



Rajgad Dnyanpeeth's

SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

Gat No. 237, Pune Bangalore Highway, Dhangawadi, Tal – Bhor, Dist- Pune (Maharashtra)

Criterion1 – Curricular Aspects

Key Indicator – 1.3 Curriculum Enrichment

1.3.2. Number of courses that include experiential learning through project work/field work/internship during the year 2021-2022

Sr. No.	Program Title	Name of the Course that include experiential learning through project work/field work/internship	Course code	Year of offering	Department
1	Sponsored Project	Concrete Technology	201010	2021-22	Civil Engineering
2	Sponsored Project	Quantity surveying, contracts and tenders	401008	2021-22	
3	Sponsored Project	Environmental Engineering II	401 001	2021-22	
4	Sponsored Project	Concrete Technology	201010	2021-22	
5	Internship	Internship	301016	2021-22	
6	Sponsored Project	Design of Machine Elements	302043	2021-22	Mechanical Engineering
7	Sponsored Project	Composite Materials	302052-A	2021-22	
8	Internship	Internship	302055	2021-22	
9	Sponsored Project	Machine Learning	410250	2021-22	Computer Engineering
10	Sponsored Project	Embedded & Real Time Operating System	410252	2021-22	
11	Sponsored Project	Machine Learning	410250	2021-22	

12	Sponsored Project	Machine Learning	410250	2021-22	
13	Sponsored Project	Embedded & Real Time Operating System	410252	2021-22	
14	Sponsored Project	Machine Learning	410250	2021-22	
15	Internship	Internship	310255	2021-22	
16	Sponsored Project	Internet of Things	404184	2021-22	E&TC Engineering
17	Sponsored Project	Internet of Things	404184	2021-22	
18	Sponsored Project	Internet of Things	404184	2021-22	
19	Sponsored Project	Electronics Product Design	404185	2021-22	
20	Internship	Internship	304199	2021-22	



Principal
Rajgad Dnyanpeeth's
Shri Chhatrapati Shivajiraje College of Engg.
Dhangawadi, Pune-412206



Savitribai Phule Pune University, Pune
SE(Civil Engineering) 2019 Course
 (With effect from Academic Year 2020-21)
Semester-IV

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks					Credit				
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	PR	TUT	Total
201008	Geotechnical Engineering	03	-	-	30	70	-	-	-	100	03	-	-	03
201009	Survey	03	-	-	30	70	-	-	-	100	03	-	-	03
201010	Concrete Technology	03	-	-	30	70	-	-	-	100	03	-	-	03
201011	Structural Analysis	03	-	-	30	70	-	-	-	100	03	-	-	03
201012	Project management	03	-	-	30	70	-	-	-	100	03	-	-	03
201013	Geotechnical Engineering Lab	-	02	-	-	-	-	-	50	50	-	01	-	01
201014	Survey Lab	-	04	-	-	-	-	50	-	50	-	02	-	02
201015	Concrete Technology Lab	-	02	-	-	-	25	-	-	25	-	01	-	01
201016	Structural Analysis Tutorial	-	-	01	-	-	25	-	-	25	-	-	01	01
201017	Project Based Learning	-	04	-	-	-	50	-	-	50	-	02	-	02
Total		15	12	01	150	350	100	50	50	700	15	06	01	22

Abbreviations:
 TH : Theory TW: Term Work PR : Practical OR: Oral TUT : Tutorial
Note: The Underlined portion of the syllabus will be covered by video lectures/ on-line lectures/ flip classroom, self study, NPTEL course lectures and/or using relevant ICT technique



SAVITRIBAI PHULE PUNE UNIVERSITY
Board of Studies in Civil Engineering
Structure for B.E. Civil 2015 Course (w. e. f. June 2018)

