S.P.B. PATEL
ENGINEERING COLLEGE
SAFFRONY INSTITUTE OF TECHNOLOGY CAMPUS

Near Shanku's Water Park,
Ahmedabad – Mehsana Highway,
Linch, Mehsana – 384435
Email: info@saffrony.ac.in
Web: www.saffrony.ac.in
Phone : (02762) 285721

CYCLE 1
NAAC Accreditation 2023

ACADEMIC YEAR
2019-20

Submitted to

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

S.P.B. PATEL ENGINEERING COLLEGE

SUPPORTING DOCUMENTS

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

Name of Certificate/ Value added course	Course Code (if any)	Year of offering/study	Period (from date - to date)	Duration of course	Number of students enrolled in the year	Number of Students completing the course in the year
2019-20						
Role of Craft and Technology in Interior - Architecture	noc19-ar15	2019-2020	July - Sept 2019	8 Weeks	3	3
Ethical Hacking - Online	noc19-cs68	2019-2020	July - Oct 2019	12 Weeks	1	1
Professional Life Skill Development	NA	2019-2020	July 19 - December 19	56 Hours	120	120
Soft Skills for Engineers Course Report	NA	2019-2020	Dec-19	33 Hours	108	108
The Joy of Computing Using Python		2019-2020	Jan - April 2020	12 Weeks	2	2
ENTREPRENEURSHIP AND INNOVATION COURSE	NA	2019-2020	Mar-20	35 Hours	103	103

Role of Craft and Technology in Interior - Architecture

July - Sept 2019

Ethical Hacking - Online

July - Oct 2019

Soft Skills for Engineers Course Report

Dec-19

The Joy of Computing Using Python

Jan - April 2020

ENTREPRENEURSHIP AND INNOVATION COURSE

Mar-20

S.P.B. Patel Engineering College

NOTICE

Date: 1st January 2019

All Degree Engineering students and faculty members are hereby informed that the Institute has started a local chapter in association with NPTEL.

All are requested to take advantage of this course and enroll in the course of your interest.

If you have any queries related to NPTEL Programs, please contact Prof. Nirav Joshi, the resource person for NPTEL.

Principal

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1. All HOD'S -FOR INFORMATION
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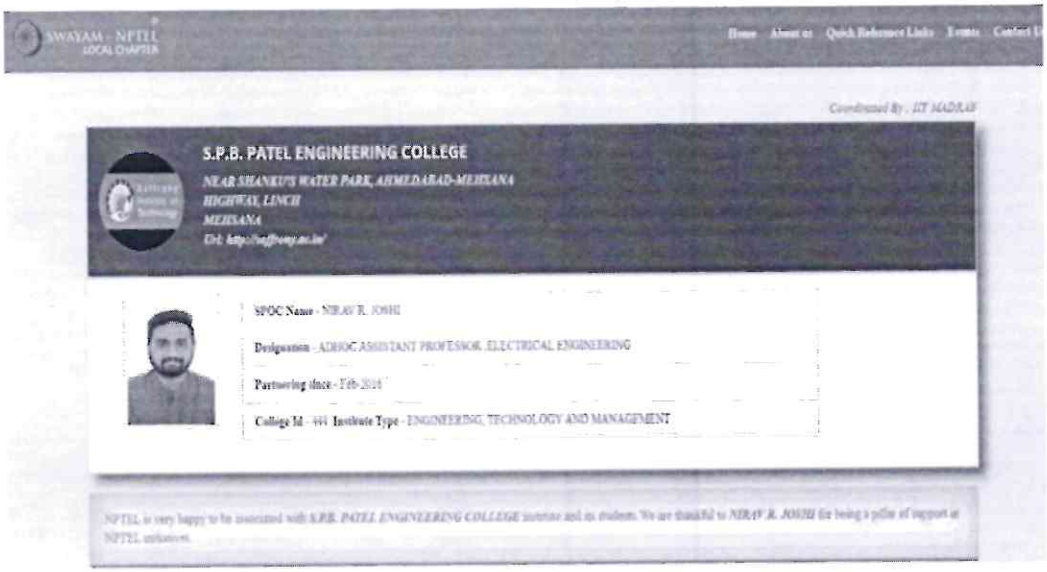
S.P.B. Patel Engineering College Linch



