



Rajgad Dnyanpeeth's

SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

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

7.1.15 The institution offers a course on Human Values and professional ethics:

Various courses are offered by the institute in all branches on human values and professional ethics. The blood donation camp, Fire Safety program, Awareness and Importance of Road safety program in the college to express the feeling towards the people in the society The College organizes the program in nearby villages to teach the people about the Digitalization.

Part A: Institution offers a course on Human Values and professional ethics:

Sr.No	Department	Class	Semester	Name of Course	Year	Document Details	Remark
1	Civil Engineering	S.E.	I	Awareness to Civil Engineering Practices	2017-18	Structure	
2			II	Road Safety Management		Syllabus	
3	Mechanical Engineering	S.E.	I	Value Education		Structure	
4			II	Intellectual Property Right		Syllabus	
5	E & TC Engineering	S.E.	I	Road Safety Management		Structure	
6			II	Cyber Crime and Law		Syllabus	
7	Engineering	T.E.	I	Cyber and Information Security		Structure	
8			II	Embedded System Design using MSP430		Syllabus	




9	Computer Engineering	S.E.	I	Environmental Studies	Structure	
10			II	Intellectual Property Rights and Patents	Structure	
11		T.E.	I	Professional Ethics and Etiquettes	Syllabus	
12			II	Digital and Social Media Marketing	Structure	
13			II	Green Computing	Syllabus	
			Structure			
			Syllabus			

Part B: Institution offers a course on Human Values and professional ethics related activities

Sr.No	Document Details	Year	Remark
14	Awareness of Road Safety Program	2017-18	
15	Importance of Road Safety & Traffic Management	2016-17	
16	Awareness of Digitalization Program	2016-17	




Principal
 Rajgad Dayanpeeth's
 Shri Chhatrapati Shivajiraje College of Engg.
 Dhangewadi, Pune-412206

Savitribai Phule Pune University
S.E. (Civil Engineering) 2015 Course

Semester I												
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credit	
		Theory (TH)	Tutorials (TUT)	Practical (PR)	In- Sem	End- Sem	TW	PR	OR	Total	TH / TUT	PR/OR/ TW
201001	Building Technology and Materials	04	--	02	50	50	50	--	--	150	04	01
207001	Engineering Mathematics III	04	01	--	50	50	50	--	--	150	05	
201006	Surveying	04	--	02	50	50	--	50	--	150	04	01
201002	Strength of Materials	04	--	02	50	50	--	--	50	150	04	01
201003	Geotechnical Engineering	04	--	02	50	50	--	--	50	150	04	01
	Audit Course I Awareness to Civil Engineering Practices	--	--	--	--	--	--	--	--	--	Grade	
Total		20	01	08	250	250	100	50	100	750	25	

Note: For audit courses students are given certificate by the institutes based on the assignment submitted by them.

Abbreviations: **TW:** Term Work, **OR:** Oral, **PP:** Passed (Only for non credit courses), **NP:** Not Passed (Only for non credit courses).



Savitribai Phule Pune University, Pune
Second Year Civil Engineering (2015 Course)

Awareness to Civil Engineering Practices

Audit Course

(Certificate to be issued by institute based on performance assessment)

Civil Engineering is the oldest engineering profession comprising of a variety of sub-disciplines such as structural engineering, geotechnical, water resources, environmental engineering, construction, transportation etc. Undergraduate programmes are designed with different theoretical approaches on the application of basic sciences to solve different societal problems by engineering knowledge. However, there is a need to make the students aware about how the Civil Engineering industry operates and how theories taught in different courses are applied in practice. The students can learn from the experience gained from different workplaces such as civil engineering consultancies, contracting companies, construction sites etc. The course aims to provide insight of the different practices followed by the industry such as use of different contracts in civil engineering practice, local by-laws, duties and responsibilities of the Engineers, site records and diaries, Health and Safety practices on site, etc.

Course Objectives:

- 1) To provide basic overview of functioning of different civil engineering related industries / firms.
- 2) To provide awareness on application of different drawings, contract documents in civil engineering.
- 3) To provide insight of code of ethics, duties and responsibilities as a Civil Engineer.

Course Outcomes:

On completion of the course, learner will be able to understand

- 1) Different types of civil engineering industries and their functioning.
- 2) Applications of different documents, drawings, regulations in Civil Engineering industries.
- 3) Code of ethics to be practiced by a Civil Engineer and understand duties and responsibilities as a Civil Engineer
- 4) Different safety practices on the site.

Course Contents

1. Awareness lectures by professionals.
2. Visit to construction site/ architectural firms/ structural engineering firms etc.
3. Discuss on issues such as sustainability, eco-friendly techniques, use of locally available materials etc. directly related to techno economic development of society.

Guidelines for assessment

1. Presentation
2. Visit report
3. Group discussion



Savitribai Phule Pune University
S.E. (Civil Engineering) 2015 Course

Semester II													
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credit		
		Theory (TH)	Tutorials (TUT)	Practical (PR)	In-Sem	End-Sem	TW	PR	OR	Total	TH / TUT	PR/OR/ TW	
201004	Fluid Mechanics I	04	--	02	50	50	--	--	50	150	04	01	
201005	Architectural Planning and Design of Buildings	04	--	02	50	50	--	50	--	150	04	01	
201008	Structural Analysis I	03	01	--	50	50	--	--	--	100	04	--	
207009	Engineering Geology	04	--	02	50	50	50	--	--	150	04	01	
201007	Concrete Technology	04	--	02	50	50	--	--	50	150	04	01	
201010	Soft Skill	--	--	02	--	--	50	--	--	50	--	01	
	Audit Course 2 Road Safety Management	--	--	--	--	--	--	--	--	--	Grade		
		19	01	10	250	250	100	50	100	750	25		

Note: For audit courses students are given certificate by the institutes based on the assignment submitted by them.

Abbreviations: **TW:** Term Work, **OR:** Oral, **PP:** Passed (Only for non credit courses), **NP:** Not Passed (Only for non credit courses).



**Savitribai Phule Pune University, Pune
S.E. (Civil Engineering) 2015 Course**

**Road Safety Management
Audit Course**

(Certificate to be issued by institute based on performance assessment)

Road transport remains the least safe mode of transport, with road accidents representing the main cause of death of people. The boom in the vehicle population without adequate road infrastructure, poor attention to driver training and unsatisfactory regulation has been responsible for increase in the number of accidents. India's vehicle population is negligible as compared to the World statistics; but the comparable proportion for accidents is substantially large.

The need for stricter enforcement of law to ensure greater safety on roads and an environment-friendly road transport operation is of paramount importance. Safety and security are growing concerns for businesses, governments and the traveling public around the world, as also in India. It is, therefore, essential to take new initiatives in raising awareness, skill and knowledge of students as one of the ibid stake holders who are expected to follow the rules and policies of the government in order to facilitate safety of individual and safe mobility of others.

Course Objectives:

- 1) To provide basic overview on road safety & traffic management issues in view of the alarming increase in vehicular population of the country.
- 2) To explain the engineering & legislative measures for road safety.
- 3) To discuss measures for improving road safety education levels among the public.

Course Outcomes:

On completion of the course, learners will:

- 1) Show changes in awareness levels, knowledge and understanding.
- 2) Demonstrate a change in attitudes / behavior e.g. against drink-drive.
- 3) Utilize remedial education for those who make mistakes and for low level offences where this is more effective than financial penalties and penalty points.
- 4) Improve road safety together leading to casualty reduction

Course Contents

1. Existing Road Transport Scenario
2. Accident Causes & Remedies
3. Road Accident Investigation & Investigation Methods
4. Vehicle Technology – CMVR & Road Safety
5. Regulatory / Legislative Provisions for Improving Road Safety
6. Behavioral Training for Drivers for Improving Road Safety
7. Road Engineering Measures for Improving Road Safety



Guidelines for Conduction (Any one or more of following but not limited to)

1. Guest Lectures.
2. Visits and reports.
3. Assist authorities like RTO for audits (e.g. Particular road safety audit as critical on-site assessment of the shortcomings in the various elements of the road).
4. Mini Project

Guidelines for Assessment (Any one of following but not limited to)

1. Written Test
2. Practical Test
3. Presentation
4. Report



**Structure of S.E. (Mechanical Engineering/ Automobile Engineering)
2015 Course**

Semester-I

Subject Code	Subject	Teaching Scheme			Examination Scheme					Total Marks	Credits	
		Hours/Week			In-Sem (online)	End-Sem	TW	PR	Oral		Lect/Tut	PR/OR
		L	Tut.	PR								
207002	Engineering Mathematics – III	04	01	-	50	50	25	-	-	125	05	-
202041	Manufacturing Process-I	03	-	02	50	50	50	-	-	150	03	01
202042	Computer Aided Machine Drawing	01	-	02	--	--		50	-	50	01	01
202043	Thermodynamics	04	-	02	50	50	-	-	50	150	04	01
202044	Material Science	03	01	-	50	50	25	-	-	125	03	01
202051	Strength of Materials	04	-	02	50	50	-	-	50	150	04	01
202055	Audit course											
	Total	19	02	08	250	250	100	50	100	750	20	05
	Total of Part-I	29 Hrs								750	25	

Note: Material Science and Engineering Mathematics-III practical may be carried out fortnightly for two hours, so that the tutorial hours may be used as practical.