Subject code	Subject	Teaching Scheme			In-Semester Assessment	TW	Pract /Or	End-Semester Exam	Total	Credit	
		Hrs/Week								Th	Lab
		Lect	Tu	Pr							
401 001	Environmental Engineering II	3	--	2	30	--	50	70	150	3	1
401002	Transportation Engineering	3	--	2	30	50	--	70	150	3	1
401 003	Structural Design and Drawing III	4	--	2	30	--	50	70	150	4	1
401 004	Elective I	3	--	2	30	50	--	70	150	3	1
401 005	Elective II	3	--	--	30	--	--	70	100	3	--
401 006	Project (Phase-I)	--	2	--	--	--	50	--	50	--	2
Total :		16	2	8	150	100	150	350	750	16	6
										22 Credits	

Subject code	Subject	Teaching Scheme			In-Semester Assessment	TW	Or	End-Semester Exam	Total	Credit	
		Hrs/Week								Th	Pr
		Lect	Tu	Pr							
401 007	Dams and Hydraulic Structures	3	--	2	30	--	50	70	150	3	1
401008	Quantity Surveying, Contracts and tenders	3	--	2	30	--	50	70	150	3	1
401 009	Elective III	3	--	2	30	50	--	70	150	3	1
401 010	Elective IV	3	--	2	30	50	--	70	150	3	1
401 006	Project	--	6	--	--	50	100	--	150	--	6
Total :		12	6	20	150	150	200	280	750	12	10
										22 Credits	



SAVITRIBAI PHULE PUNE UNIVERSITY
Board of Studies in Civil Engineering
Structure for B.E. Civil 2015 Course (w. e. f. June 2018)

Semester-I											
Subject code	Subject	Teaching Scheme			In-Semester Assessment	TW	Pract Or	End-Semester Exam	Total	Credit	
		Hrs/Week								Th	Lab
		Lect	Tu	Pr							
401 001	Environmental Engineering II	3	-	2	30	-	50	70	150	3	1
401 002	Transportation Engineering	3	-	2	30	50	-	70	150	3	1
401 003	Structural Design and Drawing III	4	-	2	30	-	50	70	150	4	1
401 004	Elective I	3	-	2	30	50	-	70	150	3	1
401 005	Elective II	3	-	-	30	-	-	70	100	3	-
401 006	Project (Phase-I)	-	2	-	-	-	50	-	50	-	2
Total :		16	2	8	150	100	150	350	750	16	6
										22 Credits	

Semester-II											
Subject code	Subject	Teaching Scheme			In-Semester Assessment	TW	Or	End-Semester Exam	Total	Credit	
		Hrs/Week								Th	Pr
		Lect	Tu	Pr							
401 007	Dams and Hydraulic Structures	3	-	2	30	-	50	70	150	3	1
401 008	Quantity Surveying, Contracts and tenders	3	-	2	30	-	50	70	150	3	1
401 009	Elective III	3	-	2	30	50	-	70	150	3	1
401 010	Elective IV	3	-	2	30	50	-	70	150	3	1
401 006	Project	-	6	-	-	50	100	-	150	-	6
Total :		12	6	8	120	150	200	280	750	12	10
										22 Credits	



Savitribai Phule Pune University, Pune														
SE(Civil Engineering) 2019 Course														
(With effect from Academic Year 2020-21)														
Semester-IV														
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks					Credit				
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	PR	TUT	Total
201008	Geotechnical Engineering	03	-	-	30	70	--	-	-	100	03	--	--	03
201009	Survey	03	-	-	30	70	-	-	-	100	03	-	-	03
201010	Concrete Technology	03	-	-	30	70	-	-	-	100	03	-	-	03
201011	Structural Analysis	03	-	--	30	70	-	-	-	100	03	-	--	03
201012	Project management	03	--	-	30	70	--	--	--	100	03	-	-	03
201013	Geotechnical Engineering Lab	-	02	-	-	-	-	-	50	50	-	01	-	01
201014	Survey Lab	-	04	-	-	-	-	50	-	50	-	02	-	02
201015	Concrete Technology Lab	-	02	-	-	-	25	-	-	25	-	01	-	01
201016	Structural Analysis Tutorial	--	-	01	--	--	25	-	-	25	--	-	01	01
201017	Project Based Learning	-	04	-	-	-	50	-	-	50	-	02	-	02
Total		15	12	01	150	350	100	50	50	700	15	06	01	22

