	2	2	-	-	-	-	-	-	2	-	2
<b>C309</b>	<b>2.67</b>	<b>2</b>	<b>2</b>	<b>--</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>--</b>	<b>2</b>	<b>2</b>	<b>--</b>	<b>2</b>

<b>Course Outcomes</b>	PSO1	PSO2	PSO3
C309.1	-	2	1
C309.2	2	-	1
C309.3	2	-	-
C309.4	2	-	1
C309.5	-	2	-
C309.6	3	-	-
<b>C309</b>	<b>2.25</b>	<b>2</b>	<b>1</b>

**Course: - Dynamics of Machinery Code: - C403 A.Y. -2019-20 SEM- 7<sup>th</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C403.1	3	2	-	2	-	-	-	-	2	2	-	-
C403.2	3	2	-	-	3	-	-	-	2	2	-	-
C403.3	3	2	-	-	-	-	-	-	2	2	-	-
C403.4	3	2	-	2	-	2	-	-	2	2	-	-
C403.5	3	2	-	-	-	2	-	-	2	2	-	2
C403.6	3	2	-	2	-	2	-	-	2	2	-	2
<b>C403</b>	<b>3</b>	<b>2</b>	<b>--</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>--</b>	<b>--</b>	<b>2</b>	<b>2</b>	<b>--</b>	<b>2</b>

<b>Course Outcomes</b>	PSO1	PSO2	PSO3

C403.1	2	--	-
C403.2	2	--	-
C403.3	2	--	-
C403.4	2	2	2
C403.5	2	2	2
C403.6	2	--	2
<b>C403</b>	<b>2</b>	<b>2</b>	<b>2</b>

**Course: - Energy Engineering Course code: - C407 A.Y. -2019-20 SEM- 8<sup>th</sup>**

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C407.1	3	3	-	-	-	-	2	-	2	2	-	2
C407.2	3	3	-	-	-	2	2	-	2	2	-	1
C407.3	3	3	-	-	-	-	2	-	2	2	-	1
C407.4	3	3	-	-	-	-	2	-	2	2	-	1
C407.5	2	2	-	-	-	2	2	-	2	2	-	2
C407.6	3	3	-	-	-	-	-	-	2	2	2	1
<b>C407</b>	<b>2.67</b>	<b>2.67</b>	-	-	-	<b>2</b>	<b>2</b>	-	<b>2</b>	<b>2</b>	<b>2</b>	<b>1.33</b>

Course Outcomes	PSO1	PSO2	PSO3
C407.1	3	3	1
C407.2	3	-	-
C407.3	3	-	-
C407.4	3	-	1
C407.5	2	3	-
C407.6	3	-	-
<b>C407</b>	<b>2.67</b>	<b>3</b>	<b>1</b>

**Program level Course-PO matrix of all courses including first year courses**

**Table 1: Program level Course-PO matrix for all the courses**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	2.00	2.00	--	--	--	--	--	--	1.00	--	--	1.00
C102	2.00	2.00	--	--	--	1.00	--	--	1.00	--	--	1.00
C103	2.00	1.00	--	--	--	--	1.00	--	1.20	1.00	1.00	1.00
C104	2.00	2.00	--	--	--	1.00	--	--	2.00	1.00	--	1.00
C105	3.00	2.00	2.00	--	2.00	--	--	--	--	1.00	--	2.00
C106	1.00		--	--	--	1.00	--	--	1.00	1.00	--	1.00
C107	2.00	2.00	--	--	--	2.00	2.00	2.00		2.00	--	2.00
C108	2.00	2.00	--	--	--	--	--	--	1.00	--	--	1.00
C109	2.00	2.00	--	--	--	--	1.00	--	--	--	--	1.00
C110	2.50	2.00		2.00	2.00	--	--	--	2.00	2.00	--	2.00
C111	2.00	2.00	--	--	--	--	--	--	2.00	1.00	--	2.00
C112	2.00	1.00	--	--	2.00	--	--	--	1.00	1.00	--	1.00
C113	--	--	--	--	--	--	--	1.00	1.00	1.00	1.00	1.00
C114	2.00	2.00	1.00	--	--	2.00	2.00	2.00	--	2.00		2.00
C201	2.00	2.00	--	--	--	--	--	--	--	--	--	1.00
C202	2.00	2.67	--	--	--	--	--	--	--	--	--	1.00
C203	2.00	2.00	--	--	2.00		--	--	2.00	--	--	--
C204	3.00	2.00	--	--	--	--	--	--	2.00	2.00	--	2.00