This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL19AR15S21020170

To
SUNSARA JHANVI MAHESHKUMAR
457,GUJARAT HOUSING BOARD, NEAR
SIDDHARTH SCHOOL, SOMNATH ROAD, MEHSANA.
MEHSANA
GUJARAT
384001
PH. NO :8320110957

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

SUNSARA JHANVI MAHESHKUMAR

for successfully completing the course

Role of Craft and Technology in Interior - Architecture

with a consolidated score of **47** %

Online Assignments	12.33/25	Proctored Exam	34.5/75

Total number of candidates certified in this course: **110**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2019
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

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Roll No: NPTEL19AR15S21020172

To
SUTHAR KURVA GAUTAMKUMAR
NAVA ORADA, AT & POST: JETALVASANA,
BHANDU, MEHSANA.
JETALVASANA
MEHSANA
GUJARAT
384120
PH. NO :6355983817

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

SUTHAR KURVA GAUTAMKUMAR

for successfully completing the course

Role of Craft and Technology in Interior - Architecture

with a consolidated score of **48** %

Online Assignments	14.67/25	Proctored Exam	33/75

Total number of candidates certified in this course: **110**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2019
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL19AR15S21020174

To
DARSHIL PANCHAL
63-KRISHNA TENAMENT KALYANPURA,
KALOL,GANDHINAGAR.
KALOL
GANDHINAGAR
GUJARAT
382721
PH. NO :9724106644

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DARSHIL PANCHAL

for successfully completing the course

Role of Craft and Technology in Interior - Architecture

with a consolidated score of **49** %

Online Assignments	19.25/25	Proctored Exam	30/75

Total number of candidates certified in this course: **110**

Prof. V. C. Srivastava
Coordinator, Continuing Education Centre
IIT Roorkee

Jul-Sep 2019
(8 week course)

Prof. Inderdeep Singh
NPTEL Coordinator
IIT Roorkee

Indian Institute of Technology Roorkee

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL19CS68S41020166

To
SANKALP GUPTA
12/SHANTISADAN FLATS, NEAR AIRTEL STORE,
MODHERA CROSS ROAD
MEHSANA
GUJARAT
384002
PH. NO :6353896086

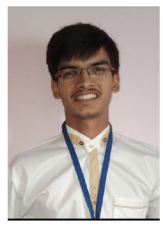
Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

SANKALP GUPTA

for successfully completing the course

Ethical Hacking

with a consolidated score of **85** %

Online Assignments	23.91/25	Proctored Exam	61.25/75

Total number of candidates certified in this course: **2097**

A. Goswami

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Jul-Oct 2019
(12 week course)

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

S.P.B. Patel Engineering College

NOTICE

Date: 10th July 2019

All students of the Degree Engineering 2016 Batch are hereby informed that, to minimize the gap between academia and industry, the Institute is going to organize a Professional & Life Skill Development Course between July 2019 and December 2019."

Principal

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S.P.B. Patel Engineering College
Linch

S.P.B. PATEL ENGINEERING COLLEGE
SAFFRONY INSTITUTE OF TECHNOLOGY CAMPUS

Professional and Life Skills Development (PLSD) Program

Year: 2019-2020

Period: July 2019 - December 2019

Duration: 56 Hours

Students Enrolled: 120

Introduction:

Saffrony believes in a personalized approach to learning, where experienced educators not only impart knowledge but also serve as mentors and guides. The Professional and Life Skills Development (PLSD) program is meticulously designed for "GenZ" students, considering their personality traits and behavioral characteristics.

Enriching Learning Experience:

1. Expert Educators: Our team of experienced educators enriches the learning experience with real-world insights, serving as mentors and guides throughout the journey.

2. Personalized Approach: The program is tailored to each student's needs, ensuring maximum engagement and effectiveness.

