

Walchand College of Engineering, Sangli

(An Autonomous Institute)



Curriculum (Structure)

for

Civil Engineering

Academic Year 2016-2017



Walchand College of Engineering, Sangli

(An Autonomous Institute)

Teaching and Evaluation Scheme from Year 2016-17

Second year B. Tech. Program in Civil Engineering

Semester I

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max	Min for Passing	
3MA201	Engineering Mathematics - III	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 201	Fluid Mechanics	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 202/ 3CV 203	Earth Science/ Advanced Geology*	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 204 (3CV203)	Engineering Surveying	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3AM 201	Solid Mechanics	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 205 (3CV202)	Building Materials and Construction	4	0	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 251	Fluid Mechanics Lab	0	0	2	1	ISE	50	20	
						ESE POE	50	20	
3CV 252	Building Materials and Construction Lab	0	0	2	1	ISE	50	20	
						ESE POE	50	20	
3CV 253	Surveying Lab	0	0	2	1	ISE	50	20	
						ESE POE	50	20	
3CV 254	Geology Lab	0	0	2	1	ISE	100	50	
Total		19	1	8	24	Total Credits: 24; Total Contact Hours: 28hrs			

* Only for the batch 2016-17

Note: Course code in the bracket indicates pre-revised code



Walchand College of Engineering, Sangli

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Teaching and Evaluation Scheme for

Teaching and Evaluation Scheme from Year 2016-17

Second year B. Tech. Program in Civil Engineering

Semester II

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max	Min for Passing	
3HS 201	Environmental Science	2	1	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 221 (3CV212)	Hydraulics & Hydraulic Machinery	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 222 (3CV213)	Building Planning & Design	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 223 (3CV214)	Advanced Surveying	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 224 (3CV215)	Water Resource Engineering	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3AM 221 (3AM211)	Structural Mechanics I	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 271 (3CV262)	Hydraulics Lab	0	0	2	1	ISE	50	20	
						ESE (OE)	50	20	
3CV 272 (3CV263)	Building Planning Mini Project	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3AM 271 (3AM251)	Solid Mechanics Lab	0	0	2	1	ISE	100		40
3CV 273 (3CV264)	Advanced Surveying Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
Total		17	2	8	23	Total Credits: 23 Total Contact Hours: 27hrs			

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Teaching and Evaluation Scheme from year 2016-17

Third year B. Tech. Program in Civil Engineering

Semester I

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max	Min for Passing	
3OE##	Open Elective I	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV301	Design of hydraulic structures	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3AM301	Design of Steel Structures	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV302	Water supply and Treatment Technology	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3AM302	Structural Mechanics -II	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV303	Soil Mechanics	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 351	Environmental Engineering Lab	0	0	2	1	ISE	50	20	
						ESE(POE)	50		
3CV 352	Soil Mechanics Lab	0	0	2	1	ISE	50	20	
						ESE (OE)	50		
3CV 341	Seminar	0	0	2	1	ISE	100		40
Total		18	2	6	23	Total Credits: 23; Total Contact Hours: 26hrs			

Note: Course code in the bracket indicates pre-revised code



Walchand College of Engineering, Sangli

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Teaching and Evaluation Scheme from year 2016-17

Third year B. Tech. Program in Civil Engineering Semester II

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max	Min for Passing	
3OE##	Open Elective II	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 321	Waste Management & Pollution Control	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 322	Foundation Engineering	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 323	Transportation Engineering- I	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 324	Estimating & Contracts	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3AM 321	Design Of Concrete Structure-I	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CV 371	Highway Engineering Lab	0	0	2	1	ISE	50	20	
						ESE(OE)	50	20	
3CV 342	Estimating & Costing (mini project)	0	0	2	1	ISE	50	20	
						ESE(OE)	50	20	
3AM 341	Steel Structures Design & Drawing (Mini Project)	0	0	2	1	ISE	50	20	
						ESE(OE)	50	20	
3CV37#/ 3AM37#	Laboratory Elective	0	0	2	1	ISE	100		40
Total		18	2	8	24	Total Credits: 24 Total Contact Hours: 28hrs			

Note: Course code in the bracket indicates pre-revised code

List of Laboratory Elective courses

Course Codes	Course Name
3CV 381	Hydraulic Structures Lab
3CV 382	Foundation Engineering Lab
3CV 383	Advances in Environmental Engineering Lab
3CV 384	Remote Sensing and GIS Lab
3AM 381	Structural dynamics Lab
3AM 382	Advanced Structural design Lab
3AM 383	Concrete Technology Lab
3AM 384	Software Applications in structural design lab
3AM 385	Advanced Structural Analysis Lab