C205	2.00	1.00	--	--	--	--	1.00	--	2.00	1.00	--	1.00
C-206	3.00	2.00	--	--	--	--	--	--	1.00	2.00	--	2.00
C207	2.83	2.67	--	--	--	--	--	--	2.00	2.00	--	1.00
C208	--	--	--	--	--	--	--	3.00	3.00	3.00	--	2.00
C209	2.83	3.00	--	--	--	--	--	--	2.00	2.00	--	1.00
C210	2.00	1.00	--	1.00	1.00	--	--	--	2.00	2.00	--	2.00
C211	1.67	3.00	--	--	--	2.00	3.00		2.00	2.00	--	2.00
C212	2.00	1.67	1.00	--	1.00	--	--	--	--	--	--	1.00
C213	1.00	--	--	--	--	--	--	--	2.00	1.00	--	1.00
C301	3.00	2.00	1.33	--	--	--	--	--	2.00	3.00	--	1.33
C302	2.83	2.50	1.50	1.00	--	--	1.00	--	2.00	2.00	--	2.00
C303	3.00	2.67	1.00	--	--	--	--	--	1.33	2.00	--	1.00
C304	3.00	2.83	--	--	2.00	1.00	--	--	2.00	2.00	--	1.33
C305	2.00	2.00	--	--	--	1.33	--	--	1.00	2.00	--	1.33
C306	1.00		--	--	--	1.00	--	--	3.00	2.00	--	2.00
C307	3.00	2.00	--	--	2.00	--	--	--	1.00	2.00	--	1.00
C308	3.00	2.00	1.00	--	1.00	--	--	1.00	2.00	2.00	--	1.00
C309	2.67	2.00	2.00		2.00	2.00	2.00	--	2.00	2.00	--	2.00
C310	2.33	1.75	1.00	--	--	--	--	--	1.00	1.00		1.17
C311	2.00	2.00	--	--	--	--	--	--	--	--	--	1.00
C312	1.00	--	--	--	2.00	2.00	--	--	2.00	1.50	1.00	2.00
C313	2.00	2.00	--	1.00	2.00	--	--	2.00	2.00	3.00	--	3.00
C401	2.67	3.00	3.00	--	2.00	--	--	--	2.00	2.00	--	2.00
C402	2.50	2.25	--	--	3.00	--	--	--	2.00	2.00	--	1.50
C403	3.00	2.00	--	2.00	3.00	2.00	--	--	2.00	2.00	--	2.00
C404A	2.83	2.33	--	--	3.00		--	--	2.00	2.00	--	1.50

C405A	2.17	3.00	--	--	--	2.00	2.00	--	--	2.00	--	1.33
C406	3.00	3.00	3.00	2.33	2.00	2.00	2.00	2.33	3.00	3.00	1.00	3.00
C407	2.67	2.67		--	--	2.00	2.00	--	2.00	2.00	2.00	1.33
C408	3.00	2.00	2.16	--	2.00	2.25	--	--	2.00	2.00	--	2.00
C409B	2.50	2.67	--	--	2.00	2.00	--	--	2.00	--	2.00	1.00
C410A	2.00	--	--	--	2.00	--	1.00	--	--	--	--	1.00
C411	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.66	3.00	3.00	2.00	3.00

**Table 2: Program level Course-PSO matrix of all courses including first year courses**

Course	PSO1	PSO2	PSO3
C101	1.00	--	--
C102	1.00	--	1.00
C103	1.00	1.00	-
C104	-	-	1.00
C105	-	-	1.00
C106	1.00	-	1.00
C107	-	-	1.00
C108	1.00	-	-
C109	1.00	--	1.00
C110	-	-	1.00
C111	2.00	--	1.00
C112	1.00	--	--
C113	1.00	--	1.00
C114	-	-	1.00
C201	1.00	--	--
C202	1.50	-	-
C203	1.00	--	1.00
C204	1.67	2.00	1.00
C205	1.00	1.00	1.00
C206	3.00	--	1.00
C207	1.83	-	1.00
C208	--	1.00	--

C209	-	2.00	-
C210	1.00	2.00	1.00
C211	1.33	2.00	1.00
C212	1.00	--	1.00
C213	--	-	3.00
C301	-	--	--
C302	2.17	2.00	-
C303	2.00	1.00	1.00
C304	2.00	2.00	1.00
C305	1.00	2.00	1.00
C306	1.00	1.00	3.00
C307	2.00	--	1.00
C308	2.00	-	--
C309	2.25	2.00	--
C310	2.00	1.00	1.00
C311	1.00	1.00	--
C312	1.00	2.00	-
C313	1.75	1.00	2.00
C401	2.25	2.00	--
C402	2.00	2.00	-
C403	2.00	2.00	2.00
C404A	2.33	2.00	2.00
C405A	2.17	2.00	--
C406	3.00	3.00	-
C407	2.67	3.00	1.00
C408	2.67	2.00	1.00
C409B	1.67	3.00	--
C410A	1.00	1.00	--
C411	3.00	3.00	3.00