Semester-II

Subject Code	Subject	Teaching Scheme			Examination Scheme					Total Marks	Credits	
		Hours/Week			In-Sem (online)	End-Sem	TW	PR	Oral		Lect/Tut	PR/OR
		L	Tut.	PR								
202045	Fluid Mechanics	04	-	02	50	50	-	50	-	150	04	01
202047	Soft Skills	-	-	02	--	--	25	-	-	25	-	01
202048	Theory of Machines – I	04	01	-	50	50	25	-	25	150	04	01
202049	Engineering Metallurgy	03	01	-	50	50	-	-	25	125	03	01
202050	Applied Thermodynamics	04	-	02	50	50	-	50	-	150	04	01
203152	Electrical and Electronics Engineering	03	-	02	50	50	25	-	-	125	03	01
202053	Machine Shop – I	-	-	02	--	--	25	-	-	25	-	01
	Total	18	02	10	250	250	100	100	50	750	18	07
	Total of Part-II	30 Hrs								750	25	

Note: Theory of Machine-I and Engineering Metallurgy practical may be carried out fortnightly for two hours, so that the tutorial hours may be used as practical.



Audit Course1

In addition to credits courses, it is recommended that there should be audit course (non-credit course) from second year of Engineering. The student will be awarded grade as AP on successful completion of audit course. The student may opt for one of the audit courses, starting in second year first semester. Though not mandatory, such audit courses can help the student to get awareness of different issues which make impact on human lives and enhance their skill sets to improve their employability. List of audit courses offered in each semester is provided in curriculum. Student can choose one audit course from the list. Evaluation of audit course will be done at institute level. Method of conduction and method of assessment for audit courses is suggested.

The student registered for audit course shall be awarded the grade AP and shall be included such grade in the Semester grade report for that course, provided student has the minimum attendance as prescribed by the Savitribai Phule Pune University and satisfactory in-semester performance and secured a passing grade in that audit course. No grade points are associated with this 'AP' grade and performance in these courses is not accounted in the calculation of the performance indices SGPA and CGPA. Evaluation of audit course will be done at institute level itself.

(Ref-http://www.unipune.ac.in/Syllabi_PDF/revised-

2015/engineering/UG_RULE_REGULATIONS_FOR_CREDIT_SYSTEM-2015_18June.pdf)

Guidelines for Conduction and Assessment (Any one or more of following but not limited to)

- Lectures/ Guest Lectures
- Visits (Social/Field) and reports
- Demonstrations
- Surveys
- Mini Project
- Hands on experience on specific focused topic

Guidelines for Assessment (Any one or more of following but not limited to)

- Written Test
- Demonstrations/ Practical Test
- Presentations
- IPR/Publication
- Report

List of courses under Audit Course1

Course Code	Audit Course Title
202054 A	Road Safety
202054 B	Innovations in engineering field / Agriculture
202054 C	Value Education

The detail course contents of above mentioned audit courses are available in Mechanical Engineering 2015 course syllabus. Moreover students can opt for any other audit course from the list of Audit Course1 of any branch of engineering.



202054: Value Education

Teaching Scheme:	Credits	Examination Scheme:
TH: --	Tut:01	TH In-Sem: --
		End-Sem: --
Tutorial: 01 hr/ week	TW:--	PR: --
		OR: --
		TW: 25

Course Objectives:

- To enable the students to understand meaning of values and select their goals by self-investigation based on personal values.
- To enable the students to understand value of truth, commitments, honesty, sacrifice, care, unity, team work and relationship.
- To educate and make the young generation students aware of their social responsibilities.
- To increase awareness among students about environment and create attitude towards sustainable lifestyle.

Course Outcomes:

On completion of the course, learner will be able to–

- Understood human values, their significance and role in life.
- Promote self-reflection and critical inquiry that foster critical thinking of one's value and the values of others.
- Practice respect for human rights and democratic principles.
- Familiarized with various living and non-living organisms and their interaction with environment.
- Understood the basics regarding the leadership and to become a conscious professional.

Course Contents

UNIT 1: Introduction of Value Education (2 Hrs)

Value Education: Definition, Need, Content, Process and relevance to present day. Concept of Human Values, self introspection.

UNIT 2: Salient values for life (2 Hrs)

Truth, commitment, honesty and integrity, forgiveness and love, empathy and ability to sacrifice, care, unity, punctuality, Interpersonal and Intra personal relationship, Team work , Positive and creative thinking.



UNIT 3: Human Rights	(2 Hrs)
Universal Declaration of Human Rights, Right to Information Act -2005, National Integration, Peace and non-violence, Dr. A P J Kalam's ten points for enlightened Citizenship. The role of media in value building.	
UNIT 4: Environment and Ecology	(2 Hrs)
Ecological balance, interdependence of all beings – living and non-living. Man and nature, Environment conservation and enrichment...	
UNIT 5: Social values & Ethical values	(2 Hrs)
Social values - Social consciousness and responsibility, Consumer rights and responsibilities.	
Ethical values - Professional ethics, Code of ethics of engineers, Influence of ethics on family life, Leadership qualities and Personality development.	
Books:	
Text:	
<ol style="list-style-type: none"> 1. Dr. N. Venkataiah, "Value Education", APH Publishing Corporation, 2007 2. M. Govindarajan, S. Natarajan, V. S. Senthil Kumar, "Professional Ethics & Human Values", PHI Learning Press, 2013. 	
References:	
<ol style="list-style-type: none"> 1. Chakravarty S. K., "Values and ethics for Organizations: Theory and Practice", Oxford University Press, New Delhi, 1999. 2. Man Singh Das, Vijay Kumar Gupta, "Social values among young adults: A changing scenario", MD Publications Pvt. Ltd, 1995. 3. Ram Ahuja, "Social Problems in India", Rawat Publications, 2012. 4. Leah Levin, "HUMAN RIGHTS Questions and Answers", UNESCO Publishing, 2012. 5. P D Sharma, Ecology and Environment, Rastogi publications, 2005. 6. Kalam A P J, Arun Tiwari, "Wings of Fire", University Press Publications, 2003. 7. http://www.ncert.nic.in/recent/env_edu.html 8. http://www.unipune.ac.in/pdf_files/Final%20Book_03042012.pdf 9. https://engineering.purdue.edu/MSE/Academics/Undergrad/ethics.pdf 	



Savitribai Phule Pune University
T.E. Mechanical Engineering 2015 – Course
T. E. (Mechanical) (2015 Course) Semester – I

Code	Subject	Teaching Scheme Hrs / week			Examination Scheme					Total Marks	Credits	
		Lecture	Tut	Pract	In- Sem	ESE	TW	PR	OR		Th	TW / PR / OR
302041	Design of Machine Elements-I	4	-	2	30@	70@	50	-		150	4	1
302042	Heat Transfer*	4	-	2	30	70		50	-	150	4	1
302043	Theory of Machines-II [§]	3	1		30	70	25	-	25	150	3	1
302044	Turbo Machines	3	-	2	30	70	-	-	25	125	3	1
302045	Metrology and Quality Control [§]	3	-	2	30	70	-	-	25	125	3	1
302046	Skill Development	-	-	2	-	-	25	25	-	50	-	1
Total		17	1	10	150	350	100	75	75	750	17	6
											23	

T. E. (Mechanical) (2015 Course) Semester – II

Code	Subject	Teaching Scheme Hrs / week			Examination Scheme					Total Marks	Credits	
		Lecture	Tut	Pract	In- Sem	ESE	TW	PR	OR		Th	TW / PR / OR
302047	Numerical Methods and Optimization*	4	-	2	30	70	-	50	-	150	4	1
302048	Design of Machine Elements-II	4	-	2	30@	70@	25	-	25	150	4	1
302049	Refrigeration and Air Conditioning	3	-	2	30	70	-	-	25	125	3	1
302050	Mechatronics [%]	3	1		30	70	-	-	25	125	3	1
302051	Manufacturing - Process-II [§]	3	-	-	30	70	-	-	-	100	3	-
302052	Machine Shop-II [§]	-	-	2	-	-	50	-	-	50	-	1
302053	Seminar [§]	-	-	2	-	-	25	-	25#	50	-	1
302054	Audit Course*	--	--	--	--	--	-	-	-	-	-	-
Total		17	1	10	150	350	100	50	100	750	17	6
											23	

Though it is under Oral head Internal Panel to be appointed by Principal and HOD. Examination schedule will not be prepared at University level.

