

**Kolhapur Institute of Technology's  
College of Engineering, Kolhapur  
(An Autonomous Institute)**



**Proposed Curriculum Structure  
for  
Computer Science & Engineering  
(Under Graduate Programme)  
Academic Year 2019-2020**

**Teaching and Evaluation scheme for**  
**Second Year B. Tech. Program in Computer Science & Engineering**  
**Semester-III**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass (%)	
UCSE0301	Computational Mathematics	3	-	1	4	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0302	Discrete Mathematical Structure	3	-	1	4	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0303	Data Structures	3	0	-	3	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0304	Digital Logic Design & Microprocessors	4	-	-	4	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0305	Data Communication and Networks	3	-	-	3	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0331	Digital Logic Design & Microprocessors Lab	-	2	-	1	ISE	25	10	-
						ESE(OE)	50	20	-
UCSE0332	Data Communication and Networks Lab	-	2	-	1	ISE	25	10	-
						ESE(POE)	50	20	-
UCSE0333	Data Structures Lab	-	4	-	2	ISE	50	20	-
						ESE(POE)	50	20	-
UCSE0361	Environmental Studies	2	-	-	-	ESE	100	40	-
		18	8	2	22	-	850	-	-
Total Credits: 22						Total Contact hours:28			

BS Basic Sciences  
 ES Engineering Sciences  
 PC Professional Core

L Theory  
 P Practical  
 T Tutorial

ISE In Semester Evaluation  
 MSE Mid Semester Examination  
 ESE End Semester Examination

**Teaching and Evaluation scheme for  
Second Year B. Tech. Program in Computer Science & Engineering  
Semester-IV**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass (%)	
UCSE0401	Automata Theory	3	-	1	4	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0402	Computer Graphics	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0403	Computer Networks	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0404	Computer Organization and Architecture	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0405	Software Engineering	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0431	Object Oriented Programming using C++ Lab	2	2	-	3	ISE	25	10	-
						ESE(POE)	50	20	
UCSE0432	Computer Graphics Lab	-	2	-	1	ISE	25	10	-
						ESE(OE)	25	10	
UCSE0433	Computer Networks Lab	-	2	-	1	ISE	25	10	-
						ESE(OE)	25	10	
UCSE0451	Mini Project	-	2	-	1	ISE	25	10	-
						ESE(POE)	50	20	-
UCSE0461	Soft Skills		2			ESE	50	20	
		17	10	1	22	-	800	-	-
		Total Credits: 22				Total Contact hours:28			

BS	Basic Sciences	L	Theory	ISE	In Semester Evaluation
ES	Engineering Sciences	P	Practical	MSE	Mid Semester Examination
PC	Professional Core	T	Tutorial	ESE	End Semester Examination

**Teaching and Evaluation scheme for**  
**Third Year B. Tech. Program in Computer Science & Engineering**  
**Semester-V**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass (%)	
UCSE0501	Computer Algorithm	3	-	1	4	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0502	Operating System	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE052*	Professional Elective-I	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0503	Database Engineering	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0504	Machine Learning	2	-	1	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0531	Database Engineering Lab	-	2	-	1	ISE	25	10	10
						ESE(POE)	50	20	25
UCSE0532	Advanced Programming Lab	2	4	-	4	ISE	25	10	10
						ESE (POE)	50	20	20
UCSE0533	Operating System Lab	-	2	-	1	ISE	50	20	-
UCSE056*	Professional Certification	-	2	-	-	ESE	100	40	-
		16	10	2	22	-	800	-	-
		Total Credits: 22				Total Contact hours:28			

Professional Elective-1	Professional Certification
Mobile Technology (UCSE0521)	Data Structures, Algorithms using Python by NPTEL(UCSE0561)
Programming Paradigm (UCSE0522)	Google Cloud Computing by NPTEL (UCSE0562)
Project Management (UCSE0523)	Ultimate Google Cloud Certifications: All in one bundle by Udemy(UCSE0563)

