

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal, MP)

CIVIL ENGINEERING DEPARTMENT

Course Outcomes Attainment (July-Dec 2021)

Table.1: CO Attainment & Gap Analysis July – Dec 2021 (I to II Year)

Course Code & Name	Course Outcomes	Direct CO Attainment Level	Indirect CO Attainment Level	Overall CO Attainment Level	Target Attainment	Gap in Attainment	Status of CO Attainment	Action Taken*
100015: Energy, Environment, Ecology & Society	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 3	2.92	3.00	2.94	2.50	-0.44	Attained	
	CO 4	2.78	3.00	2.82	2.50	-0.32	Attained	
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO6	3.00	3.00	3.00	2.50	-0.50	Attained	
110311: Building Materials & Construction	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 3	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 4	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	
110312: Fluid Mechanics – I	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	2.08	3.00	2.26	2.50	0.24	Not Attained	More problems related to Fluid

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								Properties will be given.
	CO 3	2.54	3.00	2.64	2.50	-0.14	Attained	Rubrics for the level can be modified
	CO 4	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 5	2.29	3.00	2.43	2.50	0.07	Not Attained	Measurement techniques & principles on fluid flow discussed more.
	CO 6	1.07	3.00	1.46	2.50	1.04	Not Attained	More assignments will be given related to laminar flow
110313: Surveying	CO 1	2.06	3.00	2.25	2.50	0.25	Not Attained	More assignment, on survey measurements & techniques will be conducted.
	CO 2	1.95	3.00	2.16	2.50	0.34	Not Attained	
	CO 3	1.98	3.00	2.18	2.50	0.32	Not Attained	
	CO 4	2.51	3.00	2.61	2.50	-0.11	Attained	Rubrics for the level can be modified
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	
110314: Strength of Materials	CO 1	1.76	3.00	2.01	2.50	0.49	Not Attained	More assignment related to stress & strain properties of materials will be conducted.
	CO 2	1.88	3.00	2.10	2.50	0.40	Not Attained	
	CO 3	1.49	3.00	1.79	2.50	0.71	Not Attained	
	CO 4	1.80	2.99	2.04	2.50	0.46	Not Attained	
	CO 5	1.65	3.00	1.92	2.50	0.58	Not Attained	

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110311: Building Materials & Construction (Practical)	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 3	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 4	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	
110312: Fluid Mechanics – I	CO 1	3.00	1.83	2.77	2.50	-0.27	Attained	Rubrics for the level can be modified
	CO 2	3.00	1.99	2.80	2.50	-0.30	Attained	
	CO 3	3.00	2.03	2.81	2.50	-0.31	Attained	
	CO 4	3.00	2.79	2.96	2.50	-0.46	Attained	
110315: Survey Practice Lab	CO 1	2.70	3.00	2.76	2.50	-0.26	Attained	Rubrics for the level can be modified
	CO 2	2.70	3.00	2.76	2.50	-0.26	Attained	
	CO 3	2.70	3.00	2.76	2.50	-0.26	Attained	
	CO 4	2.70	3.00	2.76	2.50	-0.26	Attained	
	CO 5	2.70	3.00	2.76	2.50	-0.26	Attained	
	CO 6	2.70	2.72	2.70	2.50	-0.20	Attained	
110314: Strength of Materials (Practical)	CO 1	2.10	2.26	2.13	2.50	0.37	Not Attained	More hands on material characteristics will be conducted.

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	CO 2	3.00	2.13	2.83	2.50	-0.33	Attained	Rubrics for the level can be modified
	CO 3	2.10	2.39	2.16	2.50	0.34	Not Attained	More hands on material characteristics will be conducted.
	CO 4	3.00	2.25	2.85	2.50	-0.35	Attained	Rubrics for the level can be modified
110307: Self Learning/Presentation	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	3.00	2.69	2.94	2.50	-0.44	Attained	
	CO 3	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 4	3.00	2.69	2.94	2.50	-0.44	Attained	
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	

Table.2: CO Attainment & Gap Analysis July – Dec 2021 (III to IV Year)

