



P P SAVANI
UNIVERSITY

EXPLORE
EXPERIENCE
EMPOWER

STUDENT

School of
Engineering

HAND BOOK

AY: 2019-20

PP SAVANI UNIVERSITY



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EXPERIENCE
EMPOWER

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About the University

*An Ordinary Teacher Lectures,
A Good Teacher Teaches,
A Great Teacher Inspires...*

We, at P P Savani Group, have been the source of Educational Inspiration for the generations of students for the last 30 years.

Launched in 1987, P P Savani Education Trust was initiated with a school. Today, the trust has expanded itself over the years with a group of schools in not only Surat district but also across Gujarat with student strength of more than 45,000. In 2016, the Trust expanded its horizons with the launch of P P Savani Knowledge City – an initiative in higher education to align with global standards of excellence. Through this immersive educational endeavor, the Governing Body aims to ignite a new era in higher education and create a talent pool of professionally sensitized industry-ready professionals in South Gujarat. A world class 100 acre campus has been developed consisting of Hi-tech infrastructure facilitating undergraduate, postgraduate, research, certificate and skill-development programmes.

Presently, P P Savani University offers several Academic Programmes under 06 Schools – Sciences, Engineering, Management, Architecture & Design, Physiotherapy and Nursing. The university fosters an aspiration to attract the best not only from Gujarat but also Nationwide. We aspire to be the ideal place where the students channelize their energy in developing competence to utilize knowledge and skills in the chosen field. Today, in the hyper-competitive world of survival of the fittest, we assure to equip the students with the apt tools to build a solid foundation for their careers.

The university desires to establish an environment wherein the students assimilate knowledge and develop critical thinking through state-of-art laboratories, industrial exposure, interactive sessions industry experts, scientists and business tycoons. The tie ups with industries in various sectors are aimed at providing placement support to the students and also to leverage the Industry Academia Interface to promote research and consulting projects. The process of developing strategic partnerships with Indian and International Universities of repute is in pipeline.

The university also believes in strong conviction in the holistic development of the students through sports, cultural and recreation activities in the campus. Moreover, idyllic stroll by the lakeside makes the academic experience more joyful and peaceful. Also, celebration of the National Holidays as well as other diverse events like Yoga Day, Rose Party or Guru Purnima among the staff members and students strengthens a connection to the community and the desire of giving back to the society. The University is nestled in the outskirts of the city and the ambience proves to be an inspiration to inquisitive minds.

Come, visit and experience the vibes...!

Blessings from the President...



It is an immense pleasure to welcome all the students to the Academic World of P P Savani University. We are desirous preparing leaders who can contribute in the national and global economy and as a result, the civilization. We desire to provide environment at the campus where students can be prepared to take up challenges of 21st century.

Technical education is the backbone of every Nation. Our aim is not only to give good technocrats to the Nation but also to contribute to the society by molding students into good human beings by imparting values and ethics which are embedded for life.

Our vision is to develop the professionals concerned for social values. We seek to provide to the students quality education of Soft skills and Technical skills. To match up the current corporate world and their expectations, we have developed well equipped workshops, laboratories, library, and hi-tech infrastructure to help students to attain highest standards in Academics. We focus on empowering students with sound knowledge, wisdom, experience and training both at academic level of engineering and highly competitive industrial market.

We assure you that you will be proud of yourself as a confident, successful and skilled engineer after four years at the P P Savani University.

Vallabhchai P Savani
President
P P Savani University

From the Desk of the Provost...



Today, Engineering Education is in a phase of extraordinary transition. Due to this, it has become the responsibility for every academic institution to keep the curriculum, infrastructure and human resource updated and upgraded in the rapidly changing world. We, the P P Savani University, foster an aspiration to grow in terms of student strength and subsequently Faculty strength to serve the academic need of the students better and to accommodate maximum of the talented aspirants to join P P Savani School of Engineering. Our vision for School of Engineering is to establish it as the preeminent center for teaching, research and entrepreneurship in the world of Engineering.

Today, the Engineers must address and dedicate themselves to the most urgent problems faced by society, challenges regarding energy, water, food, health, and the environment, and to resolve them in a sustainable, ethical, and human way. We wish to expand our research enterprise to address our Nation's most difficult and pressing technological problems. The engineering education imparted at P P Savani University will focus on creating industry ready professionals as well as Entrepreneurs.

I believe, today's teaching of engineering has ample opportunities and need for transformation in terms of teaching tools and methodology. We desire equip the latest technologies to our classrooms to shape the career of the students. We have designed our engineering curricula integrated with the best of the world class resources coping with industrial needs.

I am very excited and hopeful about the future of School of Engineering, and looking forward to deal with our students, faculty and friends to lead our school to new heights.

I wish you all the best for an effort to shape your career at P P Savani University.

Dr Parag Sanghani
Provost
P P Savani University

Inspirations from the Dean...



"Knowledge brings humility, from humility comes courtliness, with courtliness one attains wealth, with wealth one is able to perform his duties in a better way; and in performing his duties one attains happiness."

Dear students,

Welcome to the world of Engineering!

In today's era of cut through competition, it is very important to be equipped with contemporary knowledge and apt skill sets. To be successful in life one must have ambition, defined goals, discipline, positive attitude & habits, hard work and concentrated efforts to achieve success.

At P P Savani School of Engineering, we groom our students for successful academic, professional and eventually social life. Along with teaching, we nurture students with creativity, excellence, critical thinking, entrepreneurial skills, organizational interpersonal and communication skills and life values. There is also ample scope in extracurricular and co-curricular activities at the campus to encourage students to showcase their talent.

As world is becoming more complex day by day, it is tough to survive through conventional academic approach. P P Savani School of Engineering has pioneered new approaches to the teaching learning process which will provide comfortable, enjoyable and easy learning environment to the students. We offer the key to uncover knowledge through interdisciplinary studies and research. We are equipped with hi-tech tools which were unimaginable a decade ago in a form of learning technologies. We also facilitate to discover new insights in how brain functions and develops, which together would change the nature of teaching and learning.

Students, I wish you to become an active beneficiary of the academic and academic support facilities provided by the University through which you will get rewarding career.

Good Luck...!

Dr Niraj Shah

Dean, School of Engineering
P P Savani University

Schools and Programmes @ University

At present, under ambit of P P Savani University following programmes are offered under various schools:

School	Programmes Offered
School of Sciences	Bachelor of Science in <ul style="list-style-type: none"> • Biotechnology • Micro-biology • Environmental Sciences • Chemistry • Information Technology Master of Science in <ul style="list-style-type: none"> • Biotechnology • Micro-biology Integrated Course of Master of Science in <ul style="list-style-type: none"> • Biotechnology • Micro-biology
School of Architecture & Design	<ul style="list-style-type: none"> • Bachelor in Interior Design • Bachelor in Architecture
School of Physiotherapy	<ul style="list-style-type: none"> • Bachelor of Physiotherapy
School of Nursing	<ul style="list-style-type: none"> • B Sc. Nursing • GNM
School of Engineering	Bachelor of Technology in <ul style="list-style-type: none"> • Civil Engineering • Mechanical Engineering • Computer Science Engineering • Information Technology • Chemical Engineering
School of Management	<ul style="list-style-type: none"> • Bachelor of Business Administration Integrated Course of Management in <ul style="list-style-type: none"> • Master of Business Admission
School of Liberal Arts	<ul style="list-style-type: none"> • Bachelor of Arts
School of Design	Bachelor of Design in <ul style="list-style-type: none"> • Fashion & Textile Design • Graphics & Communication Design • Interior & Space Design

Faculty Profile of School of Engineering



NAME	Dr. Niraj D Shah
Qualification	Ph. D. (Civil-Structural Engineering)
Designation	Principal
E Mail	niraj.shah@ppsua.ac.in
Experience	19 Years



NAME	Dr. Ashish N Jani
Qualification	Postdoctoral Fellowship
Designation	Associate Professor (Computer Engg.)
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Experience	12 Years



NAME	Dr. Jasleen Kaur
Qualification	Ph. D. (Computer Engineering)
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Experience	13 Years



NAME	Mr. Mitul N Raj
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Experience	4 Years

Faculty Profile of School of Engineering



NAME Ms Neha Shah
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Experience 6 Years 2 Months



NAME Mr. Raviraj Chauhan
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Experience 2 Years 9 Months

Faculty Profile of School of Engineering



NAME	Ms. Aarti Patel
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Experience	10 Months



NAME	Mr. Amir D Patel
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Experience	7 Years



NAME	Mr. Palak J Patel
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Faculty Profile of School of Engineering



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Experience 7 Years



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Experience 5 Years 1 Month

Faculty Profile of School of Engineering



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NAME Mr. Deepak Kumar Haritwal
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NAME Ms. Sofia Ahmed
Qualification BE (Chemical), M. Tech (Process Modelling & Simulation)
Designation Assistant Professor (Chemical Engg.)
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Experience 3 Years

Faculty Profile of School of Engineering



NAME Mr. Jigesh Mehta
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Experience 4 Months



NAME Dr Gaurav S. Thakrar
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Experience 8 Years 1 Month



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Experience 6 Years



NAME Ms. Payal Bhatt
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Experience 1 Year 2 Months

Faculty Profile of School of Engineering



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Experience 5 Years 1 Month



NAME Mr. Vijay Kumar Saw
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NAME Dr. Bhumika G. Choksi
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Experience 6 Year 1 Month

Faculty Profile of School of Engineering



NAME	Mr. Vinay Kumar Singh
Qualification	M. Tech (Communication Systems), B. Tech. (EC)
Designation	Assistant Professor (English)
E Mail	-
Experience	9 Years



NAME	Mr. Niral Desai
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Experience	3 Years 5 Month

Academic Rules & Regulations

1. Important Terms

- a. Academic Year: Two consecutive (one odd + one even) semesters constitute one academic year.
- b. Semester: Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.
- c. Programme: An educational programme leading to award of a Degree, diploma or certificate.
- d. Course: Usually referred to, as 'paper/subject' is a component of a programme. All courses need not carry the same weight. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/term papers/assignments/ presentations/ self-study etc. or a combination of some of these. The courses should define learning objectives and learning outcomes and prerequisite if any.
- e. Choice Based Credit System (CBCS): The CBCS provides choice for students to select from the prescribed courses (foundation, core, elective or skill courses). The Choice Based Semester System will be followed across P P Savani University both at Undergraduate and Post Graduate levels. Each enrolled student will be required to take a minimum specified load of course work in the chosen subject of specialization and also complete a project/dissertation if any. Once registered at the start of semester, any student will not be allowed to withdraw the subject at any point of time during the semester.
- f. Credit Based Semester System (CBSS): Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
- g. Credit: A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week. In general, 1 credit is equivalent to 15 hours of teaching (lecture or tutorial) or 30 hours of practical work/field work.
- h. Letter Grade: It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.
- i. Grade Point: It is a numerical weight allotted to each letter grade on a 10-point scale.
- j. Credit Point: It is the product of grade point and number of credits for a course.
- k. Semester Grade Point Average (SGPA): It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- l. Cumulative Grade Point Average (CGPA): It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
- m. Transcript or Grade Card or Certificate: Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

2. Admissions

- Admission under various courses will be done as per prescribed guidelines of the government of Gujarat and P P Savani University.
- A candidate to be eligible for Lateral Entry Admission (Admissions into second year of Programme) should have passed eligibility examination in the relevant discipline conducted by a recognized University.
- A candidate from other university is allowed to join P P Savani University after transfer of grades, scored in the earlier university, as suggested by Equivalence Committee of the University provided the student has to undertake at-least 50 per cent of the courses at P P Savani University.

3. Programme Duration

The minimum and maximum duration of various programmes offered at P P Savani University are as under:

School of	Specialization	Minimum No of Semesters	Maximum No of Semesters
Science	B Sc in Biotechnology	5	12
	B Sc in Micro-biology	5	12
	B Sc in Environmental Sciences	5	12
	B Sc in Chemistry	5	12
	B Sc in Information Technology	5	12
	M Sc in Biotechnology	3	8
	M Sc in Micro-biology	3	8
	Integrated M Sc in Biotechnology	9	20
Integrated M Sc in Micro-biology	9	20	
Architecture & Design	Bachelor in Interior Design	9	20
	Bachelor in Architecture	7	16
Physiotherapy	Bachelor of Physiotherapy	8	18
Nursing	B Sc Nursing	8	16
	GNM	6	12
Engineering	B Tech in Civil Engineering	7	16
	B Tech in Mechanical Engineering	7	16
	B Tech in Computer Science Engineering	7	16
	B Tech in Information Technology	7	16
	B Tech in Textile Engineering	7	16
	B Tech in Chemical Engineering	7	16
Management	Bachelor of Business Administration	5	12
	Integrated Master of Business Administration	9	20
Liberal Arts	Bachelor of Arts	5	12
Design	Bachelor of Design in Fashion & Textile	7	16
	Bachelor of Design in Graphics & Communication	7	16
	Bachelor of Design in Interior & Space	7	16

4. Enrolment Number

Each student securing admission under P P Savani University will be issued a unique Enrolment Number which follow pattern as:

Year of Admission		Initials of School		Type of Course		Specialization Code		Roll No		
1	7	S	S	0	2	C	V	0	0	1

School	Initials	Type	Number
Science	SS	Diploma	01
Architecture & Design	SA	UG	02
Physiotherapy	SP	PG	03
Nursing	SN	Ph D	04
Engineering	SE	Certificate	05
Management	SM	Integrated	06
Liberal Arts	SL	Dual Degree	07
Design	SD	Migrated/Transferred	08
		D to D	09

School of	Specialization	Code
Science	B Sc in Biotechnology	BT
	B Sc in Micro-biology	MB
	B Sc in Environmental Sciences	ES
	B Sc in Chemistry	CH
	B Sc in Information Technology	IT
Architecture & Design	Bachelor in Interior Design	ID
	Bachelor in Architecture	AR
Physiotherapy	Bachelor of Physiotherapy	PH
Nursing	B Sc Nursing	NR
	GNM	GN
Engineering	B Tech in Civil Engineering	CV
	B Tech in Mechanical Engineering	ME
	B Tech in Computer Science Engineering	CE
	B Tech in Information Technology	IT
	B Tech in Textile Engineering	TE
	B Tech in Chemical Engineering	CH
Management	Bachelor of Business Administration	BA
	Bachelor of Commerce	BC
	Master of Business Administration	MA
Liberal Arts	Bachelor of Arts	AT
Design	Bachelor of Design in Fashion & Textile	FT
	Bachelor of Design in Graphics & Communication	GC
	Bachelor of Design in Interior & Space	IS

5. Course Nomenclature

All Courses/Subjects offered for the **Under Graduate Programmes** are broadly classified & offered as:

Type of Course	Percentage Courses	To be offered at Year
Foundation Courses	15-20%	1, 2
Core Courses	50%	2, 3, 4
Elective Courses	20%	2, 3, 4
Skill Enhancement Courses	15-10%	1, 2, 3, 4

Each Course/Subject offered at P P Savani University will have a unique Course Code which follows pattern as:

Initials of School		Specialization Code		Maximum Level at Which the Course can be Offered	Subject Code		No of Prerequisite Subjects to be Passed
S	S	B	T	2	2	1	2

School	Initials	Level	Number
Science	SS	First Year	1
Architecture & Design	SA	Second Year	2
Physiotherapy	SP	Third Year	3
Nursing	SN	Fourth Year	4
Engineering	SE	Fifth Year	5
Management	SM	Master 1 st Year	7
		Master 2 nd Year	8

6. Attendance

- Attendance is compulsory in all subject. The minimum attendance under each course is 80%. Any student failing to fulfil attendance requirements, will not be allowed to appear for University Examination. In case of genuine medical reasons like serious personal illness or accident or family calamity, the maximum permissible attendance relaxation can be up to 10% maximum, subject to approval from Dean of respective school.
- A student, who fails to fulfil attendance requirements under one or more subjects, the grade awarded will be TN and the student has to register and study, the course once again.