**Teaching and Evaluation scheme for**  
**Third Year B. Tech. Program in Computer Science & Engineering**  
**Semester-VI**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass (%)	
UCSE0601	Unix Operating System	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0602	Compiler Construction	3	-	1	4	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0603	Information System Security	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE062*	Professional Elective-II	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UOEL061*	Open Elective-I	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0631	Information System Security Lab	-	2	-	1	ISE	25	10	-
						ESE (OE)	50	20	-
UCSE063*	Professional Elective-II Lab	-	2	-	1	ISE	25	10	-
						ESE(OE)	50	20	-
UCSE0632	Unix Operating System Lab	-	2	-	1	ISE	25	10	-
						ESE(POE)	50	20	-
UCSE0651	Project Development Using Advanced Tools	2	2	-	3	ISE	25	10	-
						ESE(POE)	50	20	-
UCSE0661	Professional Communication		2			ESE	100	40	
		17	10	1	22	-	900	-	-
		Total Credits: 22				Total Contact hours:28			

PE-II Course Name	OE-I Course Name
Software Testing and Quality Assurance (UCSE0621)	Cyber Security ( UOEL0611)
Software Testing and Quality Assurance Lab ( UCSE0633)	Joy of Computing ( UOEL0612)
Data Analytics (UCSE0622)	
Data Analytics Lab ( UCSE0634)	
Ad-hoc Wireless Networks (UCSE0623)	
Ad-hoc Wireless Networks Lab ( UCSE0635)	



**Teaching and Evaluation scheme for**  
**Final Year B. Tech. Program in Computer Science & Engineering**  
**Semester-VII**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass (%)	
UCSE0701	Distributed Systems	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0702	Advanced Database Systems	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE072*	Professional Elective-III	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UOEL071*	Open Elective-II	3	-	-	3	ISE-I	10	20	40
						ISE-II	10		
						MSE	30		
						ESE	50		
UCSE0731	Advanced Database Systems Lab	-	2	-	1	ISE	50	20	
						ESE(POE)	50	20	
UCSE0732	Web Technology Lab	3	4	-	5	ISE	50	20	-
						ESE(POE)	50	20	-
UCSE0733	Distributed Systems Lab	-	2	-	1	ISE	50	20	-
						ESE(OE)	50	20	-
UCSE0751	Project Phase - I	-	2		1	ISE	50	20	-
UCSE0761	Business English Communication	-	2	-	-	ESE	50	20	-
		15	12	0	20	-	800	-	-
Total Credits: 20						Total Contact hours:27			

PE-III Course Name	OE-II Course Name
Natural Language Processing (UCSE0721)	Basics of Network Engineering (UOEL0711)
High Performance Computing (UCSE0722)	Software Systems (UOEL0712)
Software Defined Network (UCSE0723)	
Digital Image Processing (UCSE0724)	

**Teaching and Evaluation scheme for**  
**Final Year B. Tech. Program in Computer Science & Engineering**  
**Semester-VIII**

Course Code	Course	Teaching Scheme				Evaluation Scheme (TH)			
		L	P	T	Credits	Components	Max	Min for pass	
UCSE0801	Internet of Things	2			2	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0802	Cloud Computing	3			3	ISE-I	10		40
						ISE-II	10		
						MSE	30		
						ESE	50	20	
UCSE0831	Internet of Things Lab		2		1	ISE	50	20	
UCSE0851	Project Phase - II	-	12	-	6	ISE-I	75	60	120
						ISE-II	75		
						ESE(POE)	150	60	
		5	14	0	12	0	400	-	-
		Total Credits: 12				Total Contact hours:19			

PC  
PRJ.

Professional Core  
Project

L Theory  
P Practical  
T Tutorial

ISE In Semester Evaluation  
MSE  
ESE

# Distribution of Credits:-

Domain	Credits	Percentage
Project (PRJ)	11	6.4%
Humanities Science (HS)	6	3.53%
Basic Science (BS)	18	10.59%
Engineering Science (ES)	26	15.29%
Professional Core (PC)	93	53.53%
Professional Elective (PE)	10	5.88%
Open Elective (OE)	6	3.53%
Total	170	100.00%