Course Code & Name	Course Outcomes	Direct CO Attainment Level	Indirect CO Attainment Level	Overall CO Attainment	Target Attainment	Gap in Attainment	Status of CO Attainment	Action Taken*
110501: Estimating, Costing & Contracting	CO 1	2.15	3.00	2.32	2.50	0.18	Not Attained	Problems related to quantity, estimation, costing will be discussed more.
	CO 2	3.00	2.88	2.98	2.50	-0.48	Attained	Rubrics for the level can be modified

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	CO 3	0.00	2.92	0.58	2.50	1.92	Not Attained	Quantity estimation session will be improved by taking more quiz and assignment.
	CO 4	1.79	2.71	1.97	2.50	0.53	Not Attained	
	CO 5	1.46	2.67	1.70	2.50	0.80	Not Attained	
110502: Structural Design & Drawing (R.C.C.)	CO 1	0.00	2.34	0.47	2.50	2.03	Not Attained	More assignment & problems will be conducted.
	CO 2	1.35	2.49	1.58	2.50	0.92	Not Attained	
	CO 3	2.59	2.40	2.55	2.50	-0.05	Attained	Rubrics for the level can be modified
	CO 4	1.07	2.19	1.30	2.50	1.20	Not Attained	The provisions of IS: 456; IS: 13920 and SP34 will be defined more.
	CO 5	2.36	2.43	2.37	2.50	0.13	Not Attained	
110503: Fluid Mechanics – II	CO 1	1.96	2.73	2.11	2.50	0.39	Not Attained	More problems & assignment will be conducted.
	CO 2	0.00	2.42	0.48	2.50	2.02	Not Attained	
	CO 3	1.61	2.73	1.84	2.50	0.66	Not Attained	
	CO 4	0.00	2.42	0.48	2.50	2.02	Not Attained	
	CO 5	3.00	2.73	2.95	2.50	-0.45	Attained	Rubrics for the level can be modified
110505: Transportation Engineering	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	1.73	3.00	1.98	2.50	0.52	Not Attained	More problems based traffic systems, transportation materials & design. will be conducted.
	CO 3	2.14	2.93	2.30	2.50	0.20	Not Attained	

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	CO 4	2.67	2.63	2.66	2.50	-0.16	Attained	Rubrics for the level can be modified
	CO 5	1.56	2.78	1.80	2.50	0.70	Not Attained	Formulation of the layers of pavement along with provisions of its drainage & maintenance will be discussed along with reflection of field consideration.
110509: Environmental Engineering	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	2.74	3.00	2.79	2.50	-0.29	Attained	
	CO 3	2.75	3.00	2.80	2.50	-0.30	Attained	
	CO 4	2.80	3.00	2.84	2.50	-0.34	Attained	
	CO 5	3.00	3.00	3.00	2.50	-0.50	Attained	
110713: Advanced Structural Design (RCC) (DE-3)	CO 1	2.74	2.96	2.78	2.50	-0.28	Attained	Rubrics for the level can be modified
	CO 2	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 3	2.99	2.78	2.95	2.50	-0.45	Attained	
	CO 4	1.88	2.78	2.06	2.50	0.44	Not Attained	More design problems will be conducted.
110714: Hydraulic Structure (DE-3)	CO 1	3.00	2.56	2.91	2.50	-0.41	Attained	Rubrics for the level can be modified.
	CO 2	3.00	2.56	2.91	2.50	-0.41	Attained	Rubrics for the level can be modified
	CO 3	1.79	2.11	1.86	2.50	0.65	Not Attained	Problems related with cross drainage works