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SEMESTER-VI																
Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks					Credit						
		Theory	Practical	Tutorial	IN-Sem	End-Sem	TW	PR	OR	Total	TH	TW	PR	OR	TUT	Total
301012	Waste Water Engineering	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301013	Design of RC Structures	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301014	Remote Sensing and GIS	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301015	Elective II	03	--	--	30	70	--	--	--	100	03	--	--	--	--	03
301016	Internship	--	--	--	--	--	100	--	--	100	--	04	--	--	--	04
301017	Waste Water Engineering Lab	--	02	--	--	--	--	50	50	--	--	--	01	--	--	01
301018	Design of RC Structures Lab	--	04	--	--	--	--	50	50	--	--	--	02	--	--	02
301019	Remote Sensing and GIS Lab	--	02	--	--	--	50	--	50	--	01	--	--	--	--	01
301020	Elective II Lab	--	02	--	--	--	50	--	50	--	01	--	--	--	--	01
301021	Audit Course II: Leadership and Personality Development Industrial Safety	--	--	01	--	GR	--	--	--	GR	--	--	--	--	--	--
Total		12	10	01	120	280	200	--	100	700	12	06	--	03	--	21

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Elective II: 301015

S N	Course Code	Course Name
01	301015 a	Advanced Engineering Geology with Rock Mechanics
02	301015 b	Soft Computing Techniques
03	301015 c	Advanced Surveying
04	301015 d	Advanced Geotechnical Engineering
05	301015 e	Architecture and Town Planning
06	301015 f	Solid Waste Management



Savitribai Phule Pune University
Board of Studies - Automobile and Mechanical Engineering
Undergraduate Program - Mechanical Engineering (2019 pattern)

Course Code	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks					Credit				
		TH	PR	TUT	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
Semester-V														
302041	Numerical & Statistical Methods	3	-	1	30	70	25	-	-	125	3	-	1	4
302042	Heat & Mass Transfer	3	2	-	10	70	-	50	-	150	3	1	-	4
302043	Design of Machine Elements	3	2	-	10	70	-	25	-	125	3	1	-	4
302044	Mechatronics	3	2	-	30	70	-	25	-	125	3	1	-	4
302045	Elective I	3	-	-	10	70	-	-	-	100	3	-	-	3
302046	Digital Manufacturing Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302047	Skill Development	-	2	-	-	-	25	-	-	25	-	1	-	1
302048	Audit course - V ³	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		15	10	1	150	350	100	50	50	700	15	5	1	21
Semester-VI														
302049	Artificial Intelligence & Machine Learning	3	2	-	30	70	-	25	-	125	3	1	-	4
302050	Computer Aided Engineering	3	2	-	30	70	-	50	-	150	3	1	-	4
302051	Design of Transmission Systems	3	2	-	30	70	-	25	-	125	3	1	-	4
302052	Elective II	3	-	-	30	70	-	-	-	100	3	-	-	3
302053	Measurement Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302054	Fluid Power & Control Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302055	Internship/Mini project *	-	4	-	-	-	100	-	-	100	-	4	-	4
302056	Audit course - VI ³	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		12	14	-	120	280	200	50	50	700	12	9	-	21

Elective-I				Elective-II			
302045-A	Advanced Forming & Joining Processes	302052-A	Composite Materials				
302045-B	Machining Science & Technology	302052-B	Surface Engineering				

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Note: Interested students of TE (Automobile Engineering and Mechanical Engineering) can opt for any one of the audit course from the list of audit courses prescribed by BOS (Automobile and Mechanical Engineering)

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Savitribai Phule Pune University
Board of Studies - Automobile and Mechanical Engineering
Undergraduate Program - Mechanical Engineering (2019 pattern)