7. Programme Credit

The minimum and maximum credits per semester along with total programme credits for various Programmes are as under:

School of	Specialization	Course Duration Semesters	Minimum No of Semesters	Maximum No of Semesters	Maximum Contact Hours/Wk	Total Credits
Science	B Sc in Biotechnology (Honors)	6	5	12	35	140
	B Sc in Micro-biology (Honors)	6	5	12	35	140
	B Sc in Environmental Sciences (Honors)	6	5	12	35	140
Architecture & Design	Bachelor in Architecture	10	9	20	35	230
	Bachelor in Interior Design	8	7	16	35	180
Physiotherapy	Bachelor of Physiotherapy	9	8	18	42	220
Nursing	B Sc Nursing	8	7	16	42	270
	GNM	6	-	-	-	-
Engineering	B Tech in Civil Engineering	8	7	16	35	180
	B Tech in Mechanical Engineering	8	7	16	35	180
	B Tech in Computer Science Engineering	8	7	16	35	180
	B Tech in Information Technology	8	7	16	35	180
	B Tech in Textile Engineering	8	7	16	35	180
	B Tech in Chemical Engineering	8	7	16	35	180
Management	Bachelor of Business Administration	6	5	12	35	140

8. Courses to be offered

All Courses/Subjects offered for the **Under Graduate Programmes** are broadly classified & offered as:

Type of Course	Percentage Courses	To be Decided by
Foundation Courses	15-20%	Director of School
Core Courses	50%	Director of School
Elective Courses	20%	Refer Section 12
Skill Enhancement Courses	15-10%	Refer Section 13

9. Guidelines for Offering Elective Courses

- The director of the school will offer School/Department specific elective courses to the school & department students.
- The director of the school will offer **two to five open elective courses** to the students of other schools.

Examination Policy

1. Abbreviations

SOE: School of Engineering

2. Course Coordinator

A faculty member, within university, who is responsible for all the activities related to a particular course such as syllabus completion, internal evaluation, exam coordination etc.

3. Course Evaluation

All Courses/Subjects offered at P P Savani University shall be evaluated under two heads:

- a. **Continuous Evaluation (CE)** component which is under sole discretion of the course coordinator. It is expected that the continuous evaluation should consist of Unit Test/ Weekly Test/ Fortnightly Test/ Class Test/ Presentations/ Project Work/Assignment/ Group Discussion/ Quiz/ Seminar/ Debate etc.
- b. The marks of CE component should be submitted by course coordinator to University Exam Section in the format prescribed by the University.
- c. The course coordinator shall submit the answer sheets along with the final marks after showing the same to the students within 07 days of the Examination.
- d. **The maximum mark of Continuous Evaluation (CE) component is 40 percent.**
- e. **End Semester Examination (ESE)** will be conducted by University through written paper or practical test or oral test or presentation by the student or a combination of any one, two or more of these.
- f. The End Semester Examination will be evaluated by appointing two subject experts, One from outside University and another from within University, for all courses offered under University.
- g. **The maximum mark of End Semester Examination is 60 percent.**
- h. The total of the Continuous Evaluation Component and End Semester Examination marks in each course will be converted to a letter grade on a ten-point scale as per the following scheme:

Percentage of Marks	Grade	Grade Point
90-100	O	10
80-89.99	A+	9
70-79.99	A	8
60-69.99	B+	7
50-59.99	B	6
45-49.99	C	5
40-44.99	P	4
< 40%	F	0

- i. In order to earn the credit in a course a student has to obtain grade other than F.
- j. A student, who remains “Absent” in University Exam will be awarded F grade.
- k. A student, who obtains F grade, has to appear for Re-Test of university examination scheduled immediately after declaration of result. In case the candidate secures grade other than F, he/she will be awarded maximum grade of B+ after retest.
- l. A student, who obtains F grade, after Re-Test of university examination, has to repeat the university examination of the same course(s) till he/she obtains grade other than F.
- m. No student is allowed to upgrade the grade, if he/she scored grade other than F.
- n. The student’s performance in any semester will be assessed by the Semester Grade Point Average (SGPA). Similarly, his/her performance at the end of two or more consecutive semesters will be denoted by the Cumulative Grade Point Average (CGPA). The SGPA and CGPA are calculated as per guidelines of UGC.
- o. In a semester, the SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$\text{SGPA (Si)} = \frac{\sum(C_i \times G_i)}{\sum C_i}$$

Where, C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.
- p. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.

$$\text{CGPA} = \frac{\sum(C_i \times S_i)}{\sum C_i}$$

Where, S_i is the SGPA of the i th semester and C_i is the total number of credits in that semester.
- q. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the grade-card & transcript.

4. Promotion Rules

- a. All the students of odd semester are allowed to move to even semester irrespective of their results.
- b. At the end of a year, a student is not allowed to move to odd semester in case of his/her CGPA is less than 3.00.
- c. Over and above, the school has to follow the guidelines laid down by the statutory body time to time.
- d. The detained students will have to register for all the failed courses of previous two semesters with course fees worth Rs. 3000/- per course.

5. Examination Schedule

Each School shall decide and design the University Examination Schedule within one month of the beginning of the Semester. However, it shall be prepared in consultation with the Exam Section of the University.

6. Conduction of Examination

Each question paper shall comprise of 02 Sections, equally divided in terms of marks. Each question paper shall carry 60 % easy, 20 % moderate and 20 % difficult questions. The exam will be conducted primarily in the Answer sheet of 24 pages. If needed, the student may be provided with a supplementary of 04 pages. Each section will be written in different Answer sheet. Each course/ subject is divided into 60 % and 40 % as ESE and CE respectively. 40 % CE will be carried out by the respective school/ department. Moreover, the Course Coordinator will submit the CE marks to the Exam Section after the due verification by the respective Head/ Principal within 07 days of the completion of the Internal Examination.

- a. Examination Order: The Exam Section will send the exam order to both – Internal and External examiner via E mail at least two months prior to the schedule anticipating the confirmation of arrival with the course coordinator. The order shall carry the theory and practical examination date.
- b. Paper setter: The internal and the external examiner will set both the sections separately consisting of equal marks distribution of total weightage of question paper. It shall be submitted in hard as well as soft copies. The exam section will randomly select one section from both the submitted question papers. The remaining paper shall be utilized for the remedial examinations.
- c. The External Examiner will be sent the syllabus along with the format of question paper. He/she will also be informed about the online submission of the question paper with the assessment scheme and answer keys.
- d. The internal and external examiner shall assess the section 01 and 02 respectively. The examiners shall complete the assessment within 07 days of the date of exam.
- e. The final marks of University Theory Exam will be entered by the Exam Section with double layer verification. However, final marks of internal exam will be entered/ submitted by internal examiner followed by the verification by the course coordinator within 07 days.
- f. The minimum passing criteria for any (theory/ practical) Examination is 40 % of ESE as well as 40 % of overall marks.
- g. The internal examiner will enter the internal and external marks of practical examination on the same day of practical examination on the portal.
- h. For the backlog students, the re-exam will be scheduled only in the next University Semester End Examination.

7. UFM (Unfair Means):

No candidate/ examinee shall use unfair means or indulge in disorderly conduct at or in connection with examinations.

Unfair Means shall include the following:

1. During examination time having in possession or access to
 - a) Any paper, book, note or any other material (relevant or irrelevant).
 - b) Mobile Phones or any electronic gadget other than scientific calculator, even in switch off mode, which can potentially be used for communication or copying.
 - c) Anything written on any other instrument or any kind of furniture or any other substance which may have relevance to the syllabus of the examination paper concerned.
 - d) Anything written or signs made on the body of the candidate or his/her clothes/garments, handkerchief etc which may have relevance to the syllabus of the examination paper concerned.
 - e) Anything written on the question paper which may have relevance to the syllabus of the examination paper concerned.
2. Giving or receiving assistance in answering the question papers to or from any other candidate/person in the examination hall or outside during the examination hours.
3. Talking to another candidate or any unauthorized person inside or outside the examination room during the examination hours without the permission of the invigilating staff.
4. Swallowing or attempting to swallow or destroying or attempting to destroy a note or paper or any other material.
5. Impersonating any candidate or getting impersonated by any person for taking the examination.
6. If the candidate is found reading or possess some incriminating material relevant to the syllabus of the paper in verandah, urinal etc during his/her examination duration.
7. If the behavior of the candidate on being caught is unsatisfactory or the candidate uses resistance/violence against the invigilator or any person on examination duty or consistently refuses to obey the instructions.

UFM Process & Review:

If a candidate is found practicing any of above mentioned Unfair Means:

- a. UFM report to be filed by Jr & Sr Supervisor of the centre.
- b. He/she should be allowed to complete the same exam without giving any extra time.

In case of UFM in the University Examination, the Provost will form a committee after the completion of the Examination for the same school. After the exam, the committee shall conduct an interaction with the concerned Jr & Sr Supervisor, the candidate & parents. The committee shall submit the report of the same next day of the interaction.

Norms of Punishment:

The following norms for punishment are laid down, if found guilty by the committee formed by the Provost.

Type of UFM practiced	Punishment to be imposed
1. During examination time having in possession or access to <ol style="list-style-type: none"> a) Any paper, book, note or any other material (relevant or irrelevant). b) Mobile Phones or any electronic gadget other than scientific calculator, even in switch off mode, which can potentially be used for communication or copying. c) Anything written on any other instrument or any kind of furniture or any other substance which may have relevance to the syllabus of the examination paper concerned. d) Anything written or signs made on the body of the candidate or his/her clothes/garments, handkerchief etc which may have relevance to the syllabus of the examination paper concerned. e) Anything written on the question paper which may have relevance to the syllabus of the examination paper concerned. 	The candidate will be awarded F Grade in 02 courses: one in which he is found guilty and second in which he has scored minimum marks other than F & to be declared as Pass.
2. Giving or receiving assistance in answering the question papers to or from any other candidate/person in the examination hall or outside during the examination hours.	His/her examination result in that course will be cancelled and F grade will be awarded in that course.
3. Talking to another candidate or any unauthorized person inside or outside the examination room during the examination hours without the permission of the invigilating staff.	His/her examination result in that course will be cancelled and F grade will be awarded in that course.
4. Swallowing or attempting to swallow or destroying or attempting to destroy a note or paper or any other material.	The candidate will be awarded F Grade in 02 courses: one in which he is found guilty and second in which he has scored minimum marks other than F & to be declared as Pass.
5. Impersonating any candidate or getting impersonated by any person for taking the examination.	The candidate will be awarded F Grade in 02 courses: one in which he is found guilty and second in which he has scored minimum marks other than F & to be declared as Pass.
6. If the candidate is found reading or possess some incriminating material relevant to the syllabus of the paper in verandah, urinal etc during his/her examination duration.	The candidate will be awarded F Grade in 02 courses: one in which he is found guilty and second in which he has scored minimum marks other than F & to be declared as Pass.
7. If the behavior of the candidate on being caught is unsatisfactory or the candidate uses resistance/violence against the invigilator or any person on examination duty or consistently refuses to obey the instructions.	The candidate will be awarded F Grade in all course of the semester in which he/she has appeared for examination.

8. Result Declaration:

- a. The Exam Section will declare the result within 15 days of the completion of the examination.
- b. After the declaration of the results, the student can apply for rechecking or reevaluation within 03 days of the declaration of the result with payment as under:
Rechecking: Rs. 200/- per course
Reassessment: Rs. 500 per course
- c. Results for rechecking or reassessment will be declared on 8th day of the declaration of the original result. It will be declared prior to the commencement of University Retest.

List of Foundation Courses

Course Code	Course Name	Preferred Year	Credits	Teaching Scheme (Hours)		
				TH	P	T
SECV1040	Basics of Civil & Mechanical Engineering	1/2	5	4	2	0
SECV1080	Mechanics of Solids	1/2	5	4	2	0
SEME1010	Engineering Graphics	1/2	5	3	4	0
SEME1020	Engineering Workshop	1/2	1	0	2	0
SEME1040	Concepts of Engineering Drawing	1/2	3	2	2	0
SEME1050	Electrical & Electronics Workshop	1/2	1	0	2	0
SECE1010	Basics of Computer & Programming	1/2	4	3	2	0
SECE1030	Programming with Python	1/2	5	3	4	0
SECE1050	Programming for Problem Solving	1/2	5	3	4	0
SEIT1010	Introduction to Web Designing	1/2	1	0	2	0
SESH1070	Fundamentals of Mathematics	1/2	4	2	0	2
SESH1080	Linear Algebra & Calculus	1/2	5	3	0	2
SESH1210	Applied Physics	1/2	4	3	2	0
SESH1230	Fundamentals of Chemistry & Chemical Engineering	1/2	5	4	2	0

List of Skill Enhancement Courses

Course Code	Course Name	Preferred Semester	Credits	Teaching Scheme (Hours)		
				TH	P	T
SEPD1030	Communicative English	1	2	1	2	0
SEPD1020	Communication Skills	2	2	1	2	0
SEPD2010	Critical Thinking, Creativity & Decision Making	3	2	2	0	0
SEPD2020	Values & Ethics	4	2	2	0	0
SEPD3010	Professional Communication & Soft Skills	5	2	1	2	0
SEPD3020	Corporate Grooming & Etiquette	6	2	1	2	0
SEPD3030	Foreign Language (French / German / Chinese / Spanish)	7	2	2	0	0
SEPD3040	Innovation & Entrepreneurship	5/6	3	3	0	0

Academic Calendar 2019-20 (Odd Semester)