Open Elective I:		
Course Code	Course Name	Offered by Department
1OE 315 (3OE 302)	Remote Sensing & GIS, GPS	Civil
1OE 329 (3OE 304)	Manufacturing Engineering	Mechanical
1OE 330 (3OE 305)	Energy Engineering	Mechanical
1OE 331 (3OE 306)	Mechanisms and Machines	Mechanical
1OE 343 (3OE 307)	Electrical Machines	Electrical
1OE 357 (3OE 308)	Electronic Systems	Electronics
1OE 358 (3OE 311)	Fundamental of Analog and Digital Communication	Electronics
1OE 371 (3OE 309)	Software Engg. & Database Essentials	CSE
1OE 385 (3OE 310)	Internet of Things	IT

Open Elective II:		
Course Code	Course Name	Offered by Department
1OE 308 (3OE 321)	Machine Foundations	Civil-APM
1OE 309 (3OE 322)	Theory of Structures	Civil-APM
1OE 336 (3OE 324)	Power Plant Engineering	Mechanical
1OE 337 (3OE 325)	Fabrication Technology	Mechanical
1OE 338 (3OE 326)	Mechanical Power Transmission	Mechanical
1OE 350 (3OE 327)	Renewable Energy	Electrical
1OE 364 (3OE 328)	Embedded Programming	Electronics
1OE 365 (3OE 331)	Signal Processing and Foundation	Electronics
1OE 378 (3OE 329)	Data Analytics	CSE
1OE 392 (3OE 330)	Web Design & Applications	IT

Note: Course code in the bracket indicates pre-revised code



Walchand College of Engineering, Sangli
(An Autonomous Institute)
Teaching and Evaluation Scheme for Year 2016-17
Final Year U.G. Program in Civil Engineering
I Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
						Component	Marks		
		L	T	P	Credits		Max Marks	Min for Passing	
1OE***	Open Elective III	3	0	0	3	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2CE401	Transportation Engineering II	3	1	0	4	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2CE402	Construction Project Management	3	0	0	3	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2AM401	Design of Concrete Structures II	4	0	0	4	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2CE/AM 4**	Professional Elective	3	1	0	4	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2AM402	Structural Dynamics & Earthquake Engineering	3	1	0	4	ISE 1	10	20	40
						ISE 2	10		
						MSE	30		
						ESE	50		
2CE452	Construction Project Management (mini project)	0	0	2	1	ISE	50	20	
						ESE(O.E.)	50	20	
2AM451	Concrete Structures Design & Drawing – (Mini Project)	0	0	4	2	ISE	50	20	
						ESE(O.E.)	50	20	
2CE453	Pre-project Work	0	0	2	1	ISE	100	40	
Total		19	3	8	26	---			

Total Credits : 26

Total Contact Hours : 30hrs

Open Elective III:		
Course Code	Course Name	Offered by Department
1OE 415 (3OE 341)	Numerical Methods and Optimization Techniques	Civil
1OE 429 (3OE 342)	Automobile Engineering	Mechanical
1OE 430 (3OE 343)	Energy Modeling and Management	Mechanical
1OE 431 (3OE 344)	Aerospace Engineering	Mechanical
1OE 443 (3OE 345)	Industrial Automation	Electrical
1OE 457 (3OE 346)	Cyber Physical Systems	Electronics
1OE 471 (3OE 347)	Business Intelligence	CSE
1OE 472	Ethical Hacking and Cyber Security	CSE
1OE 485 (3OE 348)	Data Visualization and Interpretation	IT



Walchand College of Engineering, Sangli

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Teaching and Evaluation Scheme for Year 2016-17

Final Year U.G. Program in Civil Engineering

II Semester

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max Marks	Min for Passing	
2IC411	Industrial Management & Economics	4	0	0	4	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
2CE411	Project	0	0	8*	12	ISE	50	20	
						ESE(O.E.)	50	20	
Total		4	0	8	16				

Note*: Average contact hours/week/batch of 8-10 students

Total Credits:16

Total Contact Hours: 12 hrs.

List of Professional Electives

2AM405	Advanced Structural Analysis
2CE407	Construction Practices
2CE409	Maintenance and Rehabilitation of structures
2AM415	Advanced Structural Design
2CE419	Town and Country Planning
2CE 420	Properties of Concrete