Course Code	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks					Credit				
		TH	PR	TUT	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
Semester-V														
302041	Numerical & Statistical Methods	3	-	1	30	70	25	-	-	125	3	-	1	4
302042	Heat & Mass Transfer	3	2	-	30	70	-	50	-	150	3	1	-	4
302043	Design of Machine Elements	3	2	-	30	70	-	-	25	125	3	1	-	4
302044	Mechatronics	3	2	-	30	70	-	-	25	125	3	1	-	4
302045	Elective I	3	-	-	30	70	-	-	-	100	3	-	-	3
302046	Digital Manufacturing Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302047	Skill Development	-	2	-	-	-	25	-	-	25	-	1	-	1
302048	Audit course - V ⁵	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		15	10	1	150	350	100	50	50	700	15	5	1	21
Semester-VI														
302049	Artificial Intelligence & Machine Learning	3	2	-	30	70	-	-	25	125	3	1	-	4
302050	Computer Aided Engineering	3	2	-	30	70	-	50	-	150	3	1	-	4
302051	Design of Transmission Systems	3	2	-	30	70	-	-	25	125	3	1	-	4
302052	Elective II	3	-	-	30	70	-	-	-	100	3	-	-	3
302053	Measurement Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302054	Fluid Power & Control Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302055	Internship/Mini project *	-	4	-	-	-	100	-	-	100	-	4	-	4
302056	Audit course - VI ⁵	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		12	14	-	120	280	200	50	50	700	12	9	-	21
Elective-I					Elective-II									
302045-A	Advanced Forming & Joining Processes	302052-A			Composite Materials									
302045-B	Machining Science & Technology	302052-B			Surface Engineering									

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Note: Interested students of TE (Automobile Engineering and Mechanical Engineering) can opt for any one of the audit course from the list of audit courses prescribed by BOS (Automobile and Mechanical Engineering)

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Savitribai Phule Pune University
Board of Studies - Automobile and Mechanical Engineering
Undergraduate Program - Mechanical Engineering (2019 pattern)

Course Code	Course Name	Teaching Scheme (Hrs./week)			Examination Scheme and Marks					Credit				
		TH	PR	TUT	ISE	ESE	TW	PR	OR	Total	TH	PR	TUT	Total
Semester-V														
302041	Numerical & Statistical Methods	3	-	1	30	70	25	-	-	125	3	-	1	4
302042	Heat & Mass Transfer	3	2	-	30	70	-	50	-	150	3	1	-	4
302043	Design of Machine Elements	3	2	-	30	70	-	25	25	125	3	1	-	4
302044	Mechatronics	3	2	-	30	70	-	25	25	125	3	1	-	4
302045	Elective I	3	-	-	30	70	-	-	-	100	3	-	-	3
302046	Digital Manufacturing Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302047	Skill Development	-	2	-	-	-	25	-	-	25	-	1	-	1
302048	Audit course - V ⁵	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		15	10	1	150	350	100	50	50	700	15	5	1	21
Semester-VI														
302049	Artificial Intelligence & Machine Learning	3	2	-	30	70	-	-	25	125	3	1	-	4
302050	Computer Aided Engineering	3	2	-	30	70	-	50	-	150	3	1	-	4
302051	Design of Transmission Systems	3	2	-	30	70	-	-	25	125	3	1	-	4
302052	Elective II	3	-	-	30	70	-	-	-	100	3	-	-	3
302053	Measurement Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302054	Fluid Power & Control Laboratory	-	2	-	-	-	50	-	-	50	-	1	-	1
302055	Internship/Mini project *	-	4	-	-	-	100	-	-	100	-	4	-	4
302056	Audit course - VI ⁵	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		12	14	-	120	280	200	50	50	700	12	9	-	21
Elective-I					Elective-II									
302045-A	Advanced Forming & Joining Processes				302052-A	Composite Materials								
302045-B	Machining Science & Technology				302052-B	Surface Engineering								

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Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
(with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks					Credit		
		Hours / Week		In-Sem	End-Sem	TW	PR	OR/ *PRE	Total	TH/ TUT	PR
410250	Machine Learning	03	--								
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--
410252	Elective III	03	--	30	70	--	--	--	100	03	--
410253	Elective IV	03	--	30	70	--	--	--	100	03	--
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	100	--	02
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06
								Total Credit	12	10	
Total		12	14	120	280	200	50	100	750	22	