P P SAVANI SCHOOL OF ENGINEERING									
Academic Calendar (2019-20) - ODD SEMESTER - For Semester 1 of B Tech & B Sc (IT)									
Week No	Month	M	T	W	T	F	S	S	Activity
1	July	22	23	24	25	26	27	28	Semester 1 Orientation Programme (July 25-26, 2019)
2	July-August	29	30	31	1	2	3	4	Semester 1 Teaching Starts (July 29, 2019 Onwards)
3	August	5	6	7	8	9	10	11	
4		12	13	14	15	16	17	18	12.08.2019..Bakri-Id & 15.08.2019..Independence Day/Raksha Bandhan Holiday
5		19	20	21	22	23	24	25	24.08.2019...Janmashtami Holiday
6	August-September	26	27	28	29	30	31	1	
7	September	2	3	4	5	6	7	8	02.09.2019..Holiday..Samvatsari
8		9	10	11	12	13	14	15	11.09.2019..Holiday..Muharram Engineer's Day Celebrations on September 14
9		16	17	18	19	20	21	22	
10		23	24	25	26	27	28	29	
11	September-October	30	1	2	3	4	5	6	02.10.2019..Holiday..Gandhi Jayanti
12	October	7	8	9	10	11	12	13	08.10.2019..Holiday..Dussehra 12.10.2019..Khelaiya
13		14	15	16	17	18	19	20	Internal Practical Exam (18.10.2019 to 23.10.2019)..11.30 Onwards Internal Theory Exam (18.10.2019 to 23.10.2019)..60 Marks..2 Hours
14		21	22	23	24	25	26	27	Internal Practical Exam (18.10.2019 to 23.10.2019)..11.30 Onwards Internal Theory Exam (18.10.2019 to 23.10.2019)..9 to 11..60 Marks Diwali Break (24.10.2019 to 06.11.2019)
15		October-November	28	29	30	31	1	2	3
16	November	4	5	6	7	8	9	10	Diwali Break (24.10.2019 to 06.11.2019) University Practical Exam (07/11/2019 to 12/11/2019)
17		11	12	13	14	15	16	17	Preparation Leaves (13/11/2019 to 16/11/2019)
18		18	19	20	21	22	23	24	University Theory Exam
19	November-December	25	26	27	28	29	30	1	University Theory Exam
20	December	2	3	4	5	6	7	8	University Theory Exam
21		9	10	11	12	13	14	15	Semester 1 Result (December 14, 2019) / Semester 2 Registration & Fees Payment (December 09-14, 2019) / Semester 2 Teaching Starts (From 12/12/2019)
22		16	17	18	19	20	21	22	Semester 1 Re-Test Registration with Fees Payment (December 16-18, 2019)
All Teaching Staff Members are entitled for 2 Weeks of Diwali Vacation. Vacation Allocation is in sole discretion of the Principal/Management depending on Academic Requirements of the School									

First Year Teaching Scheme (Civil & Mechanical)

P. P. SAVANI UNIVERSITY														
SCHOOL OF ENGINEERING														
TEACHING & EXAMINATION SCHEME FOR F. Y. B. TECH. CIVIL/MECHANICAL ENGINEERING PROGRAMME AY:2019-20														
Sem	Course Code	Course Title	Offered By	Teaching Scheme				Credit	Examination Scheme					
				Contact Hours		Theory			Practical		Tutorial		Total	
				Theory	Practical	Tutorial	Total	CE	ESE	CE	ESE	CE		ESE
1	SESH1070	Fundamentals of Mathematics	SH	2	0	2	4	40	60	0	0	50	0	150
	SEME1010	Engineering Graphics	ME	3	4	0	7	40	60	40	60	0	0	200
	SEME1020	Engineering Workshop	ME	0	2	0	2	0	0	50	0	0	0	50
	SESH1210	Applied Physics	SH	3	2	0	5	40	60	20	30	0	0	150
	SEPD1030	Communicative English	SEPD	1	2	0	3	50	0	20	30	0	0	100
				Total		21	16						650	
2	SESH1080	Linear Algebra & Calculus	SH	3	0	2	5	40	60	0	0	50	0	150
	SEME1050	Electrical & Electronics Workshop	ME	0	2	0	2	0	0	50	0	0	0	50
	SECV1040	Basics of Civil & Mechanical Engineering	CV	4	2	0	6	40	60	20	30	0	0	150
	SECV1080	Mechanics of Solids	CV	4	2	0	6	40	60	20	30	0	0	150
	SECE1010	Basics of Computer & Programming	CE	3	2	0	5	40	60	20	30	0	0	150
	SEPD1020	Communication Skills	SEPD	1	2	0	3	50	0	20	30	0	0	100
				Total		27	22						750	

First Year Teaching Scheme (Chemical)

P P SAVANI UNIVERSITY															
SCHOOL OF ENGINEERING															
TEACHING & EXAMINATION SCHEME FOR F. Y. B. TECH. CHEMICAL ENGINEERING PROGRAMME AY:2019-20															
Sem	Course Code	Course Title	Offered By	Teaching Scheme			Examination Scheme								
				Theory	Practical	Tutorial	CE	ESE	CE	ESE	CE	ESE	Total		
1	SESH1070	Fundamentals of Mathematics	SH	2	0	2	4	4	40	60	0	0	50	0	150
	SEME1010	Engineering Graphics	ME	3	4	0	7	5	40	60	40	60	0	0	200
	SEME1020	Engineering Workshop	ME	0	2	0	2	1	0	0	50	0	0	0	50
	SESH1230	Fundamentals of Chemistry & Chemical Engineering	SH	3	2	0	5	4	40	60	20	30	0	0	150
	SEPD1030	Communicative English	SEPD	1	2	0	3	2	50	0	20	30	0	0	100
						Total	21	16							650
2	SESH1080	Linear Algebra & Calculus	SH	3	0	2	5	5	40	60	0	0	50	0	150
	SEME1050	Electrical & Electronics Workshop	ME	0	2	0	2	1	0	0	50	0	0	0	50
	SECV1040	Basics of Civil & Mechanical Engineering	CV	4	2	0	6	5	40	60	20	30	0	0	150
	SECV1080	Mechanics of Solids	CV	4	2	0	6	5	40	60	20	30	0	0	150
	SECE1010	Basics of Computer & Programming	CE	3	2	0	5	4	40	60	20	30	0	0	150
SEPD1020	Communication Skills	SEPD	1	2	0	3	2	50	0	20	30	0	0	100	
						Total	27	22							750

First Year Teaching Scheme (Computer & I.T.)

P P SAVANI UNIVERSITY														
SCHOOL OF ENGINEERING														
TEACHING & EXAMINATION SCHEME FOR B. TECH. F.Y. COMPUTER ENGINEERING/ INFORMATION TECHNOLOGY PROGRAMME AY: 2019-20														
Sem	Course Code	Course Title	Offered By	Teaching Scheme				Credit	Examination Scheme					
				Contact Hours		Theory			Practical		Tutorial		Total	
				Theory	Practical	Tutorial	Total	CE	ESE	CE	ESE	CE		ESE
1	SESH1070	Fundamentals of Mathematics	SH	2	0	2	4	40	60	0	0	50	0	150
	SECV1040	Basics of Civil & Mechanical Engineering	CV	4	2	0	6	40	60	20	30	0	0	150
	SECE1050	Programming for Problem Solving	CE	3	4	0	7	40	60	40	60	0	0	200
	SEME1050	Electrical & Electronics Workshop	ME	0	2	0	2	0	0	50	0	0	0	50
	SEPD1030	Communicative English	SEPD	1	2	0	3	50	0	20	30	0	0	100
							Total							650
2	SESH1080	Linear Algebra & Calculus	SH	3	0	2	5	40	60	0	0	50	0	150
	SEIT2010	Object Oriented Programming with Java	IT	3	4	0	7	40	60	40	60	0	0	200
	SEIT1010	Introduction to Web Designing	IT	0	2	0	2	0	0	50	0	0	0	50
	SEME1020	Engineering Workshop	ME	0	2	0	2	0	0	50	0	0	0	50
	SEME1040	Concepts of Engineering Drawing	ME	2	2	0	4	40	60	20	30	0	0	150
	SESH1210	Applied Physics	SH	3	2	0	5	40	60	20	30	0	0	150
	SEPD1020	Communication Skills	SEPD	1	2	0	3	50	0	20	30	0	0	100
						Total	28							850

Department of Civil Engineering

Course Code: SECV1040

Course Name: Basics of Civil & Mechanical Engineering

Prerequisite Course(s): -

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
4	2	0	5	40	60	20	30	0	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- study the fundamentals of mechanical systems.
- study and appreciate significance of mechanical engineering in different fields of engineering.
- carry out simple land survey and recent trends in civil engineering.
- understand components of building, building terminology and construction materials.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Civil Engineering: An Overview Introduction, Branches, Scope, Impact, Role of Civil Engineer, Unit of Measurement, Unit Conversion (Length, Area, Volume)	03	04
2.	Introduction to Surveying and Levelling: Introduction, Fundamental Principles, Classification Linear Measurement: Instrument Used, Chaining on Plane Ground, Offset, Ranging Angular Measurement: Instrument Used, Meridian, Bearing, Local Attraction Levelling: Instrument Used, Basic Terminologies, Types of Levelling, Method of Levelling Modern Tools: Introduction to Theodolite, Total Station, GPS	07	12
3.	Building Materials And Construction: Introduction (Types and Properties) to Construction Materials Like Stone, Bricks, Cement, Sand, Aggregates, Concrete, Steel. Classification of Buildings, Types of Loads Acting on Buildings, Building Components and their Functions, Types of Foundation and Importance, Symbols Used in Electrical Layout, Symbols Used for Water Supply, Plumbing and Sanitation	10	14
4.	Construction Equipment: Types of Equipment- Functions, Uses. Hauling Equipment-Truck, Dumper, Trailer. Hoisting Equipment- Pulley, Crane, Jack, Winch, Sheave Block, Fork Truck. Pneumatic Equipment-Compressor. Conveying Equipment- Package, Screw, Flight/scrap, Bucket, Belt Conveyor. Drill, Tractor, Ripper, Rim Pull, Dredger, Drag Line, Power Shovel, JCB, HOE.	04	08
5.	Recent Trends in Civil Engineering: Mass Transportation, Rapid Transportation, Smart City, Sky Scarper, Dams, Rain Water Harvesting, Batch Mix Plant, Ready Mix Concrete Plant, Green Building, Earth Quake Resisting Building, Smart Material	06	12
Section II			
Module No.	Content	Hours	Weightage in %
6.	Basic Concepts of Thermodynamics: Prime Movers - Meaning and Classification; the Concept of Force, Pressure, Energy, Work, Power, System, Heat, Temperature, Specific Heat Capacity, Internal Energy, Specific Volume; Thermodynamic Systems, All Laws of Thermodynamics	04	06
7.	Fuels And Energy: Fuels Classification: Solid, Liquid and Gaseous; their Application, Energy Classification: Conventional and Non-Conventional Energy Sources, Introduction and Applications of Energy Sources like Fossil Fuels, Solar, Wind, and Bio-Fuels, LPG, CNG, Calorific Value	04	06
8.	Basics of Steam Generators: Introduction, Classification, Cochran, Lancashire and Babcock and Wilcox Boiler, Functioning of Different Mountings and Accessories	LAB	12

9.	Basics of I.C Engines: Construction and Working of 2 Stroke & 4 Stroke Petrol and Diesel Engines, Difference Between 2-Stroke - 4 Stroke Engine & Petrol-Diesel Engine, Efficiency of I. C. Engines	12	14
10.	Power Transmission Elements: Construction and Applications of Couplings, Clutches and Brakes, Difference Between Clutch and Coupling, Types of Belt Drive and Gear Drive	10	12

List of Practical:

Sr. No.	Name of Practical	Hours
1.	Unit conversation Exercise and Chart preparation of building components	02
2.	Linear measurements	02
3.	Angular measurements	02
4.	Determine R. L of given point by Dumpy level. (Without Change Point)	02
5.	Determine R. L of given point by Dumpy level. (With Change Point)	02
6.	Presentation on various topics as in module about recent trends	04
7.	To understand construction and working of various types of boilers	04
8.	To understand construction and working of mountings	04
9.	To understand construction and working of accessories	04
10.	To understand construction and working 2 –stroke & 4 –stroke Petrol Engines	02
11.	To understand construction and working 2 –stroke & 4 –stroke Diesel Engines	02

Text Book(s):

Title	Author(s)	Publication
Elements of Mechanical Engineering	S. B. Mathur, S. Domkundwar	Dhanpat Rai & Sons Publications
Elements of Mechanical Engineering	Sadhu Singh	S. Chand Publications
Elements of civil engineering	Anurag A. Kandya	Charotar Publication
Surveying Vol. I & II	Dr. B. C. Punamia	Laxmi Publication

Reference Book(s):

Title	Author(s)	Publication
Thermal Engineering	R. K. Rajput	Laxmi Publications
Basic Mechanical Engineering	T.S. Rajan	Wiley Eastern Ltd., 1996.
Surveying and Levelling	N. N. Basak	Tata McGraw Hill
Surveying Vol. I	S. K. Duggal	Tata McGraw Hill
Surveying and Levelling	R. Subramanian	Oxford University
Building Construction and Construction Material	G. S. Birdie and T. D. Ahuja	Dhanpat Rai Publishing
Engineering Material	S.C. Rangwala	Charotar Publication

Web Material Link(s):

- <http://nptel.ac.in/course.php>
- <http://nptel.ac.in/courses/105107157/>
- <http://nptel.ac.in/courses/105101087/>
- <http://nptel.ac.in/courses/105107121/>
- <http://nptel.ac.in/courses/105104100/>

Course Evaluation:**Theory:**

- Continuous evaluation consists of two tests each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by Course Coordinator.
- End Semester Examination will consist of 60 marks.

Practical:

- Continuous evaluation consist of performance of practical which will be evaluated out of 10 marks for each practical and average of the same will be converted to 10 marks.
- Internal viva consists of 10 marks.
- Practical performance/quiz/drawing/test of 15 marks during End Semester Exam.
- Viva/Oral performance of 15 marks during End Semester Exam.

Course Outcomes:

After the completion of the course, the student will be able to

- know the principles and working of basic mechanical systems.
- comprehend importance of mechanical engineering in various fields of engineering.
- know about different civil engineering fields with an overview of building material, building construction and recent developments in civil engineering.