## Attainment of course outcomes

**Table 3 : Example of Mark entry**

**Course Code: C209**

**Course Name: Theory of Machines-I**

Seat No.	Name of Student	External Assessment		Internal Assessment						Indirect Assessment						
		University TH Exam	University OR Exam	Term Work	Unit Test						Course Exit Survey					
					C O 1	C O 2	C O 3	C O 4	C O 5	C O 6	C O 1	C O 2	C O 3	C O 4	C O 5	C O 6
S150290 807	Amrutkar Atharva Pramod	80	22	22	8	4	0	10	0	1 0	2	2	2	2	2	2
S150290 826	Brahmankar Tejas Somnath	70	18	18	9	4	1	10	10	1 0	3	3	3	3	3	3
S150290 828	Chandwadkar Ashutosh Santosh	79	22	22	6	8	0	0	0	0	3	3	3	3	2	2
S150290 837	Chopda Yash Rajesh	78	22	22	9	3	2	10	10	1 0	3	3	3	2	2	2
S150290 843	Deshmukh Prathmesh Ravindra	71	18	18	8	6	4	10	10	1 0	2	2	3	3	2	3
S150290 846	Dhanvate Ashwini Bhauasaheb	76	20	20	9	6	4	10	10	1 0	0	0	0	0	0	0
S150290 856	Harak Sushant Arun	83	23	23	6	8	3	0	0	0	3	3	3	3	1	1
S150290 857	Harsh Sunil Shinde	80	21	21	10	4	0	0	0	0	2	2	3	2	3	3
S150290 858	Harshal Sambhaji Bhosale	74	20	20	7	1	2	10	10	1 0	2	2	2	2	2	2
S150290 860	Hatkar Vaibhav Madhukar	68	18	18	6	6	0	10	0	1 0	0	0	0	0	0	0
S150290 864	Jadhav Prajakta Uttam	73	20	20	5	10	0	10	10	1 0	2	1	1	2	1	1
S150290 880	Mahale Hardik Subhash	81	21	21	7	6	6	10	7	1 0	2	3	3	2	2	3
S150290 881	Mahale Shruti Rajesh	72	19	19	9	9	5	10	10	1 0	3	2	3	2	2	3
S150290 882	Mahatme Om Kiran	79	21	21	5	8	3	0	0	0	3	3	3	3	2	3
S150290 883	Mayuresh Vishnu Kolhe	68	18	18	5	4	2	10	10	1 0	3	3	3	3	3	3
S150290 884	Medhane Akshay Nitin	65	17	17	6	3	3	10	10	1 0	0	0	0	0	0	0
S150290 886	Mhaske Shreyas Bhalchandra	83	23	23	10	8	3	10	10	1 0	3	3	3	3	3	3
S150290 893	Nair Abhishek Ajithkumar	73	19	19	5	5	1	10	0	1 0	3	3	3	2	2	2

Seat No.	Name of Student	External Assessment		Internal Assessment						Indirect Assessment						
		University TH Exam	University OR Exam	Term Marks	C O 1	C O 2	C O 3	C O 4	C O 5	C O 6	C O 1	C O 2	C O 3	C O 4	C O 5	C O 6
S150290 897	Nikam Vedant Ananda	66	17	17	5	7	0	10	10	10	3	3	3	3	3	3
S150290 910	Patil Rajvardhan Sunil	70	19	19	5	8	1	10	5	3	3	2	3	2	2	2
S150290 911	Patil Roshan Sahebrao	64	17	17	6	7	3	10	10	10	3	3	3	3	1	1
S150290 915	Patil Saurabh Chhotu	81	22	22	6	6	5	10	10	3	2	2	2	1	2	2
S150290 916	Patil Shubham Kiran	81	21	21	9	7	3	10	6	10	3	3	3	2	2	2
S150290 918	Patil Vaibhavi Suresh	70	19	19	8	4	4	10	10	10	2	2	2	2	2	2
S150290 926	Pund Karan Kailas	82	22	22	5	8	3	10	10	10	3	3	3	3	3	3
S150290 927	Rahul Dyaneshwar Jangle	86	23	23	5	4	2	0	0	0	3	2	2	2	2	2
S150290 936	Rote Pratik Raosaheb	80	23	23	6	8	5	0	0	0	3	3	3	3	3	3
S150290 947	Shantanu Hemant Metkar	70	18	18	0	0	0	10	10	10	3	3	3	3	3	3
S150290 951	Shinde Kajal Sharad	63	17	17	5	4	3	10	10	10	2	2	2	2	2	2
S150290 954	Shinde Ujwala Mahesh	69	18	18	8	6	4	10	10	10	3	3	2	2	2	2
S150290 955	Shingote Pragati Ramnath	71	18	18	10	7	4	10	10	10	0	0	0	0	0	0
S150290 960	Sonawane Tejaswini Sanjay	62	17	17	7	2	2	0	0	0	2	1	3	2	1	3
S150290 963	Thakare Abhishek Ramesh	73	19	19	6	4	3	10	10	10	3	3	3	3	3	3
S150290 965	Thakur Adarsh Sanjay	80	22	22	8	4	5	10	10	10	2	3	3	2	2	2
S150290 966	Thavil Avinash Ramdas	72	18	18	6	4	3	10	10	10	3	3	3	2	2	2
S150290 970	Vaidya Samyak Mandar	82	22	22	6	8	3	10	10	10	3	2	3	2	3	3
S150290 977	Yash Kiran Bhalekar	80	22	22	0	0	0	6	0	0	3	3	3	3	3	3
Number of students appeared for the exam		39	39	39	37	37	37	30	30	30	35	35	35	35	35	35
Target value		46	18	15	6	6	6	6	6	6	-	-	-	-	-	-

		External Assessment		Internal Assessment						Indirect Assessment							
				Term	Unit Test					Course Exit Survey							
Seat No.	Name of Student	University TH Exam	University OR Exam		Week	C O 1	C O 2	C O 3	C O 4	C O 5	C O 6	C O 1	C O 2	C O 3	C O 4	C O 5	C O 6
Number of Students scoring more than target value		39	33	39	27	18	1	30	25	27	-	-	-	-	-	-	-
Percentage of Students scoring more than target value		100	84.61	100	73	49	03	100	83.33	90	89.52	84.76	81.43	80.95	72.99	82.95	84.55
Attainment Level		3	3	3	1					3							