410257 Audit Course 6 **Grade**

Elective III		Elective IV	
410252 (A) <u>Advanced Digital Signal Processing</u>		410253 (A) <u>Software Defined Networks</u>	
410252 (B) <u>Compilers</u>		410253 (B) <u>Human Computer Interface</u>	
410252 (C) <u>Embedded and Real Time Operating System</u>		410253 (C) <u>Cloud Computing</u>	
410252 (D) <u>Soft Computing and Optimization Algorithms</u>		410253 (D) <u>Open Elective</u>	

410259-Audit Course 6 (AC6) Options:

AC6-I: Business Intelligence
 AC6-II: Gamification
 AC6-III: Quantum Computing

AC6-IV: Usability Engineering
 AC6-V: Conversational Interfaces
 AC6-VI: MOOC- Learn New Skills

Abbreviations:

TW: Term Work TH: Theory OR: Oral PR: Practical
 Sem: Semester PRE: Project/ Mini-Project Presentation



Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
(with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks						Credit		
		Hours / Week Theory	Practical	In-Sem	End-Sem	TW	PR	OR/ *PRE	Total	TH/ TUT	PR	
410250	Machine Learning	03	--	30	70	--	--	--	100	03	--	
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--	
410252	Elective III	03	--	30	70	--	--	--	100	03	--	
410253	Elective IV	03	--	30	70	--	--	--	100	03	--	
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02	
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	100	--	02	
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06	
Total		12	14	120	280	200	50	100	750	12	10	
											22	Grade

410257 Audit Course 6

Elective III

- 410252 (A) Advanced Digital Signal Processing
 410252 (B) Compilers
 410252 (C) Embedded and Real Time Operating System
 410252 (D) Soft Computing and Optimization Algorithms

Elective IV

- 410253 (A) Software Defined Networks
 410253 (B) Human Computer Interface
 410253 (C) Cloud Computing
 410253 (D) Open Elective

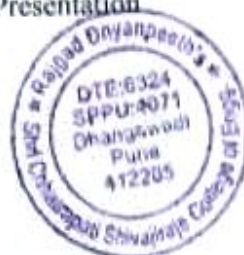
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Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
(with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks					Credit		
		Hours / Week Theory	Practical	In-Sem	End-Sem	TW	PR	OR/ -PRE	Total	TH/ TUT	PR
410250	Machine Learning	03	--	30	70	--	--	--	100	03	--
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--
410252	Elective III	03	--	30	70	--	--	--	100	03	--
410253	Elective IV	03	--	30	70	--	--	--	100	03	--
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	100	--	02
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06
								Total Credit		12	10
Total		12	14	120	280	200	50	100	750	22	Grade

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Elective III

- 410252 (A) Advanced Digital Signal Processing
 410252 (B) Compilers
 410252 (C) Embedded and Real Time Operating System
 410252 (D) Soft Computing and Optimization Algorithms

Elective IV

- 410253 (A) Software Defined Networks
 410253 (B) Human Computer Interface
 410253 (C) Cloud Computing
 410253 (D) Open Elective

410259-Audit Course 6 (AC6) Options:

- AC6-I: Business Intelligence
 AC6-II: Gamification
 AC6-III: Quantum Computing

- AC6-IV: Usability Engineering
 AC6-V: Conversational Interfaces
 AC6-VI: MOOC- Learn New Skills

Abbreviations:

- TW:** Term Work **TH:** Theory **OR:** Oral **PR:** Practical
Sem: Semester **PRE:** Project/ Mini-Project Presentation



Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
(with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks						Credit	
		Hours / Week		In-Sem	End-Sem	TW	PR	OR/ *PRE	Total	TH/ TUT	PR
410250	Machine Learning	03	--	30	70	--	--	--	100	03	--
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--
410252	Elective III	03	--	30	70	--	--	--	100	03	--
410253	Elective IV	03	--	30	70	--	--	--	100	03	--
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	100	--	02
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06
								Total Credit	750	12	10
Total		12	14	120	280	200	50	100	750	22	
410257	Audit Course 6										Grade