Department of Civil Engineering

Course Code: SECV1080

Course Name: Mechanics of Solids

Prerequisite Course(s): -

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	2	0	4	40	60	20	30	0	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- understand different types of forces, systematic evaluation of effect of these forces, behavior of rigid and deformable bodies subjected to various types of forces at the state of rest or motion of the particles.
- understand the stresses developed under the application of force.
- understand the physical and mechanical properties of materials.
- understand behavior of structural element under the influence of various loads.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction: Definition of Rigid Body, Deformable Body, Scalar and Vector Quantities, Fundamental Principles of Mechanics: Principle of Transmissibility, Principle of Superposition, Law of Parallelogram of Forces.	3	6
2.	Fundamental of Static: Force, Types of Forces, Characteristics of a Force, System of Forces, Composition and Resolution of Forces. Concurrent Forces: Resultant of Coplanar Concurrent Force System by Analytical Method, Law of Triangle of Forces, Law of Polygon of Forces, Equilibrium Conditions for Coplanar Concurrent Forces. Non-Concurrent Forces: Moments & Couples, Characteristics of Moment And Couple, Varignon's Theorem, Resultant of Non-Concurrent Forces by Analytical Method, Equilibrium Conditions of Coplanar Non-Concurrent Force System.	10	22
3.	Centroid and Centre of Gravity: Centroid of Lines, Plane Areas and Volumes, Examples Related to Centroid of Composite Geometry, Pappus –Guldinus Theorems.	5	11
4.	Moment of Inertia: Parallel and Perpendicular Axis Theorems, Polar Moment of Inertia, Radius of Gyration of Areas, Examples related to moment of Inertia of Composite geometry.	5	11
Section II			
Module No.	Content	Hours	Weightage in %
	Material Properties		
5.	Mechanical Properties of Materials: Introduction, Classification of Materials, Properties Related to Axial, Bending, and Torsional & Shear Loading, Toughness, Hardness, Ductility, Brittleness. Proof stress, Factor of Safety, Working Stress, Load Factor.	2*	5
6.	Simple Stress and Strain: Definition of Stress and Strain, Tensile & Compressive Stresses: Shear and Complementary Shear Strains, Linear, Shear, Lateral, Thermal and Volumetric. Hooke's Law, Stresses and Strain in bars of Varying, Tapering & Composite Section, Principle of Superposition. Elastic Constant, Relation between Elastic Constants.	10	21
7.	Shear Force and Bending Moment: Introduction, Types of Loads, Supports and Beams, Shear Force, Bending Moment, Sign Conventions for Shear Force & Bending Moment. Statically Determinate Beam, Support Reactions, SFD and BMD for Concentrated Load and Uniformly Distributed Load, Uniformly Varying Load, Point of Contraflexure.	12	24

*(To be covered during lab hours)

List of Practical (Any Ten):

Sr. No	Name of Practical	Hours
1.	Equilibrium of coplanar concurrent forces	02
2.	To verify the law of parallelogram of forces	02
3.	To verify the law of polygon of forces	02
4.	To verify the Lami's theorem	02
5.	Equilibrium of parallel force system – simply supported beam	02
6.	Tensile test on Ductile materials.	02
7.	Compression test on Ductile materials	02
8.	Compression test on Brittle Materials	02
9.	Determination of hardness of metals (Brinell/ Rockwell hardness test)	02
10.	Determination of impact of metals (Izod/ Charpy impact test)	02
11.	Tutorial on concurrent & Non-concurrent forces	04
12.	Tutorials on C. G & MI	02
13.	Tutorials on SFD & BMD	04

Text Book(s):

Title	Author(s)	Publication
Applied Mechanics	S. B. Junnarkar & H. J. Shah	Charotar Publication
Strength of Materials (SI Units)	R S Khurmi, N Khurmi	S. Chand & Company Pvt. Ltd.

Reference Book(s):

Title	Author(s)	Publication
Engineering Mechanics,	Meriam and Karaige,	Wiley-India
Engineering Mechanics: Statics and Dynamics	S Rajsekaran	Vikas Publication
Engineering Mechanics of Solids	Popov E.P	Prentice Hall of India
Strength of Materials (SI Units)	Er. R . K. Rajput	S. Chand & Company Pvt. Ltd.
Mechanics of Structure-Vol.I	Dr. H.J. Shah & S. B. Junarkar	Charotar Publishing House Pvt. Ltd.
Strength of materials	R. Subramanian	Oxford Publications
Strength of materials	S. Ramamrutham	DhanpatRai Publishing Company
Strength of Materials (SI Units)	Er. R . K. Rajput	S. Chand & Company Pvt. Ltd.

Web Material Link(s):

- <http://nptel.ac.in/courses/122104014/>
- <http://nptel.ac.in/courses/112103108/>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by Course Coordinator.
- End Semester Examination will consist of 60 marks.

Practical:

- Continuous Evaluation consists of performance of practical which should be evaluated out of 10 marks for each practical and average of the same will be converted to 10 marks.
- Internal viva consists of 10 marks.
- Practical performance/quiz/drawing/test consists of 15 marks during End Semester Exam.
- Viva/Oral performance consists of 15 marks during End Semester Exam.

Course Outcomes:

After the completion of the course, the student will be able to

- understand fundamental principles of mechanics, equilibrium, statics reactions and internal forces in statically determinate beams.
- apply principles of statics for determine C.G and M.I of a different geometrical shape and Understand basics of friction and its importance.
- critically analyze problem and solve the problem related to mechanical elements and analyze the deformation behavior for different types of loads.
- understand the different types of stresses and strains developed in the member subjected to axial, bending, shear & torsional effects.
- understand the physical properties of materials.

Department of Mechanical Engineering

Course Code: SEME1010

Course Name: Engineering Graphics

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
03	04	00	05	40	60	40	60	00	00	200

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- know conventions and the methods of engineering drawing.
- interpret engineering drawings using fundamental technical mathematics.
- construct basic and intermediate geometry.
- improve their visualization skills so that they can apply these skills in developing new products.
- improve their technical communication skill in the form of communicative drawings.
- comprehend the theory of projection.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction: Importance of the Course; Use of Drawing Instruments and accessories; BIS – SP – 46; Lettering, Dimensioning and Lines; Representative Fraction; Types of Scales (Plain and Diagonal Scales); Construction of Polygons.	03	05%
2.	Engineering Curves: Classification and Application of Engineering Curves; Construction of Conics, Cycloidal Curves, Involute and Spiral along with Normal and Tangent to each.	06	15%
3.	Principles of Projections: Types of Projections; Introduction of Principle Planes of Projections. Projection of Points & Line: Projection of Points in all four Quadrants; Projection of Lines with its inclination to one Referral Plane & two Referral Planes. Projection of Plane: Projection of Planes (Circular and Polygonal) with inclination to one Referral Plane and two Referral Planes; Concept of Auxiliary Projection Method.	14	30%
Section II			
Module No.	Content	Hours	Weightage in %
4.	Projection and Section of Solids: Projection of solids: Polyhedral, Prisms, Pyramids, Cylinder, Cone, Auxiliary Projection Method, One View, Two View and Three View Drawings. Missing View, Rules for Selection of Views; Sectional View, Section Plane Perpendicular to the HP & VP and other Various Positions, True Shape of Sections.	08	14%
5.	Orthographic Projection: Types of Projections: Principle of First and Third Angle Projection - Applications & Difference; Projection from Pictorial view of Object, View from Front, Top and Sides; Full Section View.	07	18%
6.	Isometric Projections and Isometric Drawing: Isometric Scale, Conversion of Orthographic views into Isometric Projection, Isometric View or Drawing.	07	18%

List of Practical:

Sr. No.	Name of Practical	Hours
1.	Introduction sheet (dimensioning methods, different types of line, construction of different polygon, divide the line and angle in parts, use of stencil, lettering)	08
2.	Plane scale and diagonal scale	04
3.	Engineering curves	08
4.	Projection of Points & Lines	06
5.	Projection of Planes	08
6.	Projection of solid & Section of solid	10
7.	Orthographic projection	08
8.	Isometric projection	08

Text Book(s):

Title	Author(s)	Publication
A Text Book of Engineering Graphics	P J Shah	S. Chand & Company Ltd., New Delhi
Engineering Drawing	N D Bhatt	Charotar Publishing House, Anand

Reference Book(s):

Title	Author(s)	Publication
Engineering Drawing	P.S.Gill	S. K. Kataria & sons, Delhi
Engineering Drawing	B. Agrawal & C M Agrawal	Tata McGraw Hill, New Delhi
Engineering Drawing made Easy	K. Venugopal	Wiley Eastern Ltd

Web Material Link(s):

- <http://nptel.ac.in/courses/105104148/>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by Course Coordinator.
- End Semester Examination will consist of 60 marks.

Practical:

- Continuous Evaluation consists of Performance of Practical/Tutorial which will be evaluated out of 10 for each practical/Tutorial and average of the same will be converted to 20 Marks.
- Internal Viva consists of 20 Marks.
- Practical performance/quiz/drawing/test will consist of 30 Marks during End Semester Exam.
- Viva/Oral performance will consist of 30 Marks during End Semester Exam.

Course Outcomes:

After the completion of the course, the student will able to

- know and understand “Drawing is a language of Engineers.”
- interpret general assembly technical drawing.
- create traditions and the strategies for Engineering Drawing.
- evaluate basic and intermediate geometry.
- apply the knowledge of principles of projections.
- develop their hallucination/imagination skills.
- enhance their technical communication skill in the form of talkative drawings.

Department of Mechanical Engineering

Course Code: SEME1020

Course Name: Engineering Workshop

Prerequisite Course(s): -

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
0	2	0	1	0	0	50	0	0	0	50

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- learn about the safety measures required to be taken while using working in workshop.
- learn about how to select the appropriate tools required for specific operation.
- learn about different manufacturing technique for production out of the given raw material.
- understand applications of machine tools, hand tools, power tools and welding process.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction: Introduction to Various Shops / Sections and Workshop Layouts, Safety Norms to be Followed in a Workshop.	-	-
2.	Fitting Shop: Introduction of Fitting Shop; Safety; Making a Job as per Drawing including Marking and other Performing Operations.	-	-
3.	Carpentry and Drilling Shop: Introduction of Carpentry Shop; Preparation of Job as per Drawing including Marking and other Performing Operations.	-	-
4.	Sheet Metal Shop: Introduction of Sheet Metal Shop; Preparation of Job as per Drawing including Marking and other Performing Operations	-	-
5.	Smithy Shop: Introduction of Sheet Metal Shop; Preparation of Job as per Drawing including Marking and other Performing Operations	-	-
6.	Introduction to Machine Tools: Introduction and Demonstration of various Machine Tools like Lathe, Drilling, Grinding, Hack Saw Cutting etc.	-	-
7.	Introduction to Welding & Plumbing: Introduction and Demonstration of Welding process. Introduction and Demonstration of Plumbing Shop.	-	-

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction and Demonstration of Safety Norms. Different Measuring Instruments.	02
2.	To Perform a Job of Fitting Shop.	06
3.	To Perform a Job of Carpentry Shop.	06
4.	To Perform a Job of Sheet Metal Shop.	06
5.	To Perform a Job of Black Smithy Shop.	04
6.	Introduction and Demonstration of Grinding & Hacksaw Cutting Machine.	02
7.	Introduction and Demonstration of Plumbing Shop & Welding Process.	04

Text Book(s):

Title	Author(s)	Publication
Elements of Workshop Technology Vol. I	Hajra Chaudhary S.K	Media promoters & Publishers
Workshop Technology Vol. I and II	Raghuvanshi B.S.	Dhanpat Rai & Sons

Reference Book(s):

Title	Author(s)	Publication
Workshop Technology Vol. I	W.A.J. Chapman	Edward Donald Publication
Workshop Practices	H S Bawa	Tata McGraw-Hill
Basic Machine Shop Practice Vol. I, II	Tejwani V.K	Tata McGraw-Hill

Web Material Link(s):

- <http://nptel.ac.in/course.php>

Course Evaluation:**Practical:**

- Continuous Evaluation Consist of Performance of Practical which will be evaluated out of 10 for each practical/Tutorial and average of the same will be converted to 30 Marks.
- Internal Viva consists of 20 Marks.

Course Outcomes:

After the completion of the course, the student will able to

- use various measuring instruments.
- know the importance of safety norms required in workshop.
- understand the application of various tools required for different operation.
- understand how to manufacture product from given raw material.
- know the use of machine tools, hand tools and power tools.

Department of Mechanical Engineering

Course Code: SEME1040

Course Name: Concepts of Engineering Drawing

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	2	0	4	40	60	20	30	0	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- know conventions and the methods of engineering drawing.
- interpret engineering drawings using fundamental technical mathematics.
- construct basic and intermediate geometry.
- improve their visualization skills so that they can apply these skills in developing new products.
- improve their technical communication skill in the form of communicative drawings.
- comprehend the theory of projection.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction: Importance of the course; Use of Drawing Instruments and Accessories; BIS – SP – 46; Lettering, Dimensioning and Lines; Representative Fraction; Types of Scales (Plain and Diagonal Scales); Construction of Polygons	07	15
2.	Engineering Curves: Classification and Application of Engineering Curves; Construction of Conics, Cycloidal Curves, Involute and Spiral along with Normal and Tangent to each.	12	25
3.	Principles of Projections: Types of Projections; Introduction of Principle Planes of Projections. Projection of Points in all four Quadrants	04	10
Section II			
Module No.	Content	Hours	Weightage in %
4.	Projection of Plane: Projection of Planes (Circular and Polygonal) with inclination to one Referral Plane and two Referral Planes	07	15
5.	Orthographic Projection: Types of Projections: Principle of First and Third Angle Projection - Applications & Difference; Projection from Pictorial View of Object, View from Front, Top and Sides.	08	20
6.	Isometric Projections and Isometric Drawing: Isometric Scale, Conversion of Orthographic Views into Isometric Projection, Isometric View or Drawing.	07	15

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction sheet (dimensioning methods, different types of line, construction of different polygon, divide the line and angle in parts, use of stencil, lettering)	04
2.	Plane scale and Diagonal scale	04
3.	Engineering curves	06
4.	Projection of Points and Plane	04
5.	Orthographic Projection	06
6.	Isometric Projection	06

Text Book:

Title	Author(s)	Publication
A Text Book of Engineering Graphics	P J Shah	S. Chand & Company Ltd., New Delhi
Engineering Drawing	N D Bhatt	Charotar Publishing House, Anand

Reference Book:

Title	Author(s)	Publication
Engineering Drawing	P.S.Gill	S. K. Kataria & sons, Delhi
Engineering Drawing	B. Agrawal & C M Agrawal	Tata McGraw Hill, New Delhi
Engineering Drawing made Easy	K. Venugopal	Wiley Eastern Ltd

Web Material Link(s):

- <http://nptel.ac.in/courses/105104148/>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by Course Coordinator.
- End Semester Examination will consist of 60 marks.

Practical:

- Continuous Evaluation Consist of Performance of Practical which should be evaluated out of 10 for each practical Tutorial and average of the same will be converted to 10 Marks.
- Internal Viva consists of 10 Marks.
- Practical performance/quiz/drawing/test of 15 Marks during End Semester Exam.
- Viva/Oral performance of 15 Marks during End Semester Exam.

Course Outcomes:

After completion of the course, the student will be able to

- know and understand “Drawing is a language of Engineers.”
- interpret general assembly technical drawing.
- create traditions and the strategies for Engineering Drawing.
- evaluate basic and intermediate geometry.
- apply the knowledge of principles of projections.
- develop their hallucination/imagination skills.
- enhance their technical communication skill in the form of talkative drawings.

Department of Mechanical Engineering

Course Code: SEME1050

Course Name: Electrical & Electronics Workshop

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
0	2	0	1	0	0	50	0	0	0	50

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- expose to the fundamental principles, concepts, methods and circuits to understand the electronic system.
- learn to use common electronic component on breadboard.
- make the student understand about instruments and terminologies used in electrical & electronic circuits and their applications.