3. Engaging Techniques: PLSD employs diverse techniques, including captivating presentations, soul-stirring music, stimulating activities, and thought-provoking assignments, to enrich the learning experience.

Activities under PLSD Cell:

1. Interactive Workshops: Regular interactive workshops are conducted on topics such as communication skills, leadership development, and stress management to facilitate practical skill-building.

2. Team-building Exercises: Students participate in team-building exercises and group activities to foster collaboration, communication, and leadership skills.

3. Guest Lectures: Renowned professionals and industry experts are invited to deliver guest lectures, providing valuable insights and perspectives on various aspects of personal and professional development.

4. Creative Assignments: Students engage in creative assignments, such as role-plays, case studies, and presentations, to apply theoretical concepts to real-life scenarios and enhance critical thinking skills.

5. Industry Visits: Educational trips and industry visits are organized to provide students with exposure to real-world work environments and industry practices.

6. Career Development Workshops: Specialized workshops on CV writing, interview preparation, and career planning are conducted to equip students with essential employability skills and enhance their job readiness.

Mission and Objectives:

Our mission is to impart not only knowledge but also invaluable life and professional skills essential for success in today's dynamic world. The PLSD program aims to instill confidence, capability, and readiness to tackle challenges.

Unique Features:

1. GenZ-Centric Design: PLSD is specifically designed for GenZ students, catering to their unique personality and behavioral traits.

2. Holistic Development: The program goes beyond academic knowledge to cultivate well-rounded individuals equipped with essential life and professional skills.

3. Confidence Building: PLSD empowers students to become not just smart learners but confident and capable individuals prepared to navigate any situation.

Achievements:

With 120 students enrolled, the PLSD program in the academic year 2019-2020 witnessed high engagement and positive feedback. Participants reported enhanced confidence, improved communication skills, and readiness for future endeavors.

Conclusion:

Saffrony's PLSD program embodies the commitment to holistic student development, providing a personalized and enriching learning experience. By equipping students with essential life and professional skills, the program prepares them for success in today's competitive world.

Photographs:

Soft Skills for Engineers Course Report

S.P.B. Patel Engineering College

December 2019

Introduction:

The Soft Skills for Engineers Course at S.P.B. Patel Engineering College in December 2019, by Dr. Pooja Mehta, was a significant endeavor aimed at preparing engineering students for the dynamic challenges of the professional world. The course focused on the growing importance of soft skills in complementing technical expertise and fostering holistic professional development.

Course Objectives:

The course had clear objectives, intending to instill a profound understanding of soft skills' significance in engineering practice. Participants were guided to enhance their communication skills, develop leadership qualities crucial for project management, and acquire conflict resolution and negotiation skills vital for collaborative work environments.

Course Structure and Duration:

In a span of 33 hours, the Soft Skills for Engineers Course at S.P.B. Patel Engineering College was intricately crafted to encompass a diverse array of essential soft skills. The curriculum, thoughtfully organized, comprised modules dedicated to Teamwork and Collaboration, Leadership Development, Conflict Resolution and Negotiation, and Applied Soft Skills. Each module seamlessly integrated theoretical knowledge with hands-on practical exercises and real-world case studies, ensuring participants underwent a comprehensive learning journey.

Participants:

A total of 108 engineering students enthusiastically participated in the course, representing diverse academic backgrounds and genders. This diversity ensured a rich exchange of ideas and experiences, contributing to a well-rounded learning environment.

Training Methods:

The course employed a variety of teaching methodologies to cater to different learning styles. Instructors delivered lectures to provide theoretical foundations, while interactive workshops, group activities, role-playing exercises, and simulations allowed students to apply and practice soft skills in simulated real-world scenarios. Continuous engagement through online platforms further facilitated discussions and resource sharing.

Topics Covered:

The course delved into essential soft skills, including Teamwork and Collaboration, Leadership Development, Conflict Resolution and Negotiation, and Applied Soft Skills. Each topic was meticulously explored, providing students with actionable insights and skills applicable to their engineering careers.