Elective III		Elective IV	
410252 (A) <u>Advanced Digital Signal Processing</u>		410253 (A) <u>Software Defined Networks</u>	
410252 (B) <u>Compilers</u>		410253 (B) <u>Human Computer Interface</u>	
410252 (C) <u>Embedded and Real Time Operating System</u>		410253 (C) <u>Cloud Computing</u>	
410252 (D) <u>Soft Computing and Optimization Algorithms</u>		410253 (D) <u>Open Elective</u>	

410259-Audit Course 6 (AC6) Options:

AC6-I: Business IntelligenceAC6-IV: Usability EngineeringAC6-II: GamificationAC6-V: Conversational InterfacesAC6-III: Quantum ComputingAC6-VI: MOOC- Learn New Skills

Abbreviations:

TW: Term Work

TH: Theory

OR: Oral

PR: Practical

Sem: Semester

PRE: Project/ Mini-Project Presentation



Savitribai Phule Pune University
 Fourth Year of Computer Engineering (2015 Course)
 (with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks					Credit			
		Theory	Practical	In-Sem	End-Sem	TW	PR	OR/ *PRE	Total	TH/ TUT	PR	
410250	Machine Learning	03	--	30	70	--	--	--	100	03	--	
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--	
410252	Elective III	03	--	30	70	--	--	--	100	03	--	
410253	Elective IV	03	--	30	70	--	--	--	100	--	02	
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02	
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	150	--	06	
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06	
Total		12	14	120	280	200	50	100	750	12	10	
											22	Grade

410257 Audit Course 6

- Elective III**
- 410252 (A) Advanced Digital Signal Processing
 - 410252 (B) Compilers
 - 410252 (C) Embedded and Real Time Operating System
 - 410252 (D) Soft Computing and Optimization Algorithms

- Elective IV**
- 410253 (A) Software Defined Networks
 - 410253 (B) Human Computer Interface
 - 410253 (C) Cloud Computing
 - 410253 (D) Open Elective

410259-Audit Course 6 (AC6) Options:

- AC6-I: Business Intelligence
- AC6-II: Gamification
- AC6-III: Quantum Computing

- AC6-IV: Usability Engineering
- AC6-V: Conversational Interfaces
- AC6-VI: MOOC- Learn New Skills

Abbreviations:

- TW: Term Work
- TH: Theory
- OR: Oral
- PR: Practical
- Sem: Semester
- PRE: Project/ Mini-Project Presentation



Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
 (with effect from 2018-19)

Semester II

Course Code	Course	Teaching Scheme		Examination Scheme and Marks					Credit			
		Hours / Week Theory	Practical	In-Sem	End-Sem	TW	PR	OR/ *PRE	Total	TH TUT	PR	
410250	Machine Learning	03	--	30	70	--	--	--	100	03	--	
410251	Information and Cyber Security	03	--	30	70	--	--	--	100	03	--	
410252	Elective III	03	--	30	70	--	--	--	100	03	--	
410253	Elective IV	03	--	30	70	--	--	--	100	--	02	
410254	Laboratory Practice III	--	04	--	--	50	50	--	100	--	02	
410255	Laboratory Practice IV	--	04	--	--	50	--	*50	100	--	06	
410256	Project Work Stage II	--	06	--	--	100	--	*50	150	--	06	
Total		12	14	120	280	200	50	100	750	12	10	
										22	Grade	

4102 Audit Course 6
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Elective III

- 410252 (A) Advanced Digital Signal Processing
 410252 (B) Compilers
 410252 (C) Embedded and Real Time Operating System
 410252 (D) Soft Computing and Optimization Algorithms

Elective IV

- 410253 (A) Software Defined Networks
 410253 (B) Human Computer Interface
 410253 (C) Cloud Computing
 410253 (D) Open Elective

410259-Audit Course 6 (AC6) Options:

- AC6-I: Business Intelligence
 AC6-II: Gamification
 AC6-III: Quantum Computing

- AC6-IV: Usability Engineering
 AC6-V: Conversational Interfaces
 AC6-VI: MOOC- Learn New Skills

Abbreviations:

- TW: Term Work TH: Theory OR: Oral PR: Practical
 Sem: Semester PRE: Project/ Mini-Project Presentation