* Marked subjects are common with TE (Auto. Engg.) and TE Mech. Sandwich

§ Marked subjects are common with TE (Auto. Engg.) only

% Marked subjects are common with TE Mech. Sandwich only

@ Examination time for Insem examination 1 Hr 30 Min. and Endsem examination 3Hrs.



Savitribai Phule Pune University, Pune
Third Year of Mechanical, Mechanical Sandwich & Automobile
(2015 Course)

Course Code: 302054

Course Name : Audit Course III - Intellectual Property Right

Teaching Scheme:	Credits	Examination Scheme: Audit (P/F) Written and MCQ
PR:	Th/Tut:--	TH In-Sem: -- End-Sem: --
Tut:	TW:	PR: -- OR: --

Objective:

Intellectual property refers to the rights which are attached to the creation of the mind and which take the form of a property. Though intangible in nature, intellectual property has become the driving force of many companies today. Fortune 500+ companies undoubtedly are the best examples of what a company can achieve through the proper understanding and management of IPR.

Thus the study of intellectual property rights is inevitable for managers, considering the fact that India is fast emerging as an economy with considerable investment in cutting-edge research and development. India is also emerging as an economy where foreign companies propose to invest considerably, both technically and financially, provided proper protection is guaranteed to their intangible assets which form the cornerstone of their business.



Topics:

1. Introduction

- Concepts of IPR
- The history behind development of IPR
- Necessity of IPR and steps to create awareness of IPR

2. IP Management

- Concept of IP Management
- Intellectual Property and Marketing
- IP asset valuation

3. Patent Law

- Introduction to Patents
- Procedure for obtaining a Patent
- Licensing and Assignment of Patents
 - Software Licensing
 - General public Licensing
 - Compulsory Licensing
- Infringement of Patents
- Software patent US and Indian scenario

4. Copyrights

- Concept of Copyright Right
- Assignment of Copyrights
- Registration procedure of Copyrights
- Infringement (piracy) of Copyrights and Remedies
- Copyrights over software and hardware

5. Designs

- Concept of Industrial Designs
- Registration of Designs
- Piracy of registered designs and remedies

6. Trademark Law

- Concept of trademarks
- Importance of brands and the generation of “goodwill”
- Trademark registration procedure
- Infringement of trademarks and Remedies available
- Assignment and Licensing of Trademarks



Savitribai Phule Pune University, Pune
SE(E&TC/Electronics Engineering) 2015 Course

(With effect from Academic Year 2016-17)

Semester I												
Course Code	Course	Teaching Scheme Hours / Week			Semester Examination Scheme of Marks						Credit	
		Theory	Tutorials	Practicals	In-Sem (On line)	End-Sem (Theory)	TW	PR	OR	Total	TH/TUT	PR+OR
204181	Signals & Systems	3	1	-	50	50	25	-	-	125	4	-
204182	Electronic Devices & Circuits	4	-	2	50	50	-	50	-	150	4	1
204183	Electrical Circuits and Machines	3	-	2	50	50	25	-	-	125	3	1
204184	Data Structures and Algorithms	4	-	2	50	50	-	-	50	150	4	1
204185	Digital Electronics	4	-	2	50	50	-	50	-	150	4	1
204186	Electronic Measuring Instruments & Tools	1	-	2	-	-	50	-	-	50	1	1
204192	Audit Course I	--	--	--	--	--	--	--	--	--		
Total		19	1	10	250	250	100	100	50	750	20	05
Total Credits											25	

Abbreviations:

Th : Theory

TW: Term Work

OR: Oral

TUT : Tutorial

PR : Practical

Note: Interested students of S.E. (Electronics/E&TC) can opt any one of the audit course from the audit courses prescribed by BoS (Electronics/Computer/IT/Electrical/Instrumentation).

Page 2 of 48



Audit Course-I**204192: Road Safety Management**

Road transport remains the least safe mode of transport, with road accidents representing the main cause of death of people. The boom in the vehicle population without adequate road infrastructure, poor attention to driver training and unsatisfactory regulation has been responsible for increase in the number of accidents. India's vehicle population is negligible as compared to the World statistics; but the comparable proportion for accidents is substantially large.

The need for stricter enforcement of law to ensure greater safety on roads and an environment-friendly road transport operation is of paramount importance. Safety and security are growing concerns for businesses, governments and the traveling public around the world, as also in India. It is, therefore, essential to take new initiatives in raising awareness, skill and knowledge of students as one of the ibid stake holders who are expected to follow the rules and policies of the government in order to facilitate safety of individual and safe mobility of others.

Course Objectives:

- Provide basic overview on road safety & traffic management issues in view of the alarming increase in vehicular population of the country.
- Insight into the transportation system management (TSM) techniques.
- Overview of the engineering & legislative measures for road safety.
- Discuss measures for improving road safety education levels among the public.

Course Outcomes:

On completion of the course, society will observe –

- Changes in awareness levels, knowledge and understanding
- A change in attitudes / behavior e.g. against drink-drive;
- Casualty Reduction;
- That remedial education for those who make mistakes and for low level offences where this is more effective than financial penalties and penalty points;
- Improving Road Safety Together

Course Contents

1. Existing Road Transport Scenario
2. Accident Causes & Remedies
3. Road Accident Investigation & Investigation Methods
4. Vehicle Technology – CMVR & Road Safety
5. Regulatory / Legislative Provisions for Improving Road Safety
6. Behavioral Training for Drivers for Improving Road Safety
7. Road Safety Education
8. Road Engineering Measures for Improving Road Safety

Guidelines for Conduction (Any one or more of following but not limited to)

- Guest Lectures
- Visits and reports
- Assist authorities like RTO for audits (e.g. Particular road safety audit as critical on-site assessment of the shortcomings in the various elements of the road)
- Mini Project



Guidelines for Assessment(Any one of following but not limited to)

- Written Test
- Practical Test
- Presentation
- Paper
- Report



Audit course-II 204193: Cyber Crime and law
Introduction to Cyber Crime and law: <p>Cyber Crimes, Types of Cybercrime, Hacking, Attack vectors, Cyberspace and Criminal Behavior, Clarification of Terms, Traditional Problems Associated with Computer Crime, Introduction to Incident Response, Digital Forensics, Computer Language, Network Language, Realms of the Cyber world, A Brief History of the Internet, Recognizing and Defining Computer Crime, Contemporary Crimes, Computers as Targets, Contaminants and Destruction of Data, Indian IT ACT 2000</p>
Introduction to Cyber Crime Investigation <p>Firewalls and Packet Filters, password Cracking, Keyloggers and Spyware, Virus and Worms, Trojan and backdoors, Steganography, DOS and DDOS attack, SQL injection, Buffer Overflow, Attack on wireless Networks</p>
Guidelines for Conduction (Any one or more of following but not limited to) <ul style="list-style-type: none"> • Guest Lectures • Visiting lectures
Guidelines for Assessment (Any one of following but not limited to) <ul style="list-style-type: none"> • Written Test • Practical Test • Presentation • Paper • Report



Third Engineering-E&TC (2015 Course)

(With effect from Academic Year 2017-18)