List of Practical:

Sr. No	Name of Practical	Hours
1.	Understanding of electronic components with their specifications	2
2.	Understanding of Galvanometer, Voltmeter, Ammeter, Wattmeter and Multimeter	2
3.	Understanding of breadboard connections	2
4.	Drawing and wiring of basic circuits on breadboard	2
5.	Verification of Ohm's law	2
6.	Kirchhoff's laws (KVL, KCL)	2
7.	Study of CRO, measurement of amplitude (voltage) & time period (frequency)	4
8.	Half wave, full wave using centre tap transformer and full wave bridge rectifier	4
9.	Electrical wiring system	2
10.	Faraday's laws of Electromagnetic Induction and Electricity Lab	2
11.	LDR characteristics	2
12.	PCB designing	4

Text Book:

Title	Author(s)	Publication
Electronic Principles	Albert Malvino and David J Bates	Mc Graw Hill(7th Edition)
Principles of Electronics	V. K. Mehta, Rohit Mehta	S. Chand

Reference Book:

Title	Author(s)	Publication
Electronic Devices	Thomas L. Floyd	Pearson (7th Edition)
Electronic Devices and Circuits	David A. Bell	Oxford Press (5th Edition)
Integrated Electronics	Jacob Millman, Christos	Tata McGraw Hill (2nd Edition)

Course Evaluation:**Practical:**

- Continuous Evaluation consist of performance of practical which should be evaluated out of 10 for each practical and at the end of the semester the average of the same will be converted to 10 Marks.
- Internal viva consists of 20 marks.
- Internal practical performance of 20 marks at the end of the semester.

Course Outcomes:

After the completion of the course, the student will be able to

- understand and identify small basic electronic circuits used in day to day life.
- design and wire-up small circuits on breadboard.
- troubleshoot electronic circuits using basic instruments.
- design and prepare PCBs on their own.
- Identify electronic and electrical circuits will be developed in students.

Department of Computer Engineering

Course Code: SECE1010

Course Name: Basics of Computer & Programming

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/ Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	2	0	4	40	60	20	30	0	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- understand basic components of computer system.
- identify appropriate approach to computational problems.
- develop logic building and problem solving skill.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction to Computer and its Architecture: Introduction and Characteristics, Generation, Classification, Applications, Central Processing Unit, Communication between Various Units, Processor Speed, Various Input and Output Devices.	03	10
2.	Memory and Operating Systems: Introduction to Memory, Memory Hierarchy, Primary Memory and its Type, Secondary Memory, Classification of Secondary Memory, Various Secondary Storage Devices and their Functioning, their Merits and Demerits, Evolution of Operating System, Types and Functions of Operating Systems,	06	15
3.	Recent Advances in Computer: Introduction to Emerging Areas like Artificial Intelligence, IoT tools, Data Science, Sensors, 3D Printing, Automization in the field of Civil, Mechanical and Chemical.	05	10
4.	Computer Programming Language: Introduction to different types of Programming Languages, Flowcharts and Algorithms. Introduction to C Programming Language, Features of C, Structure of C Program, Development of Program, Types of Errors, Debugging and Tracing Execution of Program.	08	15
Section II			
Module No.	Content	Hours	Weightage in %
1.	Constants, Variables and data Types: Character Set, C tokens, Keyword, Constants and Variables, Data Types - Declaration and Initialization, User define type Declarations Typedef, Enum, Basic Input and Output Operations, Symbolic Constants	05	10
2.	Operators and Expression and Managing I/O operations: Introduction to Operators and its Types, Evaluation of Expressions, Precedence of Arithmetic Operators, Type Conversions in Expressions, Operator Precedence and Associativity. Managing Input and Output, Reading a Character, Writing a Character, Formatted Input, Formatted Output.	07	16
3.	Conditional statement and branching: Decision Making & Branching: Decision Making with If & If ... Else Statements, If - Else Statements (Nested Ladder), The Switch & go - to Statements, The Ternary (?) Operator Looping: The While Statement, The Break Statement & The Do. While Loop, The FOR Loop, Jump Within Loops - Programs.	06	12
4.	Arrays and Strings: Introduction to Array, One Dimensional Array, Two Dimensional Arrays, Declaring and Initializing String Variables, Arithmetic Operations on Characters, Putting Strings Together, Comparison of Two Strings, Basic String Handling Functions	05	12

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction to Basic Command	04
2.	Word Processing, Spreadsheets and Presentation Exercises	06
3.	Introduction to Octave Environment	04
4.	Implementation in C for conditional statement and branching Implementation of if, if...else, nested if...else and switch statements Implementation of while loop, do...while loop and for loop	06
5.	Implementation of 1-D and 2-D array	06
6.	Implementation of in built string functions, application programs of array and strings	04

Use of different libraries will be covered in Practical Assignments.

Text Book(s):

Title	Author(s)	Publication
Programming in ANSI C	E. Balagurusamy	Tata McGraw Hill
Introduction to Computer Science	ITL Education Solutions Limited	Pearson Education

Reference Book(s):

Title	Author(s)	Publication
Programming in C	Ashok Kamthane	Pearson
Let Us C	Yashavant P. Kanetkar	Tata McGraw Hill
Introduction to C Programming	Reema Thareja	Oxford Higher Education
Programming with C	Byron Gottfried	Tata McGraw Hill

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by Course Coordinator.
- End Semester Examination consists of 60 marks.

Practical:

- Continuous Evaluation consists of the performance of practical, which will be evaluated out of 10 per each practical. At the end of the semester, the average of the entire practical will be converted to 10 marks.
- Internal viva consists of 10 marks.
- Practical performance/quiz/test consists of 15 marks during End Semester Examination.
- Viva/Oral performance consists of 15 marks during End Semester Examination.

Course Outcomes:

After completion of the course, the student will be able to

- explore new emerging areas of the field.
- apply programming fundamentals to solve real time problems.

Department of Information Technology

Course Code: SEIT2010

Course Name: Object Oriented Programming with Java

Prerequisite Course(s): Basic knowledge of Computer Programming

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
03	04	00	05	40	60	40	60	00	00	200

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- understand the basics of object-oriented programming.
- identify appropriate approach to computational problems.
- develop logic building and problem-solving skills.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction Programming language Types and Paradigms, Flavors of Java, Java Designing Goal, Features of Java Language, JVM –The heart of Java, Java’s Magic Bytecode.	03	05
2.	Object-Oriented Programming Fundamentals Class Fundamentals, Object and Object reference, Object Lifetime and Garbage Collection, Creating and Operating Objects, Constructor and initialization code block, Access Control, Modifiers, Nested class, Inner Class, Anonymous Classes, Abstract Class and Interfaces, Defining Methods, Method Overloading, Dealing with Static Members, Use of “this” reference, Use of Modifiers with Classes & Methods, Generic Class Types.	06	15
3.	Java Environment and Data types The Java Environment: Java Program Development, Java Source File Structure, Compilation Executions; Basic Language Elements: Lexical Tokens, Identifiers, Keywords, Literals, Comments, Primitive Data-types, and Operators.	05	10
4.	Class and Inheritance Use and Benefits of Inheritance in OOP, Types of Inheritance in Java, Inheriting Data Members and Methods, Role of Constructors in inheritance, Overriding Super Class Methods, Use of “super”, Polymorphism in inheritance, Type Compatibility and Conversion, Implementing interfaces.	07	15
5.	Java Packages Organizing Classes and Interfaces in Packages, Package as Access Protection, Defining Package, CLASSPATH Setting for Packages, Making JAR Files for Library Packages, Import and Static Import, Naming Convention for Packages.	02	05
Section II			
Module No.	Content	Hours	Weightage in %
1.	Array and String Concepts Defining an Array, Initializing & Accessing Array, Multi-Dimensional Array, Operation on String, Using Collection Bases Loop for String, tokenizing a String, Creating Strings using String Buffer.	04	10
2.	Exception Handling The Idea behind Exception, Exceptions & Errors, Types of Exception, Control Flow In Exceptions, JVM reaction to Exceptions, Use of try, catch, finally, throw, throw in Exception Handling, In-built and User Defined Exceptions, Checked and Un-Checked Exceptions.	05	10
3.	Thread Understanding Threads, Needs of Multi-Threaded Programming, Thread Life-Cycle, Thread Priorities, Synchronizing Threads, InterCommunication of Threads.	06	15

4.	Applet Applet & Application, Applet Architecture, Parameters to Applet.	03	05
5.	Input-Output Operations in Java Streams and the new I/O Capabilities, Understanding Streams, The Classes for Input and Output, The Standard Streams, Working with File Object, File I/O Basics, Reading and Writing to Files, Buffer and Buffer Management, Read/Write Operations with File, Channel, Serializing Objects.	04	10

List of Practical:

Sr. No.	Name of Practical	Hours
1.	Introduction to Java Environment and Netbeans	02
2.	Implementation of Java programs with classes and objects	04
3.	Implementation of Java programs to create functions, constructors with overloading and overriding	04
4.	Implementation of Java programs to demonstrate different access specifiers	04
5.	Implementation of Java programs using the concept of inner classes	02
6.	Implementation of Java programs for variables, data types, operators	04
7.	Implementation of Java programs for inheritance (single, multilevel, hierarchical)	04
8.	Implementation of Java programs to demonstrate the use of super keyword	02
9.	Implementation of Java programs for anonymous and abstract classes	02
10.	Implementation of Java programs for Interface	02
11.	Implementation of Java programs to demonstrate Java packages	02
12.	Implementation of Java programs to use arrays and string	06
13.	Implementation of Java programs for exception handling using all keywords (try, catch, throw, throws and finally)	04
14.	Implementation of Java programs to demonstrate the life cycle of thread	02
15.	Implementation of Java programs for the concepts of thread priority, synchronization, inter-thread communication	06
16.	Implementation of Applets, AWT and Web Servers	06
17.	Implementation of file handling operations	04

Use of different libraries will be covered in Practical Assignments.

Text Book(s):

Title	Author(s)	Publication
Core Java Volume I – Fundamentals	Cay Horstmann and Gray Cornell	Pearson

Reference Book(s):

Title	Author(s)	Publication
Java the complete reference	Herbert Schildt	McGraw Hill
Thinking in Java	Bruce Eckel	Pearson
Learning Java	Patrick Niemeyer and Jonathan Knudsen	O'Reilly Media

Web Material Link(s):

- <https://www.coursera.org/learn/object-oriented-java>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests each of 30 marks and 1 Hour of duration, which will be converted out of 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the course coordinator.
- End Semester Examination consists of 60 marks.

Practical:

- Continuous Evaluation consists of the performance of practical, which will be evaluated out of 10 per each practical and average of the same will be converted to 20 marks.
- Internal viva consists of 20 marks.
- Practical performance/quiz/test consists of 30 marks.
- External viva consists of 30 marks.

Course Outcome(s):

After the completion of the course, the student will be able to

- learn the fundamentals of object-oriented programming.
- develop efficient programs with their own logic & capabilities.
- understand the syntax and semantics of the 'Java' language.

Department of Computer Engineering

Course Code: SECE1050

Course Name: Programming for Problem Solving

Prerequisite Course(s): Basic Knowledge of Computer

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	4	0	5	40	60	40	60	0	0	200

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- understand the basic components of a computer system.
- identify an appropriate approach to computational problems.
- develop logic building and problem-solving skills.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Introduction to Computers: Introduction, Central Processing Unit, Main Memory Unit, Interconnection of Units, Communication between Units of a Computer System. Memory Representation and Hierarchy, Random Access Memory, Read-only Memory, Classification of Secondary Storage Devices, Types of I/O Devices. Classification of Programming Languages, Generations of Programming Languages - Machine Language, Assembly Language, High-Level Language, 4GL.	04	10
2.	Introduction to C, Constants, Variables and Data Types: Features of C Language, the Structure of C Program, Flow Charts and Algorithms Types of Errors, Debugging, Tracing the Execution of the Program, Watching Variables Values in Memory. Character Set, C Tokens, Keyword and Identifiers, Constants and Variables, Data Types - Declaration and Initialization, User Define Type Declarations - Typedef, Enum, Basic Input, and Output Operations, Symbolic Constants, Overflow and Underflow of Data.	06	15
3.	Operators, Expressions, and Managing I/O Operations: Introduction to Operators and its Types, Evaluation of Expressions, Precedence of Arithmetic Operators, Type Conversions in Expressions, Operator Precedence and Associativity. Introduction to Reading a Character, Writing a Character, Formatted Input and Output.	05	10
4.	Conditional Statements: Decision Making & Branching: Decision Making with If and If - else Statements, Nesting of If-else Statements, The Switch and go-to statements, Ternary (?:) Operator. Looping: The while Statement, The Break Statement & The Do. While loop, The FOR loop, Jump within loops - Programs.	07	15
Section II			
Module No.	Content	Hours	Weightage in %
1.	Arrays: Introduction, One-dimensional Arrays, Two-dimensional Arrays, Concept of Multidimensional Arrays.	05	12
2.	Strings: Declaring and Initializing String Variables, Arithmetic Operations on Characters, Putting Strings Together, Comparison of Two Strings, String Handling Functions.	04	10
3.	User-Defined Functions: Concepts of User-defined Functions, Prototypes, function Definition, Parameters, Parameter Passing, Calling a Function, Recursive Function, Macros and Macro Substitution	04	10
4.	Structure and Unions: Introduction, Structure Definition, Declaring and Initializing Structure Variables, Accessing Structure Members, Copying & Comparison of	04	08

	Structures, Arrays of Structures, Arrays within Structures, Structures within Structures, Structures and Functions, Unions.		
5.	Pointers and File Management: Basics of Pointers, a Chain of Pointers, Pointer and Array, Pointer to an Array, an Array of Pointers, Pointers and Functions, Dynamic Memory Allocation. Introduction to file Management and its Functions.	06	10

List of Practical:

Sr. No.	Name of Practical	Hours
1.	Introduction to Unix Commands (creating a folder, creating a file, deleting a file, renaming files, copy a file from one location to another, listing entire directories and files, list directories, listing files, moving files from one location to another)	02
2.	Introduction to C programming environment, compiler, Linker, loader, and editor.	02
3.	Working with basic elements of C languages (different input functions, different output functions, different data types, and different operators)	06
4.	Working with C control structures (if statement, if-else statement, nested if-else statement, switch statement, break statement, goto statement)	06
5.	Working with C looping constructs (for loop, while loop, do-while and nested for loop)	10
6.	Working with the array in C (1-D array, and 2-D array)	04
7.	Working with strings in C (input, output, different string inbuilt functions)	04
8.	Working with user-defined functions in C (function with/without return type, function with/without argument, function and array)	06
9.	Working with recursive function in C	02
10.	Working with structure and union in C (structure declaration, initialization, an array of structures, structure within structure, structure and functions, an array within structure and union)	08
11.	Working with pointer in C (initialization, pointer to pointer, pointer and array, an array of pointer, pointer and function)	06
12.	Working with files in C (opening a file, data insertion, and extraction from file, file management functions)	04

Use of different libraries will be covered in Practical Assignments.