Success Stories:

Several success stories emerged as participants applied their acquired soft skills in internships, projects, and team activities. These anecdotes highlighted the tangible impact of the course on participants' confidence, communication abilities, and interpersonal skills.

Conclusion:

In conclusion, the Soft Skills for Engineers Course at S.P.B. Patel Engineering College in December 2019 was a resounding success. It equipped engineering students with essential soft skills, empowering them to navigate the complex landscape of the professional world with confidence and competence.

Photographs:

ATTENDENCE SHEET OF STUDENTS

List of the students participated:

Sr.No	BR_NAME	Enrolment number	Name
1	CIVIL ENGINEERING	140390106053	PRAJAPATI SANJAYKUMAR BABULAL
2	CIVIL ENGINEERING	160390106001	KOITIYA DIXITKUMAR GAUTAMBHAI
3	COMPUTER ENGINEERING	160390107027	PRAJAPATI KRUNALKUMAR HASMUKHBHAI
4	COMPUTER ENGINEERING	160390107028	RABARI HARESHBHAI BHIKHABHAI
5	INFORMATION TECHNOLOGY	160390116009	MAJOTHEE FAIZAN SHABBIRBHAI
6	AUTOMOBILE ENGINEERING	160390102003	PARMAR RAJVEESINH RAJENDRASINH
7	AUTOMOBILE ENGINEERING	160390102006	PATEL ZEEL VIPULKUMAR
8	CIVIL ENGINEERING	160390106004	PRAJAPATI KRUNAL BHARATBHAI
9	CIVIL ENGINEERING	160390106007	ZALA KULDIPSINH JIVUJI
10	COMPUTER ENGINEERING	160390107022	PATEL JIGNA JITENDRAKUMAR
11	INFORMATION TECHNOLOGY	160390116007	HIRVANIYA SIDDHARTH SURESHBHAI
12	MECHANICAL ENGINEERING	160390119001	ACHARYA VIMARSH INDRAKUMAR
13	MECHANICAL ENGINEERING	160390119003	MAKAVANA NIRMALDEV UDAYSINH
14	MECHANICAL ENGINEERING	160390119004	MAKWANA KARTIK PRAKASHKUMAR
15	MECHANICAL ENGINEERING	160390119005	MANGUKIYA ABHAY UMESHBHAI
16	MECHANICAL ENGINEERING	160390119006	PATEL KETUL SANJAYKUMAR
17	MECHANICAL ENGINEERING	160390119009	PATHAN IRSHADKHAN RAIZKHAN
18	MECHANICAL ENGINEERING	160390119010	PATHAN MUKHTARKHAN ISHRARKHAN
19	MECHANICAL ENGINEERING	160390119014	ROSHAN PONNACHEN
20	MECHANICAL ENGINEERING	160390119016	SOLANKI VIJAYSINH KHUMANSINH
21	AUTOMOBILE ENGINEERING	170393102001	GOHIL TUSHAR VIJAY
22	AUTOMOBILE ENGINEERING	170393102002	JOSHI DARSHANKUMAR RAJENDRAKUMAR
23	AUTOMOBILE ENGINEERING	170393102003	PATEL SHIVAM KALYANBHAI
24	AUTOMOBILE ENGINEERING	170393102006	RAVAL RAVIBHAI DASHARATHBHAI
25	AUTOMOBILE ENGINEERING	170393102007	SATAVARA GURUKUMAR DEVIDASBHAI
26	AUTOMOBILE ENGINEERING	170393102009	BABARIYA SHASVAT JIGNESHBHAI
27	CIVIL ENGINEERING	170393106002	MAKWANA SACHINKUMAR RAMESHBHAI
28	COMPUTER ENGINEERING	170393107005	TANNA KUNJAN VIJAYBHAI
29	INFORMATION TECHNOLOGY	170393116001	PATEL KENIBEN RAKESHKUMAR
30	MECHANICAL ENGINEERING	170393119002	DANTANI AJAYBHAI VINODBHAI
31	MECHANICAL ENGINEERING	170393119003	JADEJA MAHIPATSINH BABUBHA
32	MECHANICAL ENGINEERING	170393119004	PARMAR NIRAVKUMAR YOGESHKUMAR