Semester I													
Course Code	Course	Teaching Scheme			Semester Examination Scheme of						Credits		
		Hours / Week			Marks						TH/TW	PR+OR	
Theory	Tutorials	Practicals	In-Sem	End-Sem	TW	PR	OR	Total					
304181	Digital Communication	4	--	--	30	70	--	--	--	100	4	--	
304182	Digital Signal Processing	4	--	--	30	70	--	--	--	100	4	--	
304183	Electromagnetics	3	1	--	30	70	--	--	--	100	4	--	
304184	Microcontrollers	3	--	--	30	70	--	--	--	100	3	1	
304185	Mechatronics	3	--	--	30	70	--	--	--	100	3	1	
304191	Signal Processing and Communications Lab (DC/DSP)	--	--	4	--	--	50	50		100	--	2	
304192	Microcontrollers and Mechatronics Lab	--	--	4	--	--	50	50		100			
304193	Electronics System Design	2	--	2	--	--	-	--	50	50	2	1	
	Audit Course 3	--	--	--	--	--	--	--	--	--			
	Total	19	1	10	150	350	100	100	50	750			
											Total Credits		25

Abbreviations:

TH: Theory
TW: Term Work

OR: Oral
PR: Practical

Note: Interested students of T.E (Electronics/E&TC) can opt any one of the audit course from the audit courses prescribed by BoS (Electronics/Computer/IT/Electrical/Instrumentation)



Unit 1 : Introduction to Kanji Script,

Describing one's daily routine. To ask what someone does.

Expressions of Giving & Receiving.

Unit 2 : Adjectives (Types of adjectives)

Asking impression or an opinion about a thing / person / place that the listener
Has experienced, visited, or met

Describing things / person / places with the help of the adjectives.

Unit 3 : Expressions of Like & Dislikes. Expressing one's ability, hobby

Comparison between objects, persons & cities

Audit Course 3

Cyber and Information Security

Course objective :

1. Students will able to learn the issues of security in IT
2. Students will able to investigate various security threats in IT

Course Outcomes :

On completion of course students

1. will increase the awareness about cyber security
2. will increase the awareness about information and network security

Basic Concepts of Technology and Law

Basics of Information Technology, Basics of Indian Legal System, Information Technology Act 2000 (Amended), Relevant Amendments in all other laws. E-Contract The essence of digital contracts, Law of Contract, Construction of E-contracts, Issues of security, Employment contracts, Consultant Agreements and Digital signature

Intelligent Property Issues in Cyber space: Doman names and related issues, Copyright in digital media, Patents in cyber world. Rights of Neitzens and E- Governance: Privacy and freedom issues in cyber world, E-Governance, Cyber crimes and Cyber laws.

Information Security Fundamentals: Background, Importance, Statistics, National and International Scenario, Goals of security, Confidentiality, Privacy, Integrity, Non-repudiation, Availability.



Essentials of computer security - Sources of security threats – Intruders, Viruses, Worms and related threats - Threat identification - Threat analysis -Vulnerability identification and Assessment.

Security Investigation: Need for Security, Business Needs, Threats, Attacks, Legal, Ethical and Professional Issues Access Control, Intrusion Detection and Server Management, Firewalls: Overview of Identification and Authorization, Overview of IDS, Intrusion, Detection Systems and Intrusion Prevention Systems, User Management, Overview of Firewalls, Types of Firewalls, DMZ and firewall features

Security Policies and Management:Security Policy Design, Designing Security Procedures, Risk Management and Assessment Techniques, Security standards, Security Models.Security Management Practices, Security Laws, Information Classification Process, Risk Management, Security Proceduresand Guidelines, Business Continuity and Disaster Recovery, Ethics and Best Practices, Security Assurance



Third Engineering-E&TC (2015 Course)

(With effect from Academic Year 2017-18)

Semester II												
Course Code	Course	Teaching Scheme			Semester Examination Scheme						Credit	
		Hours / Week			of Marks							
		Theory	Tutorials	Practicals	In-Sem	End-Sem	TW	PR	OR	Total	TH/TW	PR+OR
304186	Power Electronics	4	--	--	30	70	--	--	--	100	4	--
304187	Information Theory, Coding and Communication Networks	4	--	--	30	70	--	--	--	100	4	--
304188	Business Management	3	--	--	30	70	--	--	--	100	3	--
306189	Advanced Processors	4	--	--	30	70	--	--	--	100	4	1
304190	System Programming and Operating Systems	3	--	--	30	70	--	--	--	100	3	1
304194	Power and ITCT Lab	--	--	4	--	--	50	50	--	100	--	2
304195	Advanced Processors and System Programming. Lab	--	--	4	--	--	50	50	--	100		
304196	Employability Skills and Mini Project	2	--	2	--	--	--	--	50	50	2	1
	Audit Course 4	--	--	--	--	--	--	--	--	--		
Total		20	---	10	150	350	100	100	50	750		
Total Credits											25	

Abbreviations:

TH: Theory
TW: Term Work

OR: Oral
PR: Practical

Note: Interested students of T.E (Electronics/E&TC) can opt any one of the audit course from the audit courses prescribed by BoS (Electronics/Computer/IT/Electrical/Instrumentation)



- One will develop interest to pursue professional Japanese Language course.

Course Content

- Unit 1 : Stating existence or a presence of thing (s), person (s)
Relative positions, Counters
- Unit 2 : Expressing one's Desire & wants Verb groups,
Asking, Instructing a person to do something
- Unit 3 : Indicating an action or motion is in progress. Describing habitual action
Describing a certain continuing state which resulted from a certain action in the past. Express permission & prohibition.

Audit Course 4

Embedded System Design using MSP430

Embedded applications like automation and control, consumer electronics, test and measurement equipment's, HVAC and building control, remote monitoring and other embedded applications require Low power CPU's with more GPIO's, in-build ADC and dedicated Embedded protocols. MCU workshop is based upon Low power 16-bit MSP430 series platforms. Participants will be exposed to complete application-building concept using 16-bit MSP430 series MCUs. The workshop will be designed to give hands-on experience so that every participant will get expertise in using MSP430 platform. From Standalone applications to Embedded Networking applications (Embedded Wi-Fi) will be covered with exposure to real world interfacing techniques.

Learning outcomes:

At the end of the workshop participant will be able to learn/understand

- Embedded C programming techniques for 16-bit platform
- Embedded protocols and its interfacing techniques
- Embedded Wireless networking concepts and its implementation with application oriented projects and case studies.

Prerequisite:

Must have exposure to building embedded applications for 8-bit platforms

Basic knowledge of C language programming

Digital Electronics fundamentals

Introduction to Embedded Curriculum: framework, concept map and role of faculty mentors.



Embedded Systems and role of TI platforms

Introduction to MSP430 series platforms: scope, application and tools in Embedded ecosystem

Programming MSP430 using CCS

MSP430's Internal Architecture and Programmer's model

Various Configuration registers of in-built modules and their programming (GPIO, PWM, ADC)

Clock tree structure and its role

Interfacing Analog sensors

Enabling Low power modes and understanding Interrupt based programming techniques

Various Serial Communication Interfaces : UART / I2C / SPI

UART programming and data logging applications

Programming SPI Interface, Programming I2C Interface

Embedded Wi-Fi and Internet of things

Real-time data gathering (humidity, temperature, pressure etc.) and remote monitoring for Wireless

Sensor Network applications and related use cases.



Savitribai Phule Pune University
Second Year of Computer Engineering (2015 Course)
 (With effect from Academic Year 2016-17)

Semester I

Course Code	Course Name	Teaching Scheme Hours / Week			Examination Scheme & Marks						Credit	
		Theory	Tutorial	Practical	In-Sem	End-Sem	TW	PR	OR	Total	TH + TUT	PR
210241	<u>Discrete Mathematics</u>	04	--	--	50	50	--	--	--	100	04	--
210242	<u>Digital Electronics and Logic Design</u>	04	--	--	50	50	--	--	--	100	04	--
210243	<u>Data Structures and Algorithms</u>	04	--	--	50	50	--	--	--	100	04	--
210244	<u>Computer Organization and Architecture</u>	04	--	--	50	50	--	--	--	100	04	--
210245	<u>Object Oriented Programming</u>	04	--	--	50	50	--	--	--	100	04	--
210246	<u>Digital Electronics Lab</u>	--	--	02	--	--	25	50	--	75	--	01
210247	<u>Data Structures Lab</u>	--	--	04	--	--	25	50	--	75	--	02
210248	<u>Object Oriented Programming Lab</u>	--	--	02	--	--	25	50	--	75	--	01
210249	<u>Soft Skills</u>	--	--	02	--	--	25	--	--	25	--	01
Total											20	05
210250	<u>Audit Course I</u>	--	--	--	--	--	--	--	--	--	Grade	
Total		20	--	10	250	250	100	150	--	750	25	

Abbreviations:

TW: Term Work
 OR: Oral
 PR: Practical

TH: Theory
 TUT: Tutorial
 Sem: Semester



Savitribai Phule Pune University
Second Year of Computer Engineering (2015 Course)

210250: Audit Course 1

ACI-III: Environmental Studies

Environmental studies are the field that examines this relationship between people and the environment. An environmental study is an interdisciplinary subject examining the interplay between the social, legal, management, and scientific aspects of environmental issues.