## Course Outcome Attainment

**Table 4 : External Assessment**

Theory (%)						Oral / Practical (%)						Term Work (%)					
CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
100	100	100	100	100	100	84.61	84.61	84.61	84.61	84.61	84.61	NA	NA	NA	NA	NA	NA

**Table 5 : Internal Assessment**

Unit Test (%)						Term Work (%)					
CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
73	49	03	100	83.33	90	100	100	100	100	100	100

**Table 6 : Indirect Assessment**

Course Exit Survey (%)					
CO1	CO2	CO3	CO4	CO5	CO6
89.52	84.76	81.43	80.95	74.29	80.95

**Table 7 : CO attainment by external assessment**

External assessment tool	CO Attainment
TH exam	3
OR exam	3
Average	3

**Table 8 : CO attainment by internal assessment**

Internal assessment tool	CO Attainment
Unit test	1
Term work	3
Average	2

Direct CO attainment is then computed as

$$\begin{aligned}
 &= 0.8 \times \text{CO attainment level in university examination} \\
 &\quad + 0.2 \times \text{CO attainment level in internal assessment} \\
 &= 0.8 \times 3 + 0.2 \times 2 \\
 &= 2.8
 \end{aligned}$$

**Table 9 : CO attainment by course exit survey**

Indirect assessment tool	CO Attainment
Course exit survey	3

Overall CO attainment is then computed as

$$\begin{aligned}
 &= 0.9 \times \text{Direct CO attainment} \\
 &\quad + 0.1 \times \text{Indirect CO attainment} \\
 &= 0.9 \times 2.8 + 0.1 \times 3 \\
 &= 2.82
 \end{aligned}$$





C20 1	70	70. 04	70. 04	70. 04	70. 04	70. 04	70. 04	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C20 2	70	79. 84	79. 84	79. 84	79. 84	79. 84	79. 84	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C20 3	70	NA	NA	NA	NA	NA	NA	60 .9	60 .9	60 .9	60 .9	60 .9	60 .9	N A	N A	N A	N A	N A	N A
C20 4	70	55. 07	55. 07	55. 07	55. 07	55. 07	55. 07	77 .1	77 .1	77 .1	77 .1	77 .1	77 .1	N A	N A	N A	N A	N A	N A
C20 5	70	63. 93	63. 93	63. 93	63. 93	63. 93	63. 93	N A	N A	N A	N A	N A	N A	99 .3	99 .3	99 .3	99 .3	99 .3	99 .3
C- 206	70	80. 78	80. 78	80. 78	80. 78	80. 78	80. 78	80 .7	80 .7	80 .7	80 .7	80 .7	80 .7	N A	N A	N A	N A	N A	N A
C20 7	70	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	N A	N A	N A	N A	N A	N A
C20 8	70	NA	NA	NA	NA	NA	NA	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C20 9	70	10 0	10 0	10 0	10 0	10 0	10 0	78 .5	78 .5	78 .5	78 .5	78 .5	78 .5	N A	N A	N A	N A	N A	N A
C21 0	70	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	N A	N A	N A	N A	N A	N A
C21 1	70	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	10 0	N A	N A	N A	N A	N A	N A
C21 2	70	10 0	10 0	10 0	10 0	10 0	10 0	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C21 3	70	NA	NA	NA	NA	NA	NA	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C30 1	70	30. 19	30. 19	30. 19	30. 19	30. 19	30. 19	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C30 2	70	48. 55	48. 55	48. 55	48. 55	48. 55	48. 55	87 .2	87 .2	87 .2	87 .2	87 .2	87 .2	N A	N A	N A	N A	N A	N A
C30 3	70	58. 57	58. 57	58. 57	58. 57	58. 57	58. 57	65 .4	65 .4	65 .4	65 .4	65 .4	65 .4	N A	N A	N A	N A	N A	N A
C30 4	70	40. 58	40. 58	40. 58	40. 58	40. 58	40. 58	81 .4	81 .4	81 .4	81 .4	81 .4	81 .4	N A	N A	N A	N A	N A	N A