Sr.No	BR_NAME	Enrolment number	Name
33	MECHANICAL ENGINEERING	170393119005	PATEL APOORVA NAVINCHANDRA
34	MECHANICAL ENGINEERING	170393119007	PATEL KAUSHALKUMAR HASMUKHBHAI
35	MECHANICAL ENGINEERING	170393119008	PATEL MAYANKKUMAR VASUDEVBHAI
36	MECHANICAL ENGINEERING	170393119010	PRAJAPATI DHAVALKUMAR SHAILESHBHAI
37	MECHANICAL ENGINEERING	170393119012	SHAH YASHKUMAR HIMANSHUBHAI
38	MECHANICAL ENGINEERING	170393119013	SOLANKI RAVIBHAI BALDEVBHAI
39	MECHANICAL ENGINEERING	170393119014	SOLANKI VIRENDRASINH VIKRAMSINH
40	ELECTRICAL ENGINEERING	130390109018	NAYEE HITESHKUMAR VINUBHAI
41	ELECTRICAL ENGINEERING	140390109026	SATHVARA VISHAL JAGDISHBHAI
42	MECHANICAL ENGINEERING	140390119130	ZALA JAYDEEPSINHJI DILIPSINHJI
43	AUTOMOBILE ENGINEERING	150390102002	CHAUDHARI YASH HARSHADBHAI
44	MECHANICAL ENGINEERING	150390119004	CHAUDHARY ASMITBHAI RAMSANGBHAI
45	MECHANICAL ENGINEERING	150390119043	RAJPUT NIMESHKUMAR AMRUTJI
46	MECHANICAL ENGINEERING	170393119015	SUTHAR SAHILKUMAR ARVINDBHAI
47	MECHANICAL ENGINEERING	170393119016	TAPODHAN KULDEEP DIPINBHAI
48	CIVIL ENGINEERING	160390106006	VAGHASIYA PARIN SURESHBHAI
49	COMPUTER ENGINEERING	160390107001	BARVA POORVA BHAGWAN
50	COMPUTER ENGINEERING	160390107002	BHUVA NIRAV VRAJLAL
51	COMPUTER ENGINEERING	160390107003	CHAUHAN NIKHIL AVINASHBHAI
52	COMPUTER ENGINEERING	160390107004	CHELANA ANILKUMAR MAFABHAI
53	COMPUTER ENGINEERING	160390107005	CHOVATIYA BANSI DHARMENDRABHAI
54	COMPUTER ENGINEERING	160390107006	CHOVATIYA DENISH SHIVLALBHAI
55	COMPUTER ENGINEERING	160390107007	DESAI DEVASYA DIPAKKUMAR
56	COMPUTER ENGINEERING	160390107008	GANDHI KRUSHANG HEMANTKUMAR
57	COMPUTER ENGINEERING	160390107009	JAYADITYA PARLIA
58	COMPUTER ENGINEERING	160390107010	JOSHI BINALKUMARI KIRITBHAI
59	COMPUTER ENGINEERING	160390107011	KHAMAR NEEL DHARMESHBHAI
60	COMPUTER ENGINEERING	160390107013	PRATIK MEHTA
61	COMPUTER ENGINEERING	160390107015	PATEL APURV HITENDRAKUMAR
62	COMPUTER ENGINEERING	160390107017	PATEL DHRUVALBEN HITESHBHAI
63	COMPUTER ENGINEERING	160390107019	PATEL HEMAL DINESHKUMAR
64	COMPUTER ENGINEERING	160390107020	PATEL HITANSHU VINODCHANDRA
65	COMPUTER ENGINEERING	160390107021	PATEL HONEY HARESH
66	COMPUTER ENGINEERING	160390107024	PATEL LIPSHABEN ASHWINKUMAR
67	COMPUTER ENGINEERING	160390107025	PRAJAPATI HETAV RASHMINBHAI
68	COMPUTER ENGINEERING	160390107029	RADADIYA BHARAT DINESHBHAI
69	COMPUTER ENGINEERING	160390107031	SHAH ARIHANT PRITESHBHAI
70	COMPUTER ENGINEERING	160390107032	SHRIVASTAV ASHUTOSH SATISHKUMAR
71	COMPUTER ENGINEERING	160390107033	SUNASARA MOSIN MUSTAK
72	COMPUTER ENGINEERING	160390107034	SURANI HEVAN KANUBHAI
73	COMPUTER ENGINEERING	160390107035	VAGHANI HARMISHABEN GHANSHYAMBHAI
74	INFORMATION TECHNOLOGY	160390116002	BHIMANI KULDEEP VIRJIBHAI