Course Objectives:

- Understanding the importance of ecological balance for sustainable development.
- Understanding the impacts of developmental activities and mitigation measures.
- Understand and realize the multi-disciplinary nature of the environment, its components, and inter-relationship between man and environment
- Understand the relevance and importance of the natural resources in the sustenance of life on earth and living standard

Course Outcomes:

On completion of the course, student will be able to–

- Comprehend the importance of ecosystem and biodiversity
- To correlate the human population growth and its trend to the environmental degradation and develop the awareness about his/her role towards environmental protection and prevention
- Identify different types of environmental pollution and control measures
- To correlate the exploitation and utilization of conventional and non-conventional resources

Course Contents:

1. **Natural Resources:** Introduction, Renewable and non-renewable, Forest, water, mineral, food, energy and land resources, Individual and conservation of resources, Equitable use of resources.
2. **Ecosystems:** Concept, Structure, Function, Energy flow, Ecological succession, Forest, grassland, desert and aquatic ecosystems - Introduction, characteristic features, structure and function.
3. **Biodiversity:** Genetic, Species and ecological diversity, Biogeographical classification of India, Value and hot spots, Biodiversity at global, national and local levels, India as mega-biodiversity nation, Threats to biodiversity, Endangered and endemic species of India, Conservation of Biodiversity, Endangered and endemic species, Conservation of biodiversity.
4. **Pollution:** Definition, Causes, effects and control measures of the pollution – Air, soil, Noise, Water, Marine and Thermal and Nuclear Pollution, Solid waste management, Role of Individual in Prevention of Pollution, Pollution case studies, Disaster management

References:

1. Bharucha, E., –Textbook of Environmental Studies”, Universities Press (2005), ISBN-10:8173715408
2. Mahua Basu, —Environmental Studies”, Cambridge University Press, ISBN-978-1-107-5317-3



Savitribai Phule Pune University
Second Year of Computer Engineering (2015 Course)
 (With effect from Academic Year 2016-17)
Semester II

Course Code	Course Name	Teaching Scheme Hours / Week			Examination Scheme & Marks						Credits	
		Theory	Tutorial	Practical	In-Sem	End-Sem	TW	PR	OR	Total	TH+TUT	PR
207003	<u>Engineering Mathematics III</u>	04	01	--	50	50	25	--	--	125	05	--
210251	<u>Computer Graphics</u>	04	--	--	50	50	--	--	--	100	04	--
210252	<u>Advanced Data Structures</u>	04	--	--	50	50	--	--	--	100	04	--
210253	<u>Microprocessor</u>	04	--	--	50	50	--	--	--	100	04	--
210254	<u>Principles of Programming Languages</u>	03	--	--	50	50	--	--	--	100	03	--
210255	<u>Computer Graphics Lab</u>	--	--	02	--	--	25	50	--	75	--	01
210256	<u>Advanced Data Structures Lab</u>	--	--	04	--	--	25	50	--	75	--	02
210257	<u>Microprocessor Lab</u>	--	--	04	--	--	25	50	--	75	--	02
Total											20	05
210258	Audit Course 2	--	--	--	--	--	--	--	--	--	Grade	
Total		19	01	10	250	250	100	150	--	750	25	

Abbreviations:

TW: Term Work
 OR: Oral
 PR: Practical

TH: Theory
 TUT: Tutorial
 Sem: Semester



Savitribai Phule Pune University
Second Year of Computer Engineering (2015 Course)

210258: Audit Course 2

AC2-II: Intellectual Property Rights and Patents

Intellectual property is the area of law that deals with protecting the rights of those who create original works. It covers everything from original plays and novels to inventions and company identification marks. The purpose of intellectual property laws is to encourage new technologies, artistic expressions and inventions while promoting economic growth.

Innovation and originality have great potential value. Whatever line of activity you are engaged in, future success depends on them. The last few years have seen intellectual property rights become an issue of general interest: the smart phone –patent wars”, the introduction of Digital Rights management (DRM) and the rise of generic pharmaceuticals and open-source software are just some examples that have been in the public eye. Protecting your intellectual rights appropriately should be a top priority. Yet too many people embark on their chosen professions without even a basic awareness of intellectual property.

Course Objectives:

- To encourage research, scholarship, and a spirit of inquiry
- To encourage students at all levels to develop patentable technologies.
- To provide environment to the students of the Institute for creation, protection, and commercialization of intellectual property and to stimulate innovation.

Course Outcomes:

On completion of the course, learner will be able to–

- Understand the fundamental legal principles related to confidential information, copyright, patents, designs, trademarks and unfair competition
- Identify, apply and assess principles of law relating to each of these areas of intellectual property
- Apply the appropriate ownership rules to intellectual property you have been involved in creating

Course Contents:

- **Introduction to Intellectual Property Law** – The Evolutionary Past - The IPR Tool Kit- Para -Legal Tasks in Intellectual Property Law
- **Introduction to Trade mark** – Trade mark Registration Process – Post registration Procedures – Trade mark maintenance - Transfer of Rights – Inter partes Proceeding – Infringement - Dilution Ownership of Trade mark
- **Introduction to Copyrights** – Principles of Copyright Principles -The subjects Matter of Copy right – The Rights Afforded by Copyright Law – Copy right Ownership, Transfer and duration – Right to prepare Derivative works
- **Introduction to Trade Secret** – Maintaining Trade Secret – Physical Security – Employee Limitation - Employee confidentiality agreement

References:

1. Debirag E. Bouchoux: –Intellectual Property”. Cengage learning ISBN-10:1111648573
2. Ferrera, Bird, Darrow, –Cyber Law. Texts & Cases”, South- ISBN:0-324-39972-3
3. Prabhuddha Ganguli: –Intellectual Property Rights” TMH, ISBN-10:0070077177



Savitribai Phule University of Pune													
Third Year Computer Engineering (2015 Course)													
(with effect from 2017-18)													
Semester I													
Course Code	Course	Teaching Scheme Hours / Week			Examination Scheme and Marks						Credit		
		Theory	Tutorial	Practical	In-Sem	End-Sem	TW	PR	OR	Total	TH/TUT	PR	
310241	<u>Theory of Computation</u>	03	--	--	30	70	--	--	--	100	03	--	
310242	<u>Database Management Systems (DBMS)</u>	03	--	--	30	70	--	--	--	100	03	--	
310243	<u>Software Engineering & Project Management</u>	03	--	--	30	70	--	--	--	100	03	--	
310244	<u>Information Systems & Engineering Economics</u>	03	--	--	30	70	--	--	--	100	03	--	
310245	<u>Computer Networks (CN)</u>	04	--	--	30	70	--	--	--	100	04	--	
310246	<u>Skills Development Lab</u>	--	02	04	--	--	50	--	50	100	02	02	
310247	<u>DBMS Lab</u>	--	--	04	--	--	25	50	--	75	--	02	
310248	<u>CN Lab</u>	--	--	02	--	--	25	50	--	75	--	01	
Total Credit											18	05	
Total		16	02	10	150	350	100	100	50	750	23		
310249	<u>Audit Course 3</u>											Grade	

310249-Audit Course 3 (AC3) Options:

AC3-I: Cyber Security

AC3-II: Professional Ethics and Etiquettes

AC3-III: Emotional Intelligence

AC3-IV: MOOC- Learn New Skills

AC3-V: Foreign Language (Japanese- Module 3)

Abbreviations:

TW: Term Work TH: Theory OR: Oral TUT: Tutorial PR: Practical Sem: Semester



Savitribai Phule Pune University, Pune
Third Year of Computer Engineering (2015 Course)

310249: Audit Course 3

AC3 – II: Professional Ethics and Etiquettes

Professional ethics is the underlying concept behind the successful accomplishment of any act of a professional towards achieving the individual and societal goals. These goals should ultimately result in morally, legally, ethically and even culturally acceptable good things for all. Engineers being special group of professionals need to be more conscious of their acts since their duties, rights and responsibilities permeate into the society and the surroundings. To practice professional ethics, understanding of values and concepts are essential.