C305	70	50.7	50.7	50.7	50.7	50.7	50.7	49.7	49.7	49.7	49.7	49.7	49.7	N A	N A	N A	N A	N A	N A
C306	70	NA	NA	NA	NA	NA	NA	74.6	74.6	74.6	74.6	N A	N A	N A	N A	N A	N A	N A	N A
C307	70	72.09	72.09	72.09	72.09	72.09	72.09	100	100	100	100	100	100	N A	N A	N A	N A	N A	N A
C308	70	59.9	59.9	59.9	59.9	59.9	59.9	100	100	100	100	100	100	N A	N A	N A	N A	N A	N A
C309	70	78.5	78.5	78.5	78.5	78.5	78.5	70.4	70.4	70.4	70.4	70.4	70.4	N A	N A	N A	N A	N A	N A
C310	70	68.11	68.11	68.11	68.11	68.11	68.11	99.1	99.1	99.1	99.1	99.1	99.1	N A	N A	N A	N A	N A	N A
C311	70	69.44	69.44	69.44	69.44	69.44	69.44	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C312	70	NA	NA	NA	NA	NA	NA	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C313	70	NA	NA	NA	NA	NA	NA	87	87	87	87	N A	N A	N A	N A	N A	N A	N A	N A
C401	70	72.87	72.87	72.87	72.87	72.87	72.87	56.7	56.7	56.7	56.7	56.7	56.7	52	52	52	52	52	52
C402	70	65.83	65.83	65.83	65.83	65.83	65.83	61.8	61.8	61.8	61.8	61.8	61.8	66.4	66.4	66.4	66.4	66.4	66.4
C403	70	74.61	74.61	74.61	74.61	74.61	74.61	54.6	54.6	54.6	54.6	54.6	54.6	72.1	72.1	72.1	72.1	72.1	72.1
C404A	70	44.12	44.12	44.12	44.12	44.12	44.12	N A	N A	N A	N A	N A	N A	69.1	69.1	69.1	69.1	69.1	69.1
C405A	70	31.78	31.78	31.78	31.78	31.78	31.78	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C406	70	NA	NA	NA	NA	NA	NA	89.2	89.2	89.2	N A	N A	N A	83	83	83	N A	N A	N A
C407	70	98.44	98.44	98.44	98.44	98.44	98.44	76.8	76.8	76.8	76.8	76.8	76.8	59	59	59	59	59	59
C408	70	99.19	99.19	99.19	99.19	99.19	99.19	80.6	80.6	80.6	80.6	80.6	80.6	100	100	100	100	100	100
C409B	70	98.48	98.48	98.48	98.48	98.48	98.48	N A	N A	N A	N A	N A	N A	100	100	100	100	100	100

C41 0A	70	98. 45	98. 45	98. 45	98. 45	98. 45	98. 45	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A	N A
C41 1	70	NA	NA	NA	NA	NA	NA	99 .2	99 .2	99 .2	N A	N A	N A	79 .1	79 .1	79 .1	N A	N A	N A

**Table 11 : Internal Assessment**

Course	Attainment level-3 (%)	Unit Test (%)						Term work (%)					
		CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
C101	80	60.61	23.47	72.83	57.61	73.47	47.96	96.12	95.2	90.29	90.29	95.15	95.2
C102	80	18.18	36.36	58.33	93.1	86.1	100	96.12	96.1	96.12	96.12	NA	NA
C103	80	63.04	44.57	74.19	46.24	51.55	30.02	100	100	100	100	100	100
C104	80	27.37	15.79	47.42	29.9	20.65	42.86	84.47	84.5	88.35	82.52	85.44	87.4
C105	80	80.95	20.24	34.12	11.63	26.19	10.71	94.17	97.1	98.06	99.03	97.09	95.2
C106	80	NA	NA	NA	NA	NA	NA	96.15	96.2	96.15	96.15	NA	NA
C107	80	75	47.83	75	70.2	NA	NA	89.32	100	100	100	NA	NA
C108	80	47.87	52.63	93.75	90.12	82.72	82.28	88.35	88.4	88.35	88.35	88.35	88.4
C109	80	63.37	20.24	78.95	57.83	80.85	34.04	99.03	98.1	97.09	99.03	NA	NA
C110	80	68.13	23.33	94.67	85.3	90.4	69.86	96.12	96.1	96.12	96.12	96.12	96.1
C111	80	76.83	15.79	93.15	92.96	88.06	98.08	93.2	93.2	93.2	93.2	93.2	93.2
C112	80	NA	NA	92	90.38	89.86	74.32	99.03	99	99.03	99.03	99.03	99
C113	80	91.26	91.26	91.26	NA	NA	NA	92.23	92.2	92.23	NA	NA	NA
C114	80	62.75	51.96	77.45	69.6	NA	NA	92.23	86.4	84.47	84.47	NA	NA
C201	80	90.44	75.99	42.96	89.62	44.33	84.17	95	93.5	92.2	95.25	93.5	95.5
C202	80	70.56	77.25	60.57	80.52	67.36	48.81	96.2	NA	96.2	96.2	NA	96.2
C203	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C204	80	33.55	35.58	42.6	36.97	21.24	48.45	NA	NA	NA	NA	NA	NA
C205	80	58.05	48.01	39.35	69.65	27.34	52.73	92.65	NA	75.13	NA	NA	92.7
C-206	80	11.82	49.07	10.52	28.97	52.35	32.5	NA	NA	NA	NA	NA	NA
C207	80	88.71%	31.07%	60.06	100	98.89	85.85	NA	NA	NA	NA	NA	NA