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Savitribal Phule Pune University
Third Year of Computer Engineering (2019 Course)
 (With effect from Academic Year 2021-22)

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Savitribai Phule Pune University
Final Year E&TC Engineering (2015 Course)
 (With effect from Academic Year 2018-19)

Semester I

Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credits	
		Theor y	Tut	Pract	In-Sem	End-Sem	TW	PR	OR	Total	TH/TW	PR+OR
404181	VLSI Design & Technology	3	--	--	30	70	--	--	--	100	3	--
404182	Computer Networks & Security	4	--	--	30	70	--	--	--	100	4	--
404183	Radiation & Microwave Techniques	3	--	--	30	70	--	--	--	100	3	--
404184	Elective I	3	--	--	30	70	--	--	--	100	3	--
404185	Elective II	3	--	--	30	70	--	--	--	100	3	--
404186	Lab Practice -I (CNS + RMT)	--	--	4	--	--	50	--	50	100	--	2
404187	Lab Practice -II (VLSI + Elective I)	--	--	4	--	--	50	50	--	100	--	2
404188	Project Stage I	--	2	--	--	--	--	--	50	50	--	2
Audit Course 5		--	--	--	--	--	--	--	--	--	--	--
Total		16	2	8	150	350	100	50	100	750	16	6
Total Credits											22	

- Elective I**
- Digital Image and Video Processing
 - Industrial Drives and Control
 - Embedded Systems & RTOS
 - Internet of Things

- Elective II**
- Wavelets
 - Electronics Product Design
 - Optimization Techniques
 - Artificial Intelligence
 - Electronics in agriculture

- Audit Course 5**
- Green Energy
 - Human Behaviour



Savitribai PhulePune University
Final Year E&TC Engineering (2015 Course)
 (With effect from Academic Year 2018-19)

Semester I												
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credits	
		Theor y	Tut	Pract	In-Sem	End-Sem	TW	PR	OR	Total	TH/TW	PR+OR
404181	VLSI Design & Technology	3	--	--	30	70	--	--	--	100	3	--
404182	Computer Networks & Security	4	--	--	30	70	--	--	--	100	4	--
404183	Radiation & Microwave Techniques	3	--	--	30	70	--	--	--	100	3	--
404184	Elective I	3	--	--	30	70	--	--	--	100	3	--
404185	Elective II	3	--	--	30	70	--	--	--	100	3	--
404186	Lab Practice -I (CNS+ RMT)	--	--	4	--	--	50	--	50	100	--	2
404187	Lab Practice -II (VLSI + Elective I)	--	--	4	--	--	50	50	--	100	--	2
404188	Project Stage I	-	2	--	--	--	-	--	50	50	--	2
	Audit Course 5	--	--	--	--	--	--	--	--	--		----
	Total	16	2	8	150	350	100	50	100	750	16	6
Total Credits											22	

- Elective I**
- Digital Image and Video Processing
 - Industrial Drives and Control
 - Embedded Systems & RTOS
 - Internet of Things

- Elective II**
- Wavelets
 - Electronics Product Design
 - Optimization Techniques
 - Artificial Intelligence
 - Electronics in agriculture

- Audit Course 5**
- Green Energy
 - Human Behaviour



Savitribai Phule Pune University
Final Year E&TC Engineering (2015 Course)
 (With effect from Academic Year 2018-19)

Semester I												
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credits	
		Theory	Tut	Pract	In-Sem	End-Sem	TW	PR	OR	Total	TH/TW	PR+OR
404181	VLSI Design & Technology	3	--	--	30	70	--	--	--	100	3	--
404182	Computer Networks & Security	4	--	--	30	70	--	--	--	100	4	--
404183	Radiation & Microwave Techniques	3	--	--	30	70	--	--	--	100	3	--
404184	Elective I	3	--	--	30	70	--	--	--	100	3	--
404185	Elective II	3	--	--	30	70	--	--	--	100	3	--
404186	Lab Practice -I (CNS+ RMT)	--	--	4	--	--	50	--	50	100	--	2
404187	Lab Practice -II (VLSI + Elective I)	--	--	4	--	--	50	50	--	100	--	2
404188	Project Stage I	--	2	--	--	--	--	--	50	50	--	2
	Audit Course 5	--	--	--	--	--	--	--	--	--	--	---
	Total	16	2	8	150	350	100	50	100	750	16	6
Total Credits											22	
Elective I				Elective II				Audit Course 5				
1. Digital Image and Video Processing 2. Industrial Drives and Control 3. Embedded Systems & RTOS 4. Internet of Things				1. Wavelets 2. Electronics Product Design 3. Optimization Techniques 4. Artificial Intelligence 5. Electronics in agriculture				1. Green Energy 2. Human Behaviour				