Course Objectives:

- To create awareness on professional ethics and Human Values.
- To provide basic familiarity about Engineers as responsible Experimenters, Research Ethics, Codes of Ethics, Industrial Standards.
- To inculcate knowledge and exposure on Safety and Risk.
- To expose students to right attitudinal and behavioral aspects

Course Outcome:

On completion of the course, learner will be able to–

- understand the basic perception of profession, professional ethics, various moral issues & uses of ethical theories
- Understand various social issues, industrial standards, code of ethics and role of professional ethics in engineering field.
- Follow Ethics as an engineering professional and adopt good standards & norms of engineering practice.
- apply ethical principles to resolve situations that arise in their professional lives

Course Contents:

1. **Human Values And Engineering Ethics:** Morals, values and Ethics, Integrity, Work ethic, Civic virtue , Valuing time, Cooperation, Commitment, Empathy, Self-confidence , stress management, Senses of Engineering Ethics, Kohlberg"s theory, Gilligan"s theory, Models of professional roles, Uses of Ethical Theories.
2. **Research Ethics and Codes of Ethics:** Industrial standardization, ethical code and its importance, ethical accountability, law in engineering, engineering as social experimentation.
3. **Safety, Responsibilities And Rights:** Safety and Risk, Assessment of Safety and Risk, Risk Benefit Analysis and Reducing Risk collegiality, Collective Bargaining , Confidentiality , Conflicts of Interest, Professional Rights, Employee Rights, Intellectual Property Rights (IPR), Discrimination, Utilitarianism
4. **Professional Etiquette:** Etiquette at Meetings, Public Relations Office(PRO)'s Etiquettes, Technology Etiquette Phone Etiquette, Email Etiquette, Social Media Etiquette, Video Conferencing Etiquette, Interview Etiquette, Dressing Etiquettes : for Interview, offices and social functions, Ethical Values: Importance of Work Ethics.

Books:

1. Caroline Whitbeck, "Ethics in Engineering Practice and Research", Cambridge Press, ISBN:978-1-107-66847-8
2. Prabhuddha Ganguli: —Intellectual Property Rights| Tata Mc-Graw –Hill, New Delhi, ISBN-10:0070077177
3. Professional Ethics and Etiquette (Mastering Career Skills), Checkmark, ISBN-10: 0816071179
4. A Alavudeen, "Professional Ethics And Human Values" Firewall, ISBN13 : 8131803066



Savitribai Phule University of Pune													
Third Year Computer Engineering (2015 Course)													
(with effect from 2017-18)													
Semester II													
Course Code	Course	Teaching Scheme Hours / Week			Examination Scheme and Marks						Credit		
		Theory	Tutorial	Practical	In-Sem	End-Sem	TW	PR	OR	Total	TH/TUT	PR	
310250	<u>Design & Analysis of Algorithms</u>	04	--	--	30	70	--	--	--	100	04		
310251	<u>Systems Programming & Operating System (SP & OS)</u>	04	--	--	30	70	--	--	--	100	04	--	
310252	<u>Embedded Systems & Internet of Things (ES & IoT)</u>	04	--	--	30	70	--	--	--	100	04	--	
310253	<u>Software Modeling and Design</u>	03	--	--	30	70	--	--	--	100	03	--	
310254	<u>Web Technology</u>	03	--	--	30	70	--	--	--	100	03	--	
310255	<u>Seminar & Technical Communication</u>	--	01	--	--	--	50	--	--	50	01	--	
310256	<u>Web Technology Lab</u>	--	--	02	--	--	25	50	--	75	--	01	
310257	<u>SP & OS Lab</u>	--	--	04	--	--	25	50	--	75	--	02	
310258	<u>ES & IoT Lab</u>	--	--	02	--	--	50	--	--	50	--	01	
Total Credit											19	04	
Total		18	01	08	150	350	150	100	--	750	23		
310259	<u>Audit Course 4</u>											Grade	

310259-Audit Course 4(AC4) Options:

AC4-I: Digital and Social Media Marketing

AC4-II: Green Computing

AC4-III: Sustainable Energy Systems

AC4-IV: Leadership and Personality Development

AC4-V: Foreign Language (Japanese- Module 4)

Abbreviations:

TW: Term Work **TH:** Theory **OR:** Oral **TUT:** Tutorial **PR:** Practical **Sem:** Semester



Savitribai Phule Pune University, Pune
Third Year of Computer Engineering (2015 Course)

310259: Audit Course 4

AC4 – I: Digital & Social Media Marketing

The importance of social media's role in modern marketing efforts can no longer be ignored. It's an integral component in almost all successful marketing strategies. With this increasing emphasis on integrated social media strategies, there is an Irrefutable need for marketing professionals and organizations to have end- to- end social media expertise. Through case studies, interactive sessions, and class exercises, students will learn best practices and develop the skills to connect business objectives with social media strategy, platforms and tactics. Topics will include choosing appropriate platforms, creating effective and engaging social media content, content management, social listening and creating a social media policy

Course Objectives:

- Identify best practices for Social Media Marketing, including platform level best practices.
- Connect business objectives to appropriate Social Media tactics.
- Create strong content that engages their target audience with their marketing message.

Course Outcome:

On completion of the course, learner will be able to–

- Create editorial calendars to manage content distribution.
- Use Social Listening tools to create timely, relevant content.
- Create Social Media policies that combine business objectives with appropriate use of social media channels and content.

Course Contents:

1. Introductions and review class objectives, Discuss class goals and individual goals, Fill out questionnaire, Introduction to Blogging, Create a blog post for your project. Include headline, imagery, links and post.
2. Introduction to Facebook and channel advertising and campaigns, Introduction to Twitter and channel advertising and campaigns, Creative Campaign examples across social channels
3. Introduction to both Google+ and LinkedIn. Provide an overview on LinkedIn advertising, Create Google+ and LinkedIn outlines for your project and include: types of posts and an example post for each platform.
4. Introduction to both Instagram and Pinterest as well as channel advertising and campaigns, Create Instagram and Pinterest outlines for your project and include: types of posts and an example post for each platform, review a content calendar, Lay out your own content calendar.

References:

1. Vandana Ahuja, Digital Marketing, Oxford Press, ISBN: 9780199455447,
2. Wiley, Jeannie Mullen, David Daniels, David Gilmour “ Email Marketing: An Hour a Day”, ISBN: 978-0-470-38673-6
3. David Scott, “The New Rules of Marketing and PR”, Wiley India, ISBN: 978-1-119-07048-1



Savitribai Phule Pune University, Pune
Third Year of Computer Engineering (2017 Course)

310259: Audit Course 4

AC4 – II: Green Computing

Green computing is the study and practice of using computing resources efficiently. Green computing or green IT, refers to environmentally sustainable computing or IT. The goals of green computing are similar to green chemistry; reduce the use of hazardous materials, Maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste.