Sr.No	BR_NAME	Enrolment number	Name
75	INFORMATION TECHNOLOGY	160390116003	CHAPLA RUTVIK MAHESHKUMAR
76	INFORMATION TECHNOLOGY	160390116004	CHAUHAN DHAVALKUMAR AMRUTLAL
77	INFORMATION TECHNOLOGY	160390116006	GOSWAMI NISARG ALPESHGIRI
78	INFORMATION TECHNOLOGY	160390116010	MEHTA HARSHIL UMESHBHAI
79	INFORMATION TECHNOLOGY	160390116011	OZA HEMIL HASMUKHBHAI
80	INFORMATION TECHNOLOGY	160390116012	PADHIYAR BHARATKUMAR DILIPBHAI
81	INFORMATION TECHNOLOGY	160390116015	PATEL JAY RAKESHBHAI
82	INFORMATION TECHNOLOGY	160390116016	PATEL MINAL ASHVINBHAI
83	INFORMATION TECHNOLOGY	160390116017	PATEL NIYATI MANISHKUMAR
84	INFORMATION TECHNOLOGY	160390116018	PATEL SAHILKUMAR ARVINDBHAI
85	INFORMATION TECHNOLOGY	160390116019	PATEL SMIT KIRITBHAI
86	INFORMATION TECHNOLOGY	160390116020	PATEL UTSAV KAUSHIKKUMAR
87	INFORMATION TECHNOLOGY	160390116021	PATEL YASH VIPULBHAI
88	INFORMATION TECHNOLOGY	160390116022	RAWAL DHRU SHAILESH
89	INFORMATION TECHNOLOGY	160390116023	SACHIN SHARMA
90	INFORMATION TECHNOLOGY	160390116024	SHAH HIMALI NARENDRA
91	INFORMATION TECHNOLOGY	160390116026	VAGHELA MEHULSING VIJUBHA
92	INFORMATION TECHNOLOGY	160390116027	VALERA HIRENKUMAR MUKESHBHAI
93	MECHANICAL ENGINEERING	160390119011	PRAJAPATI RAJ KAUSHIK
94	AUTOMOBILE ENGINEERING	160393102015	SHUKLA PAVAN SANJAYKUMAR
95	AUTOMOBILE ENGINEERING	150390102022	SIROYA SAMIR NURMAHAMMAD
96	INFORMATION TECHNOLOGY	150390116014	PATEL RAHUL BABUBHAI
97	AUTOMOBILE ENGINEERING	140390102002	AKHANI HARSHIL HIMMATLAL
98	CIVIL ENGINEERING	170393106001	JAYANT MEWARA
99	CIVIL ENGINEERING	170393106003	PANCHAL PRAGNESH LALJIBHAI
100	CIVIL ENGINEERING	170393106004	VAGHASIYA BHAUTIKKUMAR MANOJBHAI
101	COMPUTER ENGINEERING	170393107001	GAJERA HETALBEN PARSOTAMBHAI
102	COMPUTER ENGINEERING	170393107002	KAPDIYA DIPALI ASHWINBHAI
103	COMPUTER ENGINEERING	170393107004	PATEL NISHI DHIREN KUMAR