Savitribai Phule Pune University
Final Year E&TC Engineering (2015 Course)
 (With effect from Academic Year 2018-19)

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Semester I												
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credits	
		Theor y	Tut	Pract	In-Sem	End-Sem	TW	PR	OR	Total	TH/TW	PR+OR
404181	VLSI Design & Technology	3	--	--	30	70	--	--	--	100	3	--
404182	Computer Networks & Security	4	--	--	30	70	--	--	--	100	4	--
404183	Radiation & Microwave Techniques	3	--	--	30	70	--	--	--	100	3	--
404184	Elective I	3	--	--	30	70	--	--	--	100	3	--
404185	Elective II	3	--	--	30	70	--	--	--	100	3	--
404186	Lab Practice -I (CNS+ RMT)	--	--	4	--	--	50	--	50	100	--	2
404187	Lab Practice -II (VLSI + Elective I)	--	--	4	--	--	50	50	--	100	--	2
404188	Project Stage I	-	2	--	--	--	-	--	50	50	--	2
	Audit Course 5	--	--	--	--	--	--	--	--	--		
	Total	16	2	8	150	350	100	50	100	750	16	6
Total Credits											22	
Elective I				Elective II				Audit Course 5				
1. Digital Image and Video Processing				1. Wavelets				1. Green Energy				
2. Industrial Drives and Control				2. Electronics Product Design				2. Human Behaviour				
3. Embedded Systems & RTOS				3. Optimization Techniques								
4. Internet of Things				4. Artificial Intelligence								
				5. Electronics in agriculture								



Savitribai Phule Pune University, Pune
T.E. (Electronics & Telecommunication Engineering) 2019 Course
 (With effect from Academic Year 2021-22)

Semester-VI

Course Code	Course Name	Teaching Scheme (Hours/Week)			Examination Scheme and Marks					Credit				
		Theory	Practical	Tutorial	In-Sem	End-Sem	TW	PR	OR	Total	TH	PR	TUT	Total
304192	Cellular Networks	03	-	-	30	70	-	-	-	100	03	-	-	03
304193	Project Management	03	-	-	30	70	-	-	-	100	03	-	-	03
304194	Power Devices & Circuits	03	-	-	30	70	-	-	-	100	03	-	-	03
304195	Elective-II	03	-	-	30	70	-	-	-	100	03	-	-	03
304196	Cellular Networks Lab	-	02	-	-	-	-	-	50	50	-	01	-	01
304197	Power Devices & Circuits Lab	-	02	-	-	-	-	50	-	50	-	01	-	01
304198	Elective-II Lab	-	02	-	-	-	-	25	-	25	-	01	-	01
304199	Internship**	-	-	-	-	-	100	-	-	100	-	-	04	04
304200	Mini Project	-	04	-	-	-	25	-	50	75	-	02	-	02
304191 B	Mandatory Audit Course 6 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		12	10	00	120	280	125	75	100	700				
Total Credit											12	05	04	21

Abbreviations:

In-Sem: In semester

End-Sem: End semester

TH: Theory

TW: Term Work

PR: Practical

OR: Oral

TUT: Tutorial

Note: Students of T.E. (Electronics & Telecommunications) have to opt any one of the audit course from the list of audit courses prescribed by BoS (Electronics & Telecommunications Engineering)

Elective -II

- 1) Digital Image Processing
- 2) Sensors in Automation
- 3) Advanced JAVA Programming
- 4) Embedded Processors
- 5) Network Security