Text Book(s):

Title	Author(s)	Publication
Programming in ANSI C	E. Balagurusamy	Tata McGraw Hill
Introduction to Computer Science	ITL Education Solutions Limited	Pearson Education

Reference Book(s):

Title	Author(s)	Publication
Programming in C	Ashok Kamthane	Pearson
Let Us C	Yashavant P. Kanetkar	Tata McGraw Hill
Introduction to C Programming	ReemaThareja	Oxford Higher Education
Programming with C	Byron Gottfried	Tata McGraw Hill

Web Material Link(s):

- <http://www.digimat.in/nptel/courses/video/106104128/L01.html>
- <https://www.youtube.com/watch?v=3QiItmIWmOM>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests, each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.
- End Semester Examination consists of 60 marks.

Practical:

- Continuous Evaluation consists of practical performance which should be evaluated out of 10 for each practical and average of the same will be converted to 20 marks.
- Internal viva consists of 20 marks.
- Practical performance/quiz/test consists of 30 marks during End Semester Exam.
- Viva-voce consists of 30 marks during End Semester Exam.

Course Outcomes:

After the completion of the course, the student will be able to

- learn the fundamentals of programming.
- develop efficient programs with their own logic & capabilities.
- understand the syntax and semantics of the C language.

Department of Information Technology

Course Code: SEIT1010

Course Name: Introduction to Web Designing

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
0	2	0	1	0	0	50	0	0	0	50

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- understand basic components of internet.
- learn basic web technologies such as HTML, JavaScript and CSS.
- develop basic knowledge of website designing.

Course Content:

Module No.	Content	Hours	Weightage in %
1.	Introduction to World Wide Web, Web Server, Website, Website design Principles, Planning the Website, Navigation, Introduction to HTML, CSS, Java Script	30	100%

List of Practical:

Sr. No	Name of Practical	Hours
1.	Implementation of HTML tags	12
2.	Designing Websites with basic CSS	4
3.	Designing of Responsive Website Designs using Java Script	4
4.	Development of mini project based on HTML, CSS and Java Script	10

Reference Book:

Title	Author(s)	Publication
HTML Black Book	Steven Holzner	Dreamtech press

Web Material Link(s):

<https://www.w3schools.com/>

Course Evaluation:**Practical:**

- Continuous Evaluation consist of performance of practical which will be evaluated out of 10 for each practical and average of the same will be converted to 20 marks.
- Prepared project during practical hours will be evaluated as a part of final submission which carries 30 marks.

Course Outcomes:

After the completion of the course, the student will be able to

- learn the fundamentals of website designing.
- apply knowledge of HTML, CSS, and JavaScript to build static and dynamic websites.

Department of Science & Humanities

Course Code: SESH1070

Course Name: Fundamentals of Mathematics

Prerequisite Course(s): Algebra, Geometry, Trigonometry & Pre-Calculus till 12th Standard level

Teaching & Examination Scheme:

Teaching Scheme(Hours/Week)				Examination Scheme(Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
2	0	2	4	40	60	-	-	50	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the course:

To help learners to

- summarize concept of calculus to enhance ability of analysing mathematical problems.
- acquire knowledge and ability to work with differentiation and integration for applications of mathematical techniques in engineering.
- develop the tool of power series for learning advanced Engineering Mathematics.
- analyse and solve system of linear equations and understand characteristics of Matrices.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Calculus Limits, Continuity, Types of Discontinuity, Successive Differentiation, Rolle's Theorem, LMVT, CMVT, Maxima and Minima.	8	28
2.	Sequence and Series-I Convergence and Divergence, Comparison Test, Integral Test, Ratio Test, Root Test, Alternating Series, Absolute and Conditional Convergence.	6	20
Section II			
Module No.	Content	Hours	Weightage in %
1.	Sequence and Series-II Power series, Taylor and Macluarin series, Indeterminate forms and L'Hospitals Rule.	6	20
2.	Matrix Algebra Elementary Row and Column operations, Inverse of matrix, Rank of matrix, System of Linear Equations, Characteristic Equation, Eigen values and Eigen vector, Diagonalization, Cayley Hamilton Theorem, Orthogonal Transformation	10	32

List of Tutorials:

Sr. No.	Name of Tutorial	Hours
1.	Calculus-1	2
2.	Calculus-2	2
3.	Integration	2
4.	Sequence and Series-1	2
5.	Sequence and Series-2	2
6.	Sequence and Series-3	2
7.	Matrix Algebra-1	2
8.	Matrix Algebra-2	2
9.	Matrix Algebra-3	2
10.	Matrix Algebra-4	2

Text Book:

Title	Author(s)	Publication
Thomas' Calculus	George B. Thomas, Maurice D. Weir and Joel Hass	Pearson
Elementary linear Algebra	Howard Anton and Chris Rorres	Wiley

Reference Book:

Title	Author(s)	Publication
Advanced Engineering Mathematics	E Kreyszig	John Wiley and Sons
A textbook of Engineering Mathematics	N P Bali and Manish Goyal	Laxmi
Higher Engineering Mathematics	B S Grewal	Khanna
Engineering Mathematics For First Year	T Veerarajan	Tata Mc Graw Hill
Engineering Mathematics-1 (Calculus)	H. K. Dass and Dr. Rama Verma	S. Chand

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests, each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.
- End Semester Examination consists of 60 marks.

Tutorial:

- Continuous Evaluation consists of performance of tutorial which will be evaluated out of 10 marks for each tutorial and average of the same will be converted to 30 marks
- MCQ based examination consists of 10 marks.
- Internal Viva consists of 10 marks.

Course Outcomes:

After the completion of the course, the student will be able to

- make use of concepts of limit, continuity and differentiability for analysing mathematical problems.
- use concepts of Limit, Derivatives and Integrals.
- examine series for its convergence and divergence.
- solve linear system using matrices.

Department of Science & Humanities

Course Code: SESH1080

Course Name: Linear Algebra & Calculus

Prerequisite Course(s): Algebra, Geometry, Trigonometry & Pre-Calculus till 12th Standard level

Teaching & Examination Scheme:

Teaching Scheme(Hours/Week)				Examination Scheme(Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	0	2	5	40	60	-	-	50	0	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the course:

To help learners to

- learn about and work with vector space, linear transformation and inner product space.
- apply concepts of linear algebra for solving science and engineering problems.
- introduce the concept of improper integral and Beta-Gamma Function.
- develop the tool of Fourier series for learning advanced Engineering Mathematics.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Vector Space Concept of vector space, Subspace, Linear Combination, Linear Dependence and Independence, Span, Basis and Dimension, Row Space, Column Space and Null Space, Rank and Nullity.	9	20
2.	Linear Transformation Introduction of Linear Transformation, Kernel and Range, Rank and Nullity, Inverse of Linear Transformation, Rank Nullity Theorem, Composition of Linear Maps, Matrix associated with linear map.	7	15
3.	Inner Product Space Inner Product, Angle and Orthogonality, Orthogonal projection, Gram- Schmidt process and QR Decomposition, Least square decomposition, Change of basis.	7	15
Section II			
Module	Content	Hours	Weightage in %
1.	Beta and Gamma function Improper Integrals, Convergence, Properties of Beta and Gamma Function, Duplication Formula (without proof)	6	14
2.	Fourier Series Periodic Function, Euler Formula, Arbitrary Period, Even and Odd function, Half Range Expansion, Parseval's Theorem	8	18
3.	Curve tracing Tracing of Cartesian Curves, Polar Coordinates, Polar and Parametric Form of Standard Curves, Areas and Length in Polar co-ordinates	8	18

List of Tutorials:

Sr. No.	Name of Tutorial	Hours
1.	Vector Space-1	4
2.	Vector Space-2	2
3.	Linear Transformation-1	2
4.	Linear Transformation-2	2
5.	Inner Product-1	2
6.	Inner Product-2	2
7.	Beta and Gamma Function-1	2
8.	Beta and Gamma Function-2	2
9.	Curve tracing-1	2
10.	Curve tracing-2	2

Text Book:

Title	Author(s)	Publication
Thomas' Calculus	George B. Thomas, Maurice D. Weir and Joel Hass	Pearson
Elementary Linear Algebra	Howard Anton and Chris Rorres	Wiley

Reference Book:

Title	Author(s)	Publication
Advanced Engineering Mathematics	E Kreyszig	John Wiley and Sons
A textbook of Engineering Mathematics	N P Bali and Manish Goyal	Laxmi
Higher Engineering Mathematics	B S Grewal	Khanna
Engineering Mathematics For First Year	T Veerarajan	Tata Mc Graw Hill
Engineering Mathematics-1 (Calculus)	H. K. Dass and Dr. Rama Verma	S. Chand

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests, each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.
- End Semester Examination consists of 60 marks.

Tutorial:

- Continuous evaluation consists of performance of tutorial which will be evaluated out of 10 Marks for each tutorial and average of the same will be converted to 30 marks.
- MCQ based examination consists of 10 marks.
- Internal Viva consists of 10 marks.

Course Outcomes:

After the completion of the course, the student will be able to

- understand the concepts of Vector Space, Linear Transformation and inner product space.
- evaluate functions like Gamma, Beta functions & their relation which is helpful to evaluate some definite integral arising in various branch of engineering.
- understand the concept of Fourier series

Department of Science & Humanities

Course Code: SESH1210

Course Name: Applied Physics

Prerequisite Course(s): Concept of Physics and Mathematics up to 12th Science

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
3	2	0	4	40	60	20	30	0	0	150

CE: Continuous Evolution, ESE: End Semester Exam

Objective(s) of the Course:

To help learner to

- prepare students for career in engineering where physics principles can be applied for the advancement of technology.
- think in core concept of engineering application by studying various topics involved in branch specific application.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	Quantum Mechanics: Wave-Particle Duality, De-Broglie Matter Wave, Phase and Group Velocity, Heisenberg Uncertainty Principle and its Applications, Wave Function and its Significance, Schrodinger's Wave Equation, Particle in One Dimensional Box	06	15
2.	Acoustic and Ultrasonic: Introduction, Classification and Characterization of Sound, Absorption Coefficients, Sound Absorbing Materials, Sound Insulation, Ultrasonic, Properties of Ultrasonic, Generation of Ultrasonic Applications of Ultrasonic.	05	10
3.	Solid State Physics Introduction, Lattice Points and Space Lattice, Unit Cells and Lattice Parameters, Primitive Cell, Crystal Systems. The Bravais Space Lattices. Miller Indices, X-Ray Properties, Diffraction and Bragg's Law, Bragg's X-Ray Spectrum	06	10
4.	Nanophysics Nanoscale, Surface to Volume Ratio, Surface Effects on Nanomaterials, Quantum Size Effects, Nanomaterials and Nanotechnology, Unusual Properties of Nanomaterials, Synthesis of Nanomaterials , Applications of Nanomaterials	06	15
Section II			
Module No.	Content	Hours	Weightage in %
1.	Non Linear Optics: Laser, Spontaneous and Stimulated Emission of Light, Applications of Laser. Fundamental Ideas about Optical Fibre, Advantages of Optical Fibre of Optical Fibre, Applications of Optical Fibre.	07	12
2.	DC and AC Circuits Fundamentals Introduction of Electrical Current, Voltage, Power and Energy; Sources of Electrical Energy Inductor and Capacitor, Fundamental Laws of Electric Circuits – Ohm's Law and Kirchhoff's Laws; Analysis of Series, Parallel and Series-Parallel Circuits. Alternating Voltages and Currents and their Vector and Time Domain Representations, Average and Rms Values, Form Factor, Phase Difference, Power and Power Factor, Purely Resistive Inductive and Capacitive Circuits, R-L, R-C, R-L-C Series Circuits, Impedance and Admittance, Circuits in Parallel, Series and Parallel Resonance.	08	25
3.	Electronics: Semiconductors, Intrinsic and Extrinsic Semiconductor Advantages of Semiconductor Devices, Diodes, Transistors, Types of Bipolar Junction Transistor, Unijunction Junction Transistor, FET and MOSFETS.	07	13

List of Practical:

Sr. No.	Name of Practical	Hours
1.	Volt-Ampere Characteristics of Light Emitting Diode	02
2.	Volt-Ampere Characteristics of Zener Diode	02
3.	To determine value of Planck's constant (h) using a photovoltaic cell	02
4.	To determine the Hall coefficient (R) and carrier concentration of a given material (Ge) using Hall effect.	04
5.	To study the Capacitors in series and parallel DC circuit.	04
6.	To determine velocity of sound in liquid using Ultrasonic Interferometer	04
7.	To study RLC Series circuit.	02
8.	To determine numerical aperture of an optical fiber.	02
9.	Determination of Young's Modulus of given material.	02
10.	Analysis of errors.	02

Text Book:

Title	Author / s	Publication
Concept of the Modern Physics	A. Beiser	Tata McGraw-Hill Education
Basic electrical engineering	Kothari and Nagrath	Tata McGraw-Hill Education
Quantum Mechanics	P.M. Mathew, K. Venkatesan	Tata McGraw-Hill Education
Waves and Acoustics	Pradipkumar Chakrabarti Satyabrata Chawdhary	New Central Book Agency
Lasers and Nonlinear Optics	G.D. Baruah	Pragati Prakashan
Solid State Physics: Basic Electronics:	S.O. Pillai	New Age International Publishers
Basic Electronics for Scientists and Engineers	Dennis L. Eggleston	Cambridge University Press

Web material Link(s):

- <http://nptel.ac.in/course.php>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests, each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.
- End Semester Examination consists of 60 marks.

Practical:

- Continuous Evaluation Consist of Performance of Practical which will be evaluated out of 10 marks for each practical and average of the same will be converted to 10 marks.
- Internal Viva consists of 10 marks.
- Practical performance/quiz/drawing/test of 20 marks during End Semester Exam.
- Viva/Oral performance of 10 marks during End Semester Exam.

Course Outcomes:

After the completion of the course, the student will be able to

- use appropriate mathematical techniques and concepts to obtain quantitative solutions to problems in physics & electrical.
- perform a literature search, to make use of appropriate computational of laboratory skill, and to make an effective written or oral presentation of the results of the project.

Department of Science & Humanities

Course Code: SESH1220

Course Name: Fundamentals of Chemistry & Chemical Engineering

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
4	2	0	5	40	60	20	30	-	-	150

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- present sound knowledge of chemistry fundamentals, enriching students to understand the role of Chemistry in the field of science and engineering.
- inculcate habit of scientific reasoning to do the task rationally.
- give an introduction of chemical engineering & various unit operations to make the student aware about the role of chemical engineer in various chemical industries.