Course Objectives:

- To acquire knowledge to adopt green computing practices to minimize negative impacts on the environment.
- To examine technology tools that can reduce paper waste and carbon footprint by user.
- To understand how to minimize equipment disposal requirements.
- To gain skill in energy saving practices in their use of hardware

Course Outcome:

On completion of the course, learner will be able to–

- Understand the concept of green IT and relate it to sustainable development.
- Apply the green computing practices to save energy.
- Discuss how the choice of hardware and software can facilitate a more sustainable operation,
- Use methods and tools to measure energy consumption

Course Contents:

1. **Fundamentals of Green IT:** Green IT Fundamentals: Business, IT, and the Environment – Green computing: carbon foot Print - Measuring, Details, reasons to bother, Plan for the Future, Cost Savings: Hardware, Power.
2. **Green Assets and Power Problems:** Green Assets: Buildings, Data Centers, Networks, and Devices, Green Information Systems : Design and Development Models, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Low-Power Computers and peripheral devices
3. **Greening Information Systems:** Initial Improvement Calculations, Selecting Metrics, Tracking Progress, Change Business Processes, Customer Interaction, Paper Reduction, Green Supply Chain, Improve Technology Infrastructure, Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling
4. **Green Grid Framework:** Virtualization of IT systems – Role of electric utilities, Telecommuting, teleconferencing and teleporting – Materials recycling – Best ways for Green PC – Green Data center Case Studies – Applying Green IT Strategies and Applications to a Home Hospital, Packaging Industry and Telecom Sector

References:

1. Woody Leonhard, Katherrine Murray, –Green Home Computing for Dummies”, August2009, ISBN: 978-0-470-46745-9
2. Alvin Galea, Michael Schaefer, Mike Ebbers, –Green Data Center: steps for the Journey”, Shoff/IBM rebook, 2011. ISBN: 10: 1-933742-05-4; 13: 978-1-933742-05-2
3. John Lamb, –The Greening of IT”, Pearson Education, 2009, ISBN 10: 0137150830
4. Jason Harris, –Green Computing and Green IT- Best Practices on regulations & industry”,Lulu.com, 2008, ISBN: 1558604898
5. Bud E. Smith, –Green Computing Tools and Techniques for Saving Energy, Money and Resources”, CRC Press, 2014, 9781466503403



Rajgad Dnyanpeeth's

SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

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

NOTICE

Date: 10/01/2018

All teaching staff, non-teaching staff & Students is hereby informed that, “Awareness of road Safety Program” is scheduled on 15 January 2018, sharp 10.00 am at seminar hall, so all students & faculties requested to be present for program.



Asst. Prof. S. V. Bankar
Event Co-ordinator



Prof. Dr. S. B. Patil

Principal

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

Rajgad Dnyanpeeth's

SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

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

Awareness of Road Safety

DEPARTMENT: All

CLASS: S.E/T.E/B.E

TITLE/TOPIC: **Awareness of Road Safety**

DAY & DATE: - 15 Jan 2018

DURATION OF SESSION: 2 hrs.

STUDENT/ STAFF PRESENT: 59/14

CO-ORDINATOR: Prof. S. V. Bankar

OBJECTIVE:

Celebrating the road safety campaign was initiated by the ISS India HSE (Health Safety and Environment) in order to make people aware about the national road safety in the Indian subcontinent. ISS India had declared to celebrate the Road Safety Week all through the country in the first week of the month of January. The aim of this campaign was to emphasize and accentuate people about the need of safe roads travel by applying just simple rules

DESCRIPTION:

The aim of celebrating the campaign road safety week is to promote the road safety measures in the community, schools, colleges, work places, on roads and o decrease and completely remove out the road accidents, road accident death and injury cases by applying the road safety measures. To encourage all the travelers to follow the traffic rules and wear helmets and seat belts while driving. To aware the people about the speed limit of the vehicles to prevent road accidents. To maintain the speed and required distance from other vehicles. To aware people that do not drink, do not drive when tired and do not use phones or radios while driving
of Department, which added to the feel of the event, they also took part in the event and planted trees. Tree planting event connected the students to the benefits of trees and fostered environmental sensitivity in them. It also brought them closer to the environment.

Principal Prof. Dr. S.B.Patil all with all HOD's guiding the students throughout the event.

At end Prof. S. V. Bankar thanked all the students and staff for their enthusiastic participation in the event.




CONCLUSION:


This Session attempts to contribute to the body of knowledge on road safety. It is hoped that it will inspire and facilitate increased cooperation, innovation and commitment to preventing road traffic crashes around the world.

PHOTO'S DURING SESSION :




Prof. S. V. Bankar
Event Co-ordinator




Prof. Dr. S. B. Patil
Principal
Rajgad Dnyanpeeth's
Shri Chhatrapati Shivajiraje College of Engg.,
Dhangawadi, Pune-412206

Rajgad Dnyanpeeth's

SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

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

Importance of Road Safety & Traffic Management

DEPARTMENT: All

CLASS: S.E/T.E/B.E

TITLE/TOPIC: **Importance of Road Safety & Traffic Management**

DAY & DATE: - 11/01/2017

DURATION OF SESSION: 3 hrs.

STUDENT/ STAFF PRESENT: 40/10

CO-ORDINATOR: Prof .S. V. Bankar

OBJECTIVE:

The objective of importance of Road Safety & Traffic Management Activity conducted in RDTC SCSCCOE Campus is achieving an optimal use of the transportation system with optimal safety for all road users & awareness credited in Students & Staff.

DESCRIPTION:

The aim of celebrating the campaign road safety week our campus arranged programme is Importance of Road Safety & Traffic Management to promote the road safety measures, Importance of Road Safety, Importance of Traffic Management in the community, colleges, work places, on roads.RDTC SCSCOE Staff & Students campaigning on Satara City Roads & Display Sign Boards & Distributing Pamphlets in Powaie Naka Chowk & S.T.Bus Stand, Satara City.

Following Points are discussed in Programme

1. **Sensitising drivers of all kinds :-**

All activities will focus on sensitising drivers of all kinds, specially the two-wheeler riders. Many a times, it has been noticed that due to the carelessness of not wearing helmets, riders suffer severe head injuries and many later succumb to them. 90 percent of such accidents are fatal. This can only be minimised by adopting safety measures like the helmet. An awareness campaign has to be conducted for proving its importance. Apart from this, other road safety rules, traffic rules, and the importance of traffic signage are also to be impressed other drivers of different kinds of vehicles through various campaign methods.



2. Awareness regarding safe driving to Roadways College bus:-

It has often been noticed that the bus drivers of Road Transport Department drive rashly, leading to accidents. These drivers, especially on highways, tend to mix drinks with driving, which is risky as hundreds of lives are at stake. A campaign is required to educate and sensitise them, in which literature on road safety rules and a special booklet will be printed and distributed specifically for bus drivers.

OUTCOME:

This Programmed attempts to contribute to the body of knowledge on road safety & Traffic Management. It is hoped that it will inspire the students and Teaching & Non-Teaching Staff and facilitate increased cooperation, innovation and commitment to preventing road traffic crashes around the world.

PHOTO'S DURING CAMPAINING





Prof. S. V. Bankar
Event Co-ordinator



Prof. Dr. S. B. Patil
Principal
Rajgad Dnyanpeeth's
Shri Chhatrapati Shivajiraje College of Engg.,
Dhangawadi, Pune-412206

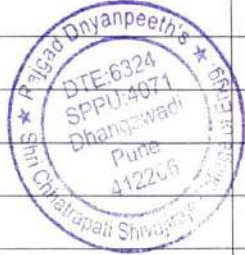
Importance of Road Safety & Traffic Management

Date - 11/01/2017

Sr. No	Name	Branch	Sign.
1	Bathe kelan Nathu	TE-civil	<u>Bathe</u>
2	Akshay lokman babar	TE-mech	<u>Babar</u>
3	Dabekar PEsad V.	TE-mech	<u>Peasad</u>
4	Babar Akshay Vijay	TE-mech	<u>Babar</u>
5	chaudhari R.R.	E-ETC	<u>Ramesh</u>
6	Akhade trupti shiraji	BE E & TC	<u>trupti</u>
7	chendage kashur Dorraray	T.E. mech	<u>kashur</u>
8	Kumar Vaibhav	TE-civil	<u>Vaibhav</u>
9	Bansal Atul sanjay	TE-civil	<u>Atul</u>
10	Ghodake Anol Uttam	BE-EATC	<u>Anol</u>
11	Bhelke pratik Rajendra	TE civil	<u>Pratik</u>
12	Borade A. A.	BE-comp	<u>Ajay</u>
13	Bhosale Abhijit Vittal	BE-EATC	<u>Abhi</u>
14	Awale Ashwini Dattatray	BE E & TC	<u>Ashu</u>
15	Ambhore Kunal Srinivas	BE-EATC	<u>Kunal</u>
16	Choe mahesh Varant	BE-computer	<u>Mahesh</u>
17	Palani Dalani swaphil Ganesh	T.E-civil	<u>swar</u>
18	Dhumal Priyanka. S.	T.E.(civil)	<u>Dhumal</u>
19	Dalani akshay Balasa	(BE-EATC)	<u>Akshay</u>
20	Bhise Pitendra Mahadev	TE civil	<u>Bhise</u>
21	puris Arjun Ramesh	T.E civil	<u>Arjun</u>
22	Kale Jayashri.	T.E civil	<u>Jayashri</u>
23	Devkate Ravaji. S.	TE.(civil)	<u>Ravaji</u>
24	Bhosale Megha. G.	T.E. civil	<u>Megha</u>
25	Khopade vinayak vilal	T.E civil	<u>Vinay</u>
26	Bhilare tejas. S.	TE mech	<u>tejas</u>
27	Galande tejshwini Sadashiv	BE E & TC	<u>Teju</u>
28	Kumbale Ritam	T.E civil	<u>Ritam</u>
29	Patil Aniket Bhanu.	T.E civil	<u>Patil</u>
30	memane Akanksha. A.	TE-civil	<u>Akanksha</u>
31	Arora Tousib Kasambhai	B.B. com	<u>Tousib</u>
32	Gade Sagar parikrushna	BE-EATC	<u>Gade</u>
33	Dhumal Tejasree Taraji	BE comp.	<u>Teju</u>



