

Walchand College of Engineering, Sangli

(An Autonomous Institute)



Curriculum (Structure)

for

Computer Science and Engineering

Academic Year 2016-2017



Walchand College of Engineering, Sangli
 (An Autonomous Institute)
 Teaching and Evaluation Scheme for Year 2016-17
Second Year UG Program in Computer Science & Engineering
 Semester I

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max.	Min. for Passing	
3CS201	Discrete Mathematics	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS202	Data Structures	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS203	Data Communication & Networking	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS204	Software Engineering	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS205	Processor Architecture	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3HS 201	Environmental Science	2	1	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 251 (3CS252)	Data Structures Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3CS 252 (3CS255)	Processor Architecture Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3CS 253 (3CS256)	Programming Lab-I	2	0	2	3	ISE	50	20	
						ESE (POE)	50	20	
Total		19	3	6	25	Total Contact Hours/Week: 28 hrs			

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



Walchand College of Engineering, Sangli
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 Teaching and Evaluation Scheme for Year 2016-17
Second Year UG Program in Computer Science & Engineering
 Semester II

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Theory Marks		
							Max.	Min.	
3CS 221 (3CS211)	Theory of Computation	3	1	0	4	ISE-1	10		40
						MSE	30		
						ISE-2	10		
						ESE	50	20	
3CS 222 (3CS212)	Computer Network	3	0	0	3	ISE-1	10		40
						MSE	30		
						ISE-2	10		
						ESE	50	20	
3CS 223 (3CS213)	Operating System	3	1	0	4	ISE-1	10		40
						MSE	30		
						ISE-2	10		
						ESE	50	20	
3CS 224 (3CS214)	Database Engineering	3	0	0	3	ISE-1	10		40
						MSE	30		
						ISE-2	10		
						ESE	50	20	
3CS 225 (3CS215)	Statistics and Fuzzy System	3	1	0	4	ISE-1	10		40
						MSE	30		
						ISE-2	10		
						ESE	50	20	
3CS 271 (3CS262)	Computer Network Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3CS 272 (3CS264)	Database Engineering Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3CS 273 (3CS265)	Programming Lab. -II	2	0	2	3	ISE	50	20	
						ESE (POE)	50	20	
Total		17	3	6	23	Total Contact Hours/Week: 26 Hrs			

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Teaching and Evaluation Scheme for Year 2016-17

Third Year UG Program in Computer Science & Engineering Semester I

Course Code	Course	Teaching Scheme				Evaluation Scheme			
						Component	Marks		
		L	T	P	Credits		Max.	Min. for passing	
1OE371	Open Elective I	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS3**	Professional Electives I	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 301	Computer Architecture	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 302	Principles of Compiler Design	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 303	Design and Analysis of Algorithm	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 351	Design and Analysis of Algorithm Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
3CS 352	Object Oriented Modeling and Design	2	0	2	3	ISE	50	20	
						ESE (POE)	50	20	
3CS 341	Mini-Project-I	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
2CS3**	Professional Electives II	2	0	2	3	ISE	100	40	
Total		19	1	8	24	Total Contact Hours/Week: 28 Hrs			

Professional Elective I		Professional Elective II	
3CS 311	Advanced Operating System	3CS 361	Computer Graphics and Visualization
3CS 312	Advanced Data Structure	3CS 362	Advanced Programming

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

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Teaching and Evaluation Scheme for Year 2016-17

Third Year UG Program in Computer Science & Engineering Semester II

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max.	Min. for passing	
10E 378	Open Elective II	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 321	Distributed & Cloud Computing	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 322	Advanced Database System	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 323	Pervasive Computing	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 3**	Professional Elective III	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 3**	Professional Elective IV	3		0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
3CS 371	Advanced Database System Lab	0	0	2	1	ISE	50	20	
						ESE(POE)	50		
3CS 372	Internet and Web Programming	2	0	2	3	ISE	50	20	
						ESE	50		
3CS 342	Mini-Project-II	0	0	2	1	ISE (POE)	50	20	
						ESE(POE)	50		
Total		20	1	6	24	Total Contact Hours/Week: 27 Hrs			

Professional Elective III		Professional Elective IV	
3CS 331	Digital Image Processing	3CS 334	Soft Computing
3CS 332	Intelligent Systems	3CS 335	Advanced Computer Network Technology
3CS 333	Computer Modeling and Simulation	3CS 336	Software Testing and Quality Assurance

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

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Teaching and Evaluation Scheme for Year 2016-17

Final Year UG Program in Computer Science & Engineering

Semester I

Course Code	Course	Teaching Scheme				Evaluation Scheme			
		L	T	P	Credits	Component	Marks		
							Max.	Min. for passing	
2CS43*	Open Elective III	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS401	Information Security	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS402	Data Warehousing & Data Mining	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS403	Information Retrieval	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2IC 402	Industrial Management	3	0	0	3	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS4**	Professional Elective V	3	1	0	4	ISE-1	10	20	40
						MSE	30		
						ISE-2	10		
						ESE	50		
2CS481	Pre-Project work	0	0	2	1	ISE	100	40	
2CS451	Information Security Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
2CS452	Data Warehousing & Data Mining Lab	0	0	2	1	ISE	50	20	
						ESE (POE)	50	20	
Total		18	2	6	23	Total Credits: 23 Total Contact Hours/Week: 26 hrs			

1CS42* : Professional Elective V	
2CS 411	High Performance Computing
2CS 412	Pattern Recognition
2CS 413	Natural Language Processing

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



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Teaching and Evaluation Scheme for Year 2016-17

Final Year UG Program in Computer Science & Engineering Semester II

Course Code	Course	Teaching Scheme				Evaluation Scheme		
		L	T	P	Credits	Component	Marks	
							Max.	Min. for passing
2CS4**	Professional Elective VI	3	0	0	3	ISE-1	10	40
						MSE	30	
						ISE-2	10	
						ESE	50	20
2CS482	Project	0	0	8	12	ISE	50	20
						ESE (OE)	50	20
Total		3	0	8	15	Total Contact Hours/Week: 11 hrs		