Course Content:

Section I			
Module No.	Content	Hours	Weightage in %
1.	<p>Chemical Bonding and Structure of Molecules General Terms: Chemical Bond, Valence, Valence Electrons, Bonding and Non Bonding Electrons, Lewis Symbols, Octet Rule. Ionic Bond: Definition, Condition for Formation of Ionic Bond, Factors Governing Formation of Ionic Bond, Examples (NaCl, MgCl₂, CaO, Al₂O₃), Characteristics of Ionic Compounds. Covalent Bond: Definition, Conditions for Covalent Bond Formation, Examples [(Single Covalent Bond: H₂, Cl₂, H₂O, NH₃, CH₄) (Multiple Covalent Bond: O₂, N₂, CO₂)], General Characteristics of Covalent Compounds, Valence Bond Approach, Formation of H₂ Molecule, Concept of Hybridization, Hybridization and Shape of Molecules, Shape of Water, Ammonia, PCl₅ and SF₆, Limitations of Valence Bond Theory, Vsepr Theory, Fajan's Rules. Co-ordinate Covalent Bond: Definitions, Examples (NH₄⁺, H₃O⁺, BF₄⁻, CH₃NO₂, SO₃, AlCl₃, SO₄²⁻, O₃ and CO. Hydrogen Bonding: Definition, Conditions for H-Bond Formation, Examples (HF, H₂O, NH₃, 2-nitrophenol), Types of H-bonds, Characteristics of H-bonded Compounds. Metallic Bond: Definition, The Electron Sea Model, Explanation to the Physical Characteristics of Metal Based on the Electron Sea Model.</p>	12	20
2.	<p>Electrochemistry Introduction, Arrhenius ionic theory, Debye Huckel theory of strong electrolytes, activity and activity co-efficient, Conductivity of electrolytes, Kohlrausch's law of independent migration of ions, Ostwald's dilution law, Acids and bases, Concept of pH and pOH, Buffer solutions, Solubility product, common-ion effect, hydrolysis of salts, conductometric titration, transport number.</p>	08	15
3.	<p>Water Technology and Colloids Introduction, Source of Water, Impurities of Water, Hard and Soft Water, Degree of Hardness, Scale and Sludge Formation in Boiler, Boiler Corrosion, Caustic Embrittlement, Priming and Forming, Softening of Water, Potable Water, Break Point of Chlorination, Desalination of Brackish Water. Lyophilic and Lyophobic Colloids, Characteristics of lyophilic and lyophobic Sols, Preparation of Sols, Dispersion Methods, Aggregation Methods, Purification of Sols, Dialysis, Optical Properties of sols: Tyndall Effect.</p>	10	15
Section II			
Module	Content	Hours	Weightage in %
1.	<p>Introduction to Unit Operation Systematic analysis to chemical process, flow sheet symbols for various operations, Forms of Energy, Overall balances, Mass balance and Momentum Balance, total energy balance, Introduction to modes of heat transfer, Introduction to the concepts of mass transfer, Numerical</p>	08	15

2.	Introduction to Reaction Kinetics Introduction to the Types of Reaction, Reaction Rate, Order of Reaction, Reaction Mechanism, Numerical	08	15
3.	Thermodynamics Introduction & Basic Concepts, Equilibrium, Laws of Thermodynamics, Heat Reservoir & Heat Engines, Energy Balances.	14	20

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction to chemistry laboratory – Molarity, Normality, Primary, Secondary standard solutions, Volumetric titrations, Quantitative analysis, Quantitative analysis etc	2
2.	Demonstration: Preparation of solutions of different concentrations	4
3.	Determination of alkalinity in the given water sample	2
4.	Determination of temporary and permanent hardness in water sample using EDTA as standard solution	4
5.	Conduct metric titration of strong acid vs. strong base	2
6.	Determination of critical micelle concentration of a surfactant using conductometry	4
7.	Determination of concentration of unknown solution spectrophotometrically	2
8.	Determining the strength of ferrous ammonium sulfate with the help of $K_2Cr_2O_7$	4
9.	Determination of dissociation constant of strong acid by pH metric method	2
10.	Determination of cloud point of a surfactant in the presence of salts.	4
	Total	30

Text Book:

Title	Author(s)	Publication
Engineering Chemistry (16 th Edition)	P.C. Jain and Monika Jain	Dhanpat Rai publishing company
Introduction to Chemical Engineering	W. Badger	Tata McGraw Hill Education
A textbook of Chemical Engineering Thermodynamics	K. V. Narayan	PHI Learning Pvt. Ltd.
An Introduction to Chemical Engineering Kinetics and Reactor Design	Charles Hill	Wiley India

Reference Book:

Title	Author(s)	Publication
Textbook of Engineering Chemistry (4 th Edition)	R. Gopalan, D. Venkappaya, S. Nagarajan	Vikas Publishing house Ltd.
A textbook of Chemical technology (Volume-1)	G. N. Pandey	Vikas Publishing house Ltd.
Essentials of Physical Chemistry	A. Bahl, B.S. Bahl and G.D. Tuli	S. Chand Publishing
Concise Inorganic Chemistry	J.D. Lee	Wiley India
Organic Reaction Mechanisms	V. K. Ahluwalia, R. K. Parashar	Norasa Publishing House
Organic Chemistry (6 th edition)	Robert Thornton Morrison Robert Neilson Boyd	Pearson Education
Introduction to Chemical Engineering.	L. B. Andersen & L. A. Wenzel	Mc Graw Hill Kogakusha Company Ltd

Web Material Link(s):

- <https://books.google.co.in/books?id=Z3033BGuMBEC&printsec=frontcover&dq=engineering+chemistry+ebook&hl=en&sa=X&ved=0ahUKEwj9xoiNv3UAhVEL48KHYg7Ak0Q6AEIITAA#v=onepage&q&f=false>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests, each of 30 marks and 1 hour of duration and average of the same will be converted to 30 marks.
- Faculty evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.
- End Semester Examination consists of 60 marks.

Practical:

- Continuous Evaluation consist of performance based on practical which will be evaluated out of 10 marks each and average of the same will be converted to 10 marks.
- Internal viva consists of 10 marks of evaluation.
- Practical performance/quiz/drawing/test consists of 15 marks evaluation during End Semester Exam.
- Viva/Oral performance consists of 15 marks evaluation during End Semester Examination.

Course Outcomes:

After the completion of the course, the student will be able to

- understand the relevance of fundamentals and applications of chemical sciences and chemistry in the field of engineering.
- apply the knowledge of thermodynamics in studying different chemical systems.
- apply the knowledge of Colloids, metals and alloys, their types and their properties.
- have sound knowledge on Electrochemistry.
- be aware about the role of chemical engineer in various chemical industries.
- acquire knowledge on unit processes and unit operations
- apply mass balance and energy balance on them.

Centre for Skill Enhancement & Professional Development

Course Code: SEPD1030

Course Name: Communicative English

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
01	02	00	02	50	--	20	30	--	--	100

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- utilize their knowledge of grammar effectively for communicative purpose.
- learn language in authentic contexts.
- use English efficiently for routine.
- sharpen receptive skills for better comprehension by providing authentic resources.
- Enable themselves to express ideas clearly and accurately with fluent speaking & writing skills.
- gain confidence in speaking & writing English in an academic and professional context.
- analyze and improve pronunciation.

Course Content:

Module No.	Content	Hours	Weightage in %
1.	Foundational Grammar & Vocabulary <ul style="list-style-type: none"> Functional use of pronoun, adjective, adverb, preposition, and conjunction Narration of Past, Present and Future events Vocabulary 	03	20
2.	Communicative English <ul style="list-style-type: none"> Phrases to express likes/dislikes, request, inquiry, order, predict, complain, question, answer, invite (accepting/ denying) Idioms & Proverbs 	04	30
3.	Receptive Skills <ul style="list-style-type: none"> Introduction to Receptive Skills Techniques/strategies of Reading Techniques/strategies of Listening Types of Listening Skills 	04	25
4.	Productive Skills <ul style="list-style-type: none"> Speech modulation and its importance Phonetics and Transcription for effective pronunciation Speaking in various contexts Cohesion and Coherence/ Building Paragraphs Technical Writing (Application/ Letter/ Review/ Report) E-mail etiquettes 	04	25

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction to Foundational Grammar & Vocabulary – Ice Breaker	02
2.	Foundational Grammar – practice of pronoun, adjective, adverb, preposition, and conjunction with context	02
3.	Foundational Grammar – Narrating past, present and future events	02
4.	Communicative English – exposure to structures & phrases to express various language functions	02
5.	Communicative English – practice of using idioms, proverbs & phrases to communicate effectively	02
6.	Communicative English – Role play for requesting, inquiring, ordering, predicting, complaining, questioning, answering, inviting (accepting/denying)	02
7.	Communicative English – Role play for Requesting, inquiring, ordering, predicting, complaining, questioning, answering, inviting (accepting/denying)	02
8.	Practice of reading through authentic resources – Summarizing and Paraphrasing.	02
9.	Practice of reading through authentic resources – Skimming and Scanning	02
10.	Comprehensive Listening: Note Taking and Note Making	02
11.	Comprehensive Listening: Summarizing and Paraphrasing	02
12.	Speech for Fluency – phonetics	02
13.	Conversational Skills	02
14.	Leave Application/ Request Letter/Business Letter	02
15.	Notice/Memo/Agenda/ Minutes	02

Reference Book(s):

Title	Author(s)	Publication
Communicative English	Dr. Anuradha, Dr. Minal Batra	Nirmal Publishing, First edition (2016)
Communicative Grammar of English	Geoffrey Leech, Jan Sartvik	Longman, 3 edition (6 January 2003)
Advanced Skills for Communication in English: Book I	V. Jaya Santhi	New century book house
Engineers' Guide to Technical Writing	Kenneth G. Budinski	ASM International, 2001
Communication Skills	Parul Popat & Kaushal Kotadia	Pearson, 2015
Practical Techniques to Develop Communication Skills	Parul Popat & Kaushal Kotadia	Pothi Prakashan, 2015

Web Material Link(s):

- https://www.researchgate.net/publication/301351158_Advanced_Skills_for_Communication_in_English_Book_I
- <https://anekawarnapendidikan.files.wordpress.com/2014/04/a-communicative-grammar-of-english-by-geoffrey-leech.pdf>
- <https://archive.org/details/FunctionalEnglish/page/n1>
- <https://www.talkenglish.com/grammar/grammar.aspx>
- http://toefl.uobabylon.edu.iq/papers/itp_2015_3158553.pdf
- <https://msu.edu/course/be/485/bewritingguideV2.0.pdf>
- <https://www.khanacademy.org>
- <http://www.kantakji.com/media/6494/t121.pdf>

Course Evaluation:**Theory:**

- Continuous Evaluation consists of two tests each of 30 marks and average of the same will be converted to 30 marks.
- There will be a submission consisting 10 marks as per the guidelines of course coordinator.
- Faculty Evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.

Practical:

- Continuous Evaluation consists of performance of Practical which should be evaluated out of 10 for each practical and average of the same will be converted to 10 marks.
- Internal viva consists of 10 marks.
- Practical performance/quiz/drawing/test consists of 15 marks during End Semester Exam.
- Viva/Oral performance consists of 15 marks during End Semester Exam.

Course Outcomes:

After completion of the course, the student will be able to

- expand his/her vocabulary.
- use variety of sentence structures.
- use English effectively in academic and professional spectrum.
- enhance comprehensive listening.
- write English effectively with improved grammar and vocabulary.
- practice strategies for comprehensive reading in English.
- speak English fluently and efficiently.
- effectively use LSRW skills in English.

Centre for Skill Enhancement & Professional Development

Course Code: SEPD1020

Course Name: Communication Skills

Prerequisite Course(s): --

Teaching & Examination Scheme:

Teaching Scheme (Hours/Week)				Examination Scheme (Marks)						
Theory	Practical	Tutorial	Credit	Theory		Practical		Tutorial		Total
				CE	ESE	CE	ESE	CE	ESE	
01	02	00	02	50	00	20	30	--	--	100

CE: Continuous Evaluation, ESE: End Semester Exam

Objective(s) of the Course:

To help learners to

- hone basic communication skills by exposing them to the key communication techniques.
- improvise comprehension and expressional skills which are required for personal, social, academic and professional environment.
- sharpen communication skills with reference to organizational structure.
- show the importance of team work and give practice in group communication with reference to group dynamics.

Course Content:

Module No.	Content	Hours	Weightage in %
1.	Introduction to Communication Skills <ul style="list-style-type: none"> • Concept and Process of Communication • Types of Communication • Principles of Effective Communication • Barriers to Communication 	05	33
2.	Interpersonal Organizational Communication <ul style="list-style-type: none"> • Styles and Flows of Communication • Essentials of Organizational Communication • Kinesics, Proxemics and Chronemics 	03	20
3.	Team/ Group Dynamics and Leadership <ul style="list-style-type: none"> • Types of Groups and Essentials of Group Work and Networking • Concept and Types of Leadership • Traits of an Effective Leader 	03	20
4.	Presentation Skills <ul style="list-style-type: none"> • Modes, Means and Purposes of Presentation • Audience Analysis and Content Organization • Visual aids and Nuances of Delivery • Non Verbal Cues for Effective Presentation 	04	27

List of Practical:

Sr. No	Name of Practical	Hours
1.	Introduction to Communication: An Ice Breaker	02
2.	Verbal/ Non Verbal Communication Pros and Cons	02
3.	Principles of Communication	02
4.	Barriers to Communication	02
5.	Interpersonal Communication	02
6.	Organizational Communication	02
7.	Assertive Vs Aggressive Communication	02
8.	Group Dynamics: A Decision Making Activity	02
9.	Group Dynamics Working together to achieve organizational vision	02
10.	Difference between Group Discussion and Debate	02
11.	Leadership: Holding a diverse Group Together	02
12.	Presentation Skills; Video Session	02
13.	Presentations by the student: Self-Peer-teacher assessment	02
14.	Presentations by the student: Self-Peer-teacher assessment	02
15.	Presentations by the student: Self-Peer-teacher assessment	02

Text Book (s):

Title	Author(s)	Publication
Practical Techniques to Develop Communication Skills	Parul Popat & Kaushal Kotadia	Pothi Prakashan, 2015

Reference Book (s):

Title	Author(s)	Publication
Communication Skills	Parul Popat & Kaushal Kotadia	Pearson, 2015
Communication Skills, Second Edition	Sanjay Kumar, PushpLata	Oxford University Press, 2015
Communication Skills for Engineers	Sunita Mishra	Pearson, 2011
Effective Interpersonal and Team Communication Skills for Engineers	Clifford Whitcomb, Leslie E. Whitcomb	John Wiley & Sons, 2012

Web Material Link(s):

- <http://www.mindtools.com/page8.html>
- http://techpreparation.com/soft-skills.htm?gclid=CJf34fyQv5wCFdMtpAodjjX_tA
- <http://lorien.ncl.ac.uk/ming/Dept/Tips/present/comms.htm>

Course Evaluation:**Theory:**

- Continuous Evaluation consists two tests each of 30 marks and average of the same will be converted to 30 marks.
- There will be a submission consisting 10 marks as per the guidelines of course coordinator.
- Faculty Evaluation consists of 10 marks as per the guidelines provided by the Course Coordinator.

Practical:

- Continuous Evaluation consists of Performance of Practical which should be evaluated out of 10 for each practical.
- Internal viva consists of 10 marks.
- Practical performance/quiz/drawing/test of 15 marks during End Semester Exam.
- Viva/Oral performance of 15 marks during End Semester Exam.