C208	80	NA	NA	NA	NA	NA	NA	76.03	76	76.03	76.03	NA	NA
C209	80	64.15	53.74	9.28	98.89	77.34	90.85	100	100	100	100	100	100
C210	80	36.58	60.18	51.93	89.58	88.5	89.45	NA	NA	NA	NA	NA	NA
C211	80	80.99	35.38	59.8	100	100	100	NA	NA	NA	NA	NA	NA
C212	80	67.43	34.27	3.51	100	76.68	62.66	100	100	NA	NA	100	100
C213	80	NA	NA	NA	NA	NA	NA	100	100	100	100	NA	NA
C301	80	86.57	54.94	30.08	82.61	47.5	61.52	72.22	69.9	72.62	68.92	72.62	72.6
C302	80	50.71	67.7	71.68	67.8	50.64	36.63	NA	NA	NA	NA	NA	NA
C303	80	98.04	54.75	94.315	72.71	36.46	76.325	83.18	87.6	83.38	96.18	89.66	90.4
C304	80	85.01	86.37	82.6	59.58	80.85	34.76	NA	NA	NA	NA	NA	NA
C305	80	74.4	89.83	50	78.19	64.49	43.8	NA	NA	NA	NA	NA	NA
C306	80	NA	NA	NA	NA	NA	NA	87.6	87.6	87.6	87.6	NA	NA
C307	80	73.18	70.48	44.92	98.57	92.86	98.57	NA	NA	NA	NA	NA	NA
C308	80	55.4	27.27	46.34	96.39	99.02	98.04	100	100	100	100	100	100
C309	80	76.49	64.86	35.27	73.05	62.2	77.43	NA	NA	NA	NA	NA	NA
C310	80	83.44	78.07	67.14	50.47	91.12	90.12	NA	NA	NA	NA	NA	NA
C311	80	80.19	79.25	56.13	75.9	86.96	55.42	NA	NA	NA	NA	NA	NA
C312	80	NA	NA	NA	NA	NA	NA	100	100	100	100	NA	NA
C313	80	NA	NA	NA	NA	NA	NA	100	100	100	100	NA	NA
C401	80	95.7	94.68	2.38	46.32	8.6	73.68	NA	NA	NA	NA	NA	NA
C402	80	91.81	58.49	95.83	76.57	73.23	19.44	NA	NA	NA	NA	NA	NA
C403	80	95	67.86	39.69	71	95.92	94.9	NA	NA	NA	NA	NA	NA
C404A	80	74	95.35	57.5	98.05	99.05	84.28	NA	NA	NA	NA	NA	NA
C405A	80	73.71	67.71	45.24	98.88	1.12	89.66	NA	NA	NA	NA	NA	NA
C406	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C407	80	80.21	96.87	90.81	98.94	96.81	96.81	NA	NA	NA	NA	NA	NA
C408	80	92.8	96.97	93.94	100	98.72	100	NA	NA	NA	NA	NA	NA



**Table 12 : Indirect Assessment**

Course	Attainment level -3 (%)	Course Exit Survey (%)					
		CO1	CO2	CO3	CO4	CO5	CO6
C101	80	90.88	89.12	90.18	87.72	88.77	89.12
C102	80	89.74	87.18	91.03	81.41	84.62	88.46
C103	80	97.65	94.37	97.65	97.65	96.24	94.84
C104	80	91	91	90.33	88.66	89	87
C105	80	78.35	74.91	77.66	78.69	78.69	76.98
C106	80	NA	NA	NA	NA	NA	NA
C107	80	88.89	88.52	88.52	88.52	NA	NA
C108	80	93.78	92.44	92.44	88.89	92.89	88.44
C109	80	93.19	89.96	87.81	88.89	85.3	89.61
C110	80	66.66	100	100	66.66	66.66	66.66
C111	80	88.46	86.54	87.18	82.05	81.41	85.9
C112	80	100	100	100	66.67	66.67	66.67
C113	80	NA	NA	NA	NA	NA	NA
C114	80	92.79	84.68	88.29	83.33	NA	NA
C201	80	91.15	86.43	90.84	87.76	87.43	89.82
C202	80	91.77	92.08	92.49	93.81	91.27	93.54
C203	80	NA	NA	NA	NA	NA	NA
C204	80	88.5	86	88.5	91	83.5	87.5
C205	80	88.5	90.5	86.5	88.5	87.5	90
C-206	80	93.16	94.66	90	88	88.5	89.16
C207	80	89.5	87	87	87.5	81.5	80
C208	80	NA	NA	NA	NA	NA	NA
C209	80	89.33	83.83	91.33	82	77	78.33
C210	80	84.5	86	84.5	85.5	85	86.5
C211	80	91	91	87	87	83	86

C212	80	88.5	86	84.5	84.5	80	80.5
C213	80	NA	NA	NA	NA	NA	NA
C301	80	89.16	89.52	85.12	85.47	86.31	85
C302	80	92	90	89	89.66	91.33	87.66
C303	80	93.68	92.75	90.52	93.63	91.56	88.59
C304	80	93.6	92.08	90.99	91.4	91.7	90.04
C305	80	92.96	91.18	92.27	88.63	91.2	90.81
C306	80	NA	NA	NA	NA	NA	NA
C307	80	95.66	95.16	95.66	88	90.12	87.5
C308	80	90.86	89.29	90.07	86.77	87.75	86.53
C309	80	94.6	95.3	92.3	92.6	93	89.6
C310	80	92.32	93.22	91.53	87.57	86.9	87.35
C311	80	89.24	88.89	89.93	87.15	88.19	87.5
C312	80	NA	NA	NA	NA	NA	NA
C313	80	NA	NA	NA	NA	NA	NA
C401	80	96	95.26	94.53	94.53	93.43	93.63
C402	80	93.23	91.36	93.62	92.76	91.97	89.94
C403	80	91.66	89.33	90.66	87	87.66	87.66
C404A	80	95.09	91.24	91.83	91.52	89.72	91.55
C405A	80	93.53	89.32	91.59	89.64	90.29	89.97
C406	80	NA	NA	NA	NA	NA	NA
C407	80	91.65	94.2	95.03	93.25	92.84	92.84
C408	80	93.47	91.8	90.28	89.58	89.64	90.14
C409B	80	95.26	95.83	96.04	94.94	92.41	91.87
C410A	80	93.26	89.72	90.43	89.36	89.01	87.94
C411	80	NA	NA	NA	NA	NA	NA