34	Bathe maya Kisan	BE. E&TC	Maya
35	Awate Swaphil Rajendra	B.E. Com	Swan
36	Gade Sagar Pandurang	BE-E&TC	Sagar
37	Dhobe Avinash Parashuram	BE-computer	Dhobe
38	Dixit Aparna Avinash	BE comp.	Daparna
39	Awate Arati Mohan	BE-computer	Arati
40	Borve Shumrao Kakasa	T.E. Mech	Shumrao



Rajgad Dnyanpeeth's


SHRI CHHATRAPATI SHIVAJIRAJE COLLEGE OF ENGINEERING

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


NOTICE

Date: 19/04/2016

All Students are hereby informed that, Awareness of Digitalization Program is scheduled on 22/04/2016. For planning and execution of program, meeting is arranged on 20/04/2016 at 11.00 am in seminar hall. All coordinator are instructed to attend the meeting without fail.


Prof. S. V. Bankar
Event Co-ordinators




Prof. Dr. S. B. Patil
Principal
Rajgad Dnyanpeeth's
Shri Chhatrapati Shivajiraje College of Engg.,
Dhangawadi, Pune-412206

Awareness of Digitalization

DEPARTMENT: All

CLASS: S.E/T.E/B.E

TITLE/TOPIC: **Awareness of Digitalization**

DAY & DATE: - 22/04/2016

DURATION OF SESSION: 2 hrs.

STUDENT/ STAFF PRESENT: 65/05

CO-ORDINATOR: Prof.D.U.Dalavi

OBJECTIVE:

Digitalization which is the need of today's world is the result of innovations and technological advances. Every country is aiming to achieve digitalization to empower society in a better way. This Campaigning came as a dream project of the Indian government to remodel India digitally. This aim would be very difficult to achieve unless there is awareness amongst the rural people.

DESCRIPTION:

Digital India was launched by the Prime Minister of India Narendra Modi on 1 July 2015 with an objective of connecting rural areas with high-speed Internet networks and improving digital literacy. The vision of Digital India program is inclusive growth in areas of electronic services, products, manufacturing and job opportunities, etc. and it is centered on three key areas – Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand and Digital Empowerment of Citizens.

The aim of celebrating the campaigning Awareness of digitalization is to promote connecting rural areas with high-speed Internet networks and improving digital literacy & Importance of Some of the facilities which will be provided through this initiative are Internet, Digital Locker, e-education, e-health, e-sign, e-shopping and national scholarship portal. As the part of Digital India.



Principal Prof. Dr. S. B. Patil all, with all HOD's guiding the Rural Peoples & Students throughout the event. At end Prof. D. U. Dalavi thanked all the students and staff for their enthusiastic participation in the event.

OUTCOME:

This Session attempts to contribute to the body of knowledge on Internet, Digital Locker, e-education, e-health, e-sign, e-shopping and national scholarship portal. It is hoped that it most of the Students & People are aware about initiative about Digital India.

PHOTO'S DURING :

1



Photos During Session on Awerness of Digitalization

Prof.D.U.Dlavi

Event Co-ordinator



Prof. Dr. S.B.Patil

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

Attendance Sheet

Event Name: Awareness of Digitalization

Date: 22-09-2016

Sr. No	Name	Branch	Signature
1	Asha dheerendra Thorave	TE-civil	<u>Thorave</u>
2	Swati sham Bhokase	TE-civil	<u>Bhokase</u>
3	Avhad Siddharth Babar	BE-mech	<u>Babar</u>
4	Akshay chandrakant dhore	T.E.civil	<u>Dhore</u>
5	Bandal ganesh Ashok	BE-Mech	<u>Bandal</u>
6	Bankar vijay A.	BE mech	<u>Bankar</u>
7	vijay padarun chudmi	T.E civil	<u>Vijay</u>
8	Akani Tushar yuvraj	BE mech	<u>Tushar</u>
9	Awaghade ganesh Balu	BE mech	<u>Awaghade</u>
10	Abhijit shatrughna babar.	TE-civil	<u>Abhi</u>
11	Abhijit P. DAS	BE-mech.	<u>DAS</u>
12	BADE Namdev marutti	BE-mech	<u>Bader</u>
13	Kadam Keerti. A.	TE-ERTC	<u>Keerti</u>
14	Anarase Amol Gahiminath	BE mech	<u>A.G.A</u>
15	Dalavi akshay balaso	TE-ERTC.	<u>Dakshay</u>
16	Ceade sasor pandurang	TE E f TC	<u>Ceade</u>
17	Nikhil Bhanudas bhosale	T.E.civil	<u>Niw</u>
18	Aditya Nandkumar kamale	TE mech	<u>Adik</u>
19	Choudhary Parash Ravindra	TE E f TC	<u>Parash</u>
20	Bhadekar Ganesh. S.	Mech-BE	<u>Ganesh</u>
21	Pranita Peakash Bandal	TE-civil	<u>Pranita</u>
22	Ambavate pratik Ramchandra	TE mech	<u>Ambavate</u>
23	Chaudhari Parsh R.	T.E e f TC	<u>Parsh</u>
24	Awale Sangram Laxman	TE-Mech	<u>Sangram</u>
25	Avhad Siddharth. B.	BE-mech	<u>Siddharth</u>
26	Andrat Dylan Austin	BE mech	<u>Dylan</u>
27	Gole Mayur Mohan	TE-ERTC.	<u>Gole</u>



28	Adat Ashok shankar	BE-mech	Ashok
29	Bhasare ABHINAV	TE EFTC	Bhasare
30	Bidve varad dhanjay	TE EFTC	Varad
31	Amit shivaji. Mahargare	BE-mech	Amit
32	B Ghodake Amol	TE EFTC	Amol
33	Akshay prabhakar sunil	TE mech	Aksh
34	Ahire vishal sudej	BE-mech	Vishal
35	Pankaj Anil Dhamkare	TE civil	Pankaj
36	amit jaykumar baredade	TE civil	amit
37	Jahav Avinash ARUN	TE EFTC	Jahav
38	Awale Ashwini Dattatray	TE EFTC	Ashwini
39	Bagul. S. R.	BE-mech	Bagul
40	Bade Namdev Maruti	BE-mech	Namdev
41	Rahul Tukaram chavan	TE-civil	Rahul
42	Baswan samir abdul.	B.E. mech	Baswan
43	Ghodake Amol.	BE EFTC	Amol
44	Adsul sudej dnyandev	BE mech	Adsul
45	Tasdale Akshay. B.	TE EFTC	Tasdale
46	Amir chivaji mahargare	B.E mech	Amir
47	Ambavale Kajal shiriram	TE EFTC	Ambavale
48	Aishwarya shubham swami	TE-mech	Aishwarya
49	Jadhav snehal laxman	TE EFTC	Snehal
50	Galante Tejaswini	TE EFTC	Tejaswini
51	Awagade Kiran Kailas	TE mech.	Kiran
52	Ahire vishal sunil	TE mech	Vishal
53	Badave Nitin ulhas	BE-mech	Nitin
54	Akhade Trupti shivaji	TE EFTC	Akhade
55	Awale Ashwini Dattatray	TE EFTC	Awale
56	Akshay Chandrakant dhotare	TE-civil	Akshay
57	Gade Sagar Pandurang	TE-E&TE	Sagar
58	Akase harshal Bharat	BE-mech	Akase
59	Kadam Rohit .S.	TE EFTC	Rohit
60	Atole Prashant. S.	BE mech	Prashant
61	Akshay Zunjar Phadave	TE civil	Akshay