Course Outcomes:

After completion of the course, the student will be able to

- follow the process of communication and its components in organizational context.
- express themselves and to participate in the classroom discussions and other such academic activities.
- comprehend whatever they receive from Informal Interactions with the family, teachers and friends; and from Formal Communications taking Place in Lectures, Laboratories and the like.
- enhance the teamwork and collaborative attitude.
- communicate effectively using suitable styles and techniques.
- able to participate in the group discussions and other such academic or academic support activities.
- use language effectively with reference to communication in groups and group behaviour.

Class Time Table

		W.E.F. : 29/07/2019 Civil/Mechanical/Chemical Engineering Department		2019-20			
P P Savani School of Engineering		Sem		Academic Year			
CLASS: C-010		CV/ME/CH		1			
Time Table		Sem		Academic Year			
Slot	Time/Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	08:00 to 08:55	SPORTS/LIBRARY/CLUB ACTIVITY	Batch Course Faculty A SEPD1030 ARP C-010 B SEME1020 ADP C-010 C SESH1230 SESH1210 NAD C-010/C-012	Batch Course Faculty A SESH1070 BGC B SEME1020 CBK C SEPD1030 PPB	Problem Solving Session	Batch Course Faculty A SESH1230 DSP B SESH1070 BGC C SEME1020 CBK	
2	08:55 to 09:50	SA/NAD C-010/C-012	SESH1070	SEPD1030	SESH1230/SESH1210	SPORTS/LIBRARY/CLUB ACTIVITY	
3	9:50 to 10:45	BGC C-010	BGC C-010	ARP C-010	SA/NAD C-010/C-011	SPORTS/LIBRARY/CLUB ACTIVITY	
4	10:45 to 11:40	SEME1010	SPORTS/LIBRARY/CLUB ACTIVITY	SPORTS/LIBRARY/CLUB ACTIVITY	SEME1010	SESH1230/SESH1210	
5	11:40 to 12:35	ADP C-010			ADP C-010	SA/NAD CL-3/CL-1	
Lunch Break							
6	12:35 to 01:30	SEPD1030	SEME1010	SEME1010	SPORTS/LIBRARY/CLUB ACTIVITY	SESH1070	
7	01:30 to 02:25	Batch Course Faculty A SEME1010 ADP B SEPD1030 ARP C SEME1010 HCM	ADP C-010 SPORTS/LIBRARY/CLUB ACTIVITY SESH1230/SESH1210	ADP C-010 Problem Solving Session	Batch Course Faculty A SEME1020 ADP B SEME1010 CBK C SESH1070 VKSSH	Batch Course Faculty A SEME1010 ADP B SESH1230 DSP C SEME1010 HCM	
8	02:25 to 03:20		SA/NAD C-010/C-011				

Note:
 • For all the sessions lecture time will be of 50 Minutes and 5 Minutes for faculty change over time.

SEME1010 : Engineering Graphics SEME1020 : Engineering Workshop SEPD1030 : Communicative English SESH1070 : Fundamentals of Mathematics C-202-A/B/C/D/E SEME1010 : C-009 SESH1230 : C-103	SESH1210 : Applied Physics SESH1230 : Fundamentals of Chemistry & Chemical Engineering SESH1210 : B-201
SAA Ms. Sofia Ahmed NAD Mr. Niraj Desai BGC Dr. Bhumiika Choksi ADP Mr. Amir Patel ARP Mr. Ankit Patel HCM Mr. Hardik Majiwala	CBK Mr. Chandreshkumar Kumbhani VKSSH Mr. Vijay Kumar Saw DSP Mr. Deepak Singh Panwar

Director/Dean

Class Time Table



P P Savani School of Engineering

CLASS: C-012

Time Table

Sem I

Academic Year

2019-20

Information Technology Department

W.E.F. : 29/07/2019

Slot	Time/Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	08:00 to 08:55	SESH1070 VKSSH C-012	SECY1040 PSM C-012	Batch Course Faculty A SESH1070 VKSSH NAD B SEME1050 NAD C SECY1040 PSM/PIP	SECY1040 PIP C-012	Batch Course Faculty A SECY1040 PIP/PSM B SECE1050 MKV C SECE1050 JAK	
2	09:50 to 10:45	SPORTS/LIBRARY/CLUB ACTIVITY	SPORTS/LIBRARY/CLUB ACTIVITY	SECY1040 MKV C-012	SECY1040 PIP C-012	SPORTS/LIBRARY/CLUBACTIVITY	
3	10:45 to 11:40	Batch Course Faculty A SECE1050 MKV B SECY1040 PSM/PIP C SEME1050 NAD	SECY1050 MKV C-012	SECY1040 PIP C-012	Batch Course Faculty A SEPD1030 PPB B SESH1070 VKSSH C SECE1050 JAK	SPORTS/LIBRARY/CLUBACTIVITY	
4	11:40 to 12:35			VKSSH C-012			
5	12:35 to 01:30						
6	01:30 to 02:25	SECY1040 PSM/PIP C-012	SESH1070 VKSSH C-012	SECY1040 MKV C-012	SEPD1030 PPB C-012	SPORTS/LIBRARY/CLUBACTIVITY	
7	02:25 to 03:20	Problem Solving Session	Batch Course Faculty A SECE1050 MKV B SEPD1030 PPB C SESH1070 VKSSH	SECY1040 PSM C-012	Problem Solving Session	Batch Course Faculty A SEME1050 NAD B SECE1050 MKV C SEPD1030 PPB	
8							

Note:
• For all the sessions lecture time will be of 50 Minutes and 5 Minutes for faculty change over time.

Course Details:	SECE1050 : Programming for Problem Solving SECY1040 : Basics of Civil & Mechanical Engineering SEME1050 : Electrical & Electronics Workshop SEPD1030 : Communicative English	SESH1070 : Fundamentals of Mathematics
Lab Location:	SECY1040 : B-108 & B:207 SEME1050 : B-202	PPB JAK Ms. Payal Bhatt Dr. Jasleen Kaur
Faculty:	Mr. Vijay Kumar Saw Mr. Mitlesh Yadav Mr. Parresh Mistry Mr. Palak Patel Mr. Niraj Desai Mr. Bhavni Rana	

Director/Dean

Class Time Table

PP Savani School of Engineering		W.E.F. : 29/07/2019		Computer Engineering Department		2019-20							
CLASS: C-011		Sem		CE		1							
Time Table		Semester		Academic Year		2019-20							
Slot	Time/Day	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday	
1	08:00 to 08:55	Batch A B C	Course SECE1050 SEPD1030 SESH1070	Faculty BIR PPB BGC	SESH1070 BGC C-011		SPORTS/LIBRARY/CLUB ACTIVITY		Batch A B C	Course SECE1050 SECE1050 SEPD1030	Faculty NAD BIR PPB	SECE1050 BIR C-011	
2	08:55 to 09:50	SECE1050		SECV1040		SECE1050		SECE1050		SPORTS/LIBRARY/CLUB ACTIVITY		SPORTS/LIBRARY/CLUB ACTIVITY	
3	9:50 to 10:45	Batch BIR A B C	Course SECE1050 SECV1040 SEPD1030	Faculty C-011 BIR PSM/PIP NAD	C-011 Faculty		Problem Solving Session		Problem Solving Session		Batch A B C		Faculty SESH1070 BGC BIR SECV1040 PSM/PIP
4	10:45 to 11:40	SEPD1030		SECE1050		SECE1050		SECE1050		Problem Solving Session		Problem Solving Session	
5	11:40 to 12:35	C-011		C-011		C-011		C-011		Lunch Break		Lunch Break	
6	12:35 to 01:30	Batch BGC C-011	Course SESH1070	Faculty C-011	SECV1040 PSM C-011		SEPD1030		Batch PSM C-011	Course SECV1040	Faculty C-011	SPORTS/LIBRARY/CLUB ACTIVITY	
7	01:30 to 02:25	SPORTS/LIBRARY/CLUB ACTIVITY		SECE1050		SECE1050		SECE1050		SECE1050		SECE1050	
8	02:25 to 03:20	Batch PIP C-011	Course SECV1040	Faculty C-011	SPORTS/LIBRARY/CLUB ACTIVITY		SPORTS/LIBRARY/CLUB ACTIVITY		Batch A B C	Course SEPD1030 SESH1070 SECE1050	Faculty PPB NAD BIR	PSM/PIP NAD BIR SESH1070 BGC C-011	

Note:

• For all the sessions lecture time will be of 50 Minutes and 5 Minutes for faculty change over time.

Course Details:	SECE1050 : Programming for Problem Solving SECV1040 : Basics of Civil & Mechanical Engineering SEME1050 : Electrical & Electronics Workshop SEPD1030 : Communicative English C-202-A/B/C/D/E
Lab Location:	SECV1040 : B-108 & B-207 SEME1050 : B-202
Faculty:	BIR Mr. Bhavin Rana PPB Ms. Payal Bhatt BGC Dr. Bhumiika Choksi PSM Mr. Parash Mistry PIP Mr. Paik Patel NAD Mr. Niraj Desai

Director/Dean

Course Coursecoordinators & Details

Course Code	Course Name	Course Coordinator
SESH1070	Fundamentals of Mathematics	Ms. Bhumika Choksi +91 70165 27953 bhumika.choksi@ppsua.ac.in
SESH1210	Applied Physics	Mr. Niral Desai +91 82001 13204 niral.desai@ppsua.ac.in
SESH1230	Fundamentals of Chemistry & Chemical Engineering	Ms. Sofia A. Ahmed +91 94087 65220 sofia.ahmed@ppsua.ac.in
SECV1040	Basics of Civil & Mechanical Engineering	Mr. Paresh Mistry +91 81548 21484 paresh.mistry@ppsua.ac.in
SECE1050	Programming for Problem Solving	Mr. Mithlesh Yadav +91 92057 16620 mithlesh.yadav@ppsua.ac.in
SEME1010	Engineering Graphics	Mr. Amir Patel +91 96018 27788 amir.patel@ppsua.ac.in
SEME1020	Engineering Workshop	Mr. Chandreshkumar Kumbhani +91 63542 08458 chandresh.kumbhani@ppsua.ac.in
SEME1050	Electrical & Electronics Workshop	Mr. Niral Desai +91 82001 13204 niral.desai@ppsua.ac.in
SEPD1030	Communicative English	Ms. Payal Bhatt +91 74055 26372 payal.bhatt@ppsua.ac.in

Women's Development Cell

Objective:

Women's Development Cell shall create opportunities and environs to facilitate women to reach to the peak of their naturally endowed potential, and thereby enriching organizational and social life.

Committee Constitution & Nominee

Constitution	Name of Member	Contact No
Faculty Representative (Female)	Ms. Nafisa Shaikh	7621875977
Representative of Non-Teaching Staff	Ms. Chandni Patel Counsellor, P P Savani University	9998770219

Objectives of Women Development Cell

- To promote intellectual and cultural activities for overall personality development of students.
- To enhance the self-esteem and self-confidence of women student, faculty and staff in the college.
- To create social awareness about the problems of women and in particular regarding gender discrimination.
- To develop critical thinking ability of girl students such that it enhances decision-making ability.
- To provide proper guidance to girl students about physical appearance, behavior, physical and mental strength.
- To create legal awareness on specific issues concerning girl students and women.
- To enable women to make informed choices in areas like education, employment and health especially reproductive health.
- To organize various types of training programs and create awareness about self-employment schemes for the encouragement among girl students and women.

Anti-Ragging Cell Decelaration Forms

1) Anti-ragging Committee

Constitution	Name of Member	Contact No
The Head of Institution	Niraj Shah	9099063010
Faculty Representative (Male)	Mitul Raj	8140965363
Faculty Representative (Female)	Nafisa Shaikh	7621875977
Representative of Non-Teaching Staff	Deepak Hotta	9512035610

2) Anti-Ragging Squad

Name	Designation	Contact No
Faculty Representative (Male)	Mitul Raj Faculty Member, Mechanical Engineering	8140965363
Faculty Representative (Female)	Ms. Chandni Patel, Counsellor, P P Savani University	9998770219
Representative of Non-Teaching Staff	Dhruvi Tailor	9212778750

AFFIDAVIT BY THE STUDENT

- 1) I, _____
(full name of student with admission/registration/enrolment number)
S/o or D/o Mr./Mrs./Ms. _____,
having been admitted to P P Savani School of Engineering , have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the “Regulations”) carefully read and fully understood the provisions contained in the said Regulations.
- 2) I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
- 3) I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
- 4) I hereby solemnly aver and undertake that
- a. I will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
 - b. I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
- 5) I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any law for the time being in force.
- 6) I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this _____ day of _____ month of _____ year. Sign: _____

Name: _____

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at P P Savani University on this _____ day of _____ month of _____ year.

Sign of Deponent : _____

Solemnly affirmed and signed in my presence on this _____ day of _____ month of _____ year,
after reading the contents of this affidavit.

OATH COMMISSIONER

AFFIDAVIT BY AFFIDAVIT BY PARENT/GUARDIAN

- 1) I, Mr./Mrs./Ms. _____
(full name of parent/guardian)
father/mother/guardian of _____
(full name of student with admission/registration/enrolment number)
having been admitted to P P Savani School of Engineering , have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the “Regulations”) carefully read and fully understood the provisions contained in the said Regulations.
- 2) I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
- 3) I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
- 4) I hereby solemnly aver and undertake that
- a. My ward will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
 - b. My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
- 5) I hereby affirm that, if found guilty of ragging, my ward is liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.
- 6) I hereby declare that my ward has not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, the admission of my ward is liable to be cancelled.

Declared this _____ day of _____ month of _____ year. Sign of Deponent : _____

Name: _____

Address: _____

Telephone/ Mobile No.: _____

VERIFICATION

Verified that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at P P Savani University on this _____ day of _____ month of _____ year.

Sign of Deponent : _____

Solemnly affirmed and signed in my presence on this _____ day of _____ month of _____ year, after reading the contents of this affidavit.

OATH COMMISSIONER



Contact Details

For What	Contact Details
Admission Counselling	Ms. Chandni Patel 9879608000
Fees Payment	Kamlesh Patel 9427971248
Ragging Complaint	Anti-Ragging Committee Details available in Student Hand Book
Any Complaint by Girl Student/Staff	Women's Development Cell Details available in Student Hand Book
Any Complaint by Boy Student	Amir Patel 96018 27788
Computer & IT infrastructure related Query	Dhruvi Tailor 9712778750
Transport In-charge	Bhratbhai 9824143272
Hostel Administration	Jigisha Desai 9512035613
Canteen In-charge	Navin Upadhyay 8490931155
Technical Activity In-charge	Sofia Ahmed 6355556506 Vinaykumar Singb 9447609458 Chandresh Kumbhani 9924819207
Sports Activity In-charge	Raviraj Chauhan 7405419415 Kamlesh Parmar 8238915151
Cultural Activity In-charge	Payal Bhatt 7405526372 Neha Shah 9824184008
Subject Related Query	Subject Coordinator Details available in Student Hand Book





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UNIVERSITY



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