**Table 13 : Overall CO Attainment AY 2019-20**

Course	Direct CO Attainment			Indirect CO Attainment	Overall CO Attainment
	External	Internal	Total		
C101	2	2	2	3	2.10
C102	3	2	2.8	3	2.82
C103	2	1.5	1.9	3	2.01
C104	2	1.5	1.9	3	2.01
C105	0	1.5	0.3	2	0.47
C106	NA	3	3	NA	3.00
C107	NA	2	2	3	2.10
C108	3	2.5	2.9	3	2.91
C109	1	1.5	1.1	3	1.29
C110	3	2.5	2.9	3	2.91
C111	2	2.5	2.1	3	2.19
C112	3	3	3	3	3.00
C113	NA	3	3	NA	3.00
C114	NA	2	2	3	2.10
C201	3	2.5	2.9	3	2.91
C202	3	2	2.8	3	2.82
C203	2	NA	2	NA	2.00
C204	2	0	1.6	3	1.74
C205	2	1.5	1.9	3	2.01
C206	3	0	2.4	3	2.46
C207	3	2	2.8	3	2.82
C208	NA	2	2	NA	2.00

C209	3	2	2.8	3	2.82
C210	3	1	2.6	3	2.64
C211	3	2	2.8	3	2.82
C212	3	2	2.8	3	2.82
C213	NA	3	3	NA	3.00
C301	0	1.5	0.3	3	0.57
C302	1.5	0	1.2	3	1.38
C303	1.5	2	1.6	3	1.65
C304	1.5	2	1.6	3	1.74
C305	0.5	1	0.6	3	0.84
C306	3	3	3	NA	3.00
C307	3	2	2.8	3	2.82
C308	2	2.5	2.1	3	2.19
C309	3	2	2.8	3	2.82
C310	2.5	2	2.4	3	2.46
C311	2	2	2	3	2.10
C312	NA	3	3	NA	3.00
C313	3	3	3	NA	2.70
C401	1.67	0	1.34	3	1.51
C402	2	0	1.6	3	1.74
C403	2.34	2	2.3	2.27	2.34
C404A	1	3	1.4	3	1.56
C405A	0	1	0.2	3	0.48
C406	3	NA	3	NA	3.00
C407	2.33	3	2.46	3	2.51
C408	3	3	3	3	3.00

C409B	3	3	3	3	3.00
C410A	3	2	2.8	3	2.82
C411	3	NA	3	NA	3.00

### Attainment of Program Outcomes and Program Specific Outcomes

Results of evaluation of each PO & PSO

Table 14 :PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	1.40	1.40	--	--	--	--	--	--	0.70	--	--	0.70
C102	1.88	1.88	--	--	--	0.94	--	--	0.94	--	--	0.94
C103	1.34	0.67	--	--	--	--	0.67	--	0.80	0.67	0.67	0.67
C104	1.34	1.34	--	--	--	0.67	--	--	1.34	0.67	--	0.67
C105	0.47	0.31	0.31	--	0.31	--	--	--	--	0.15	--	0.31
C106	1.00		--	--	--	1.00			1.00	1.00	--	1.00
C107	1.40	1.40	--	--	--	1.40	1.40	1.40	--	1.40	--	1.40
C108	1.94	1.94	--	--	--	--	--	--	0.97	--	--	0.97
C109	0.86	0.86	--	--	--	--	0.43	--	--	--	--	0.43
C110	2.42	1.94	--	1.94	1.94	--	--	--	1.94	1.94	--	1.94
C111	1.40	1.40	--	--	--	--	--	--	1.40	0.73	--	1.40
C112	2.00	1.00	--	--	2.00	--	--	--	1.00	1.00	--	1.00
C113	--	--	--	--	--	--	--	1.00	1.00	1.00	1.00	1.00
C114	1.40	1.40	0.70	--	--	1.40	1.40	1.40	--	1.40	--	1.40
C201	1.94	1.94	--	--	--	--	--	--	--	--	--	0.97
C202	1.88	2.51	--	--	--	--	--	--	--	--	--	0.94
C203	1.33	1.33	--	--	1.33	--	--	--	1.33	--	--	--
C204	1.74	1.16	--	--	--	--	--	--	1.16	1.16	--	0.58