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	CO 4	0.00	2.56	0.51	2.50	1.99	Not Attained	and design of various elements of hydraulic structure will be conducted more.
	CO 5	2.43	2.78	2.50	2.50	0.00	Not Attained	
110715: Advanced Structural Analysis (DE-3)	CO 1	0.00	2.78	0.56	2.50	1.94	Not Attained	Analysis of statically indeterminate structures (MATLAB) hands-on with software's will be discussed more.
	CO 2	0.00	2.78	0.56	2.50	1.94	Not Attained	
	CO 3	1.60	2.78	1.84	2.50	0.66	Not Attained	
	CO 4	1.33	2.78	1.62	2.50	0.88	Not Attained	
	CO 5	1.60	2.78	1.84	2.50	0.66	Not Attained	
900201: Integrated Waste Management for Smart City (OC - 2)	CO 1	3.00	2.50	2.90	2.50	-0.40	Attained	Rubrics for the level can be modified.
	CO 2	2.74	2.50	2.69	2.50	-0.19	Attained	Rubrics for the level can be modified.
	CO 3	2.41	2.50	2.43	2.50	0.07	Not Attained	Waste energy recovery techniques will be discussed more.
	CO 4	2.57	2.74	2.60	2.50	-0.10	Attained	Rubrics for the level can be modified.
900202: Project Planning & Control (OC - 2)	CO 1	1.93	3.00	2.15	2.50	0.35	Not Attained	Analysis of planning and project network by CPM & PERT methods will be discussed more.
	CO 2	2.31	3.00	2.45	2.50	0.05	Not Attained	
	CO 3	2.47	3.00	2.58	2.50	-0.08	Attained	Rubrics for the level can be modified.
	CO 4	3.00	2.86	2.97	2.50	-0.47	Attained	
	CO 5	3.00	2.86	2.97	2.50	-0.47	Attained	

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900213: Urban Planning & Transportation Systems (OC - 3)	CO 1	2.92	2.92	2.92	2.50	-0.42	Attained	Rubrics for the level can be modified
	CO 2	2.85	2.64	2.81	2.50	-0.31	Attained	
	CO 3	2.74	2.64	2.72	2.50	-0.22	Attained	
	CO 4	2.90	2.92	2.90	2.50	-0.40	Attained	
	CO 5	3.00	2.50	2.90	2.50	-0.40	Attained	
110503: Fluid Mechanics-II (Practical)	CO 1	2.00	2.23	2.05	2.50	0.45	Not Attained	More Practical related hands on based on turbines & pumps properties will be taken during practical's performing.
	CO 2	2.00	2.12	2.02	2.50	0.48	Not Attained	
	CO 3	2.20	2.35	2.23	2.50	0.27	Not Attained	
110509: Environmental Engineering (Practical)	CO 1	2.90	2.88	2.90	2.50	-0.40	Attained	Rubrics for the level can be modified
	CO 2	2.90	3.00	2.92	2.50	-0.42	Attained	
	CO 3	2.90	2.27	2.77	2.50	-0.27	Attained	
	CO 4	2.90	2.58	2.84	2.50	-0.34	Attained	
110505: Transportation Engineering (Practical)	CO 1	3.00	3.00	3.00	2.50	-0.50	Attained	Rubrics for the level can be modified
	CO 2	3.00	3.00	3.00	2.50	-0.50	Attained	
	CO 3	3.00	2.62	2.92	2.50	-0.42	Attained	
	CO 4	3.00	3.00	3.00	2.50	-0.50	Attained	
110508: Self Learning/Presentations	CO 1	2.10	2.71	2.22	2.50	0.28	Not Attained	For improving effective

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	CO 2	2.40	2.68	2.46	2.50	0.04	Not Attained	communication, more PPT's and Poster presentations on civil engineering related arena will be performed from students.
	CO 3	2.10	2.77	2.23	2.50	0.27	Not Attained	
	CO 4	3.00	2.98	3.00	2.50	-0.50	Attained	
	CO 5	1.80	2.80	2.00	2.50	0.50	Not Attained	For improving effective communication, more PPT's and Poster presentations on civil engineering related arena will be performed by students.
110701: Software Application for Solving Civil Engineering Problem	CO 1	2.30	2.18	2.28	2.50	0.22	Not Attained	More hands on based on building elements such as beams, slabs by using various software's such as MATLAB, MS Excel will be given to solve.
	CO 2	2.30	1.41	2.12	2.50	0.38	Not Attained	
	CO 3	2.30	2.18	2.28	2.50	0.22	Not Attained	
	CO 4	2.30	1.67	2.17	2.50	0.33	Not Attained	
	CO 5	2.30	1.92	2.22	2.50	0.28	Not Attained	
110703: Creative Problem Solving	CO 1	2.90	3.00	2.92	2.50	-0.42	Attained	Rubrics for the level can be modified
	CO 2	2.90	3.00	2.92	2.50	-0.42	Attained	
	CO 3	2.90	3.00	2.92	2.50	-0.42	Attained	
	CO 4	2.90	3.00	2.92	2.50	-0.42	Attained	

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