C205	1.34	0.67	--	--	--	--	0.67	--	1.34	0.67	--	0.67
C206	2.46	1.64	--	--	--	--	--	--	0.82	1.64	--	1.64
C207	2.66	2.51	--	--	--	--	--	--	1.88	1.88	--	0.94
C208	--	--	--	--	--	--	--	2.00	2.00	2.00	--	1.33
C209	2.67	2.82	--	--	--	--	--	--	1.88	1.88	--	0.94
C210	1.76	0.88	--	0.88	0.88	--	--	--	1.76	1.76	--	1.76
C211	1.57	2.82	--	--	--	1.88	2.82	--	1.88	1.88	--	1.88
C212	1.88	1.57	0.94	--	0.94	--	--	--	--	--	--	0.94
C213	1.00	--	--	--	--	--	--	--	2.00	1.00	--	1.00
C301	0.57	0.38	0.25	--	--	--	--	--	0.38	0.57	--	0.25
C302	1.30	1.15	0.69	0.46	--	--	0.46	--	0.92	0.92	--	0.92
C303	1.65	1.47	0.55	--	--	--	--	--	0.73	1.10	--	0.55
C304	1.74	1.64	--	--	1.16	0.58	--	--	1.16	1.16	--	0.77
C305	0.56	0.56	--	--	--	0.37	--	--	0.28	0.56	--	0.37
C306	1.00	--	--	--	--	1.00	--	--	3.00	2.00	--	2.00
C307	2.82	1.88	--	--	1.88	--	--	--	0.94	1.88	--	0.94
C308	2.19	1.46	0.73	--	0.73	--	--	0.73	1.46	1.46	--	0.73
C309	2.50	1.88	1.88	--	1.88	1.88	1.88	--	1.88	1.88	--	1.88
C310	1.91	1.43	0.82	--	--	--	--	--	0.82	0.82	--	0.96
C311	1.40	1.40	--	--	--	--	--	--	--	--	--	0.70
C312	1.00	--	--	--	2.00	2.00	--	--	2.00	1.50	1.00	2.00
C313	1.80	1.80	--	0.90	1.80	--	--	1.80	1.80	2.70	--	2.70
C401	1.34	1.51	1.51	--	1.01	--	--	--	1.01	1.01	--	1.01
C402	1.45	1.30	--	--	1.74	--	--	--	1.76	1.16	--	0.87
C403	2.34	1.56	--	1.56	2.34	1.56	--	--	1.56	1.56	--	1.56
C404A	1.47	1.21	--	--	1.56	--	--	--	1.04	1.04	--	0.78

C405A	0.34	0.48	--	--	--	0.32	0.32	--	--	0.32	--	0.21
C406	3.00	3.00	3.00	2.33	2.00	2.00	2.00	2.33	3.00	3.00	1.00	3.00
C407	2.02	2.02	--	--	--	1.52	1.52	--	1.52	1.52	1.52	1.01
C408	3.00	2.00	2.16	--	2.00	2.25	1	1	2.00	2.00	--	2.00
C409B	2.50	2.67	--	--	2.00	2.00	--	--	2.00	--	2.00	1.00
C410A	1.88	--	--	--	1.88	--	0.94	--	--	--	--	0.94
C411	3.00	3.00	3.00	3.00	3.00	2.50	2.50	2.66	3.00	3.00	2.00	3.00

### PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	1.89	1.78	1.50	1.78	1.81	1.63	1.55	1.69	1.69	1.63	1.58	1.45
Direct Attainment	1.71	1.57	1.27	1.58	1.64	1.40	1.31	1.47	1.45	1.39	1.31	1.15
In Direct Attainment	2.60	2.59	2.43	2.49	2.47	2.52	2.54	2.58	2.63	2.57	2.60	2.64

### PSO Attainment

Course	PSO1	PSO2	PSO3
C101	0.7	--	--
C102	0.94	--	0.94
C103	0.67	0.67	
C104	--	--	0.67
C105	--	--	0.16
C106	1	--	1
C107	--	--	0.7
C108	0.97	--	--
C109	0.43	--	0.43
C110		--	0.97
C111	1.4	--	0.73
C112	1	--	
C113	1	--	1
C114	--	--	0.7
C201	0.97	--	--

C202	1.41	--	--
C203	0.66	--	0.66
C204	0.97	1.16	0.58
C205	0.67	0.67	0.67
C206	2.46	--	0.82
C207	1.72	0.94	0.94
C208	--	0.67	--
C209	1.88	1.88	0.94
C210	0.88	1.76	0.88
C211	1.25	1.88	0.94
C212	0.94	--	0.94
C213	--	--	3.00
C301	0.38	--	--
C302	0.99	0.92	0.46
C303	1.10	0.55	0.55
C304	1.16	1.16	0.58
C305	0.28	0.56	0.28
C306	1.00	1.00	3.00
C307	1.88	--	0.94
C308	1.46	1.46	--
C309	2.11	1.88	0.94
C310	1.64	0.82	0.82
C311	0.70	0.70	--
C312	1.00	2.00	3.00
C313	1.57	0.90	1.80
C401	1.13	1.01	--

C402	1.16	1.16	1.16
C403	1.56	1.56	1.56
C404A	1.21	1.04	1.04
C405A	0.34	0.48	--
C406	3.00	3.00	3.00
C407	2.02	2.28	0.76
C408	2.67	2.00	1.00
C409B	1.67	3.00	--
C410A	0.94	0.94	0.94
C411	3.00	3.00	3.00

### PSO Attainment Level

Course	PSO1	PSO2	PSO3
CO Attainment	1.53	1.62	1.45
Direct Attainment	1.28	1.38	1.13
In Direct Attainment	2.52	2.60	2.74