Sr.No	BR_NAME	Enrolment number	Name
104	COMPUTER ENGINEERING	170393107006	TRIVEDI APURV DOLARKUMAR
105	INFORMATION TECHNOLOGY	170393116002	PATEL UTSAV HITENDRA
106	INFORMATION TECHNOLOGY	170393116003	VEGAD SHIVANI DEEPAKBHAI
107	MECHANICAL ENGINEERING	170393119006	PATEL JAY HARSHADBHAI
108	MECHANICAL ENGINEERING	170393119011	PRAJAPATI PREET ARVINDBHAI

Course Curiculum:

Teamwork and Collaboration

1. Understanding Team Dynamics

- Importance of Teamwork: Discuss the significance of teamwork in engineering projects and the workplace. Highlight how effective teamwork leads to improved productivity, creativity, and problem-solving.
- Characteristics of High-Performing Teams: Identify key characteristics of high-performing teams, such as clear communication, mutual respect, shared goals, and accountability.
- Team Roles and Responsibilities: Discuss different roles within a team and their responsibilities, including leader, coordinator, communicator, and contributor.

2. Building Effective Teams

- Forming, Storming, Norming, Performing: Introduce the Tuckman's stages of group development and discuss strategies for navigating each stage effectively.
- Team Building Activities: Engage participants in team building exercises and activities to foster trust, cooperation, and collaboration. Activities may include icebreakers, problem-solving challenges, and group discussions.
- Establishing Team Norms: Guide participants in establishing ground rules and norms for team communication, decision-making, and conflict resolution.

3. Effective Communication in Teams

- Importance of Communication: Emphasize the critical role of communication in team effectiveness. Discuss the impact of clear, concise, and timely communication on project success.
- Active Listening Skills: Introduce techniques for active listening, such as paraphrasing, summarizing, and asking clarifying questions. Encourage participants to practice active listening in team interactions.
- Feedback and Constructive Criticism: Discuss the importance of giving and receiving feedback in a constructive manner. Provide guidelines for delivering feedback effectively and receiving feedback openly.

4. Collaborative Problem-Solving

- Problem-Solving Techniques: Introduce different problem-solving techniques, such as brainstorming, root cause analysis, and the fishbone diagram. Discuss when and how to apply each technique in a team setting.
- Decision-Making Processes: Discuss decision-making processes and models, such as consensus decision-making, majority voting, and decision matrices. Highlight the importance of involving all team members in the decision-making process.
- Conflict Resolution Strategies: Provide strategies for resolving conflicts and disagreements within teams. Discuss techniques for addressing conflicts constructively and reaching mutually acceptable solutions.

Leadership Development

1. Introduction to Leadership

- Definition of Leadership: Define leadership and discuss its role in guiding and influencing others towards a common goal. Differentiate between leadership and management.
- Leadership Styles: Introduce different leadership styles, such as autocratic, democratic, laissez-faire, transformational, and servant leadership. Discuss the characteristics and effectiveness of each style.
- Qualities of Effective Leaders: Identify key qualities and attributes of effective leaders, such as integrity, empathy, vision, and resilience.

2. Developing Leadership Skills

- Self-awareness and Emotional Intelligence: Discuss the importance of self-awareness and emotional intelligence in effective leadership. Provide strategies for developing self-awareness and managing emotions.
- Goal Setting and Visioning: Guide participants in setting SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals and creating a compelling vision for their teams or projects. Discuss the role of goal alignment in driving team performance.
- Time Management and Prioritization: Introduce time management techniques and tools for prioritizing tasks and activities. Discuss strategies for managing time effectively and avoiding procrastination.

3. Motivating and Inspiring Teams

- Motivation Theory: Discuss motivational theories, such as Maslow's Hierarchy of Needs, Herzberg's Two-Factor Theory, and McClelland's Theory of Needs. Explore how these theories can be applied to motivate teams effectively.
- Recognition and Reward Systems: Discuss the importance of recognition and reward systems in motivating team members. Provide guidelines for designing and implementing effective recognition programs.
- Leading by Example: Emphasize the importance of leading by example and modeling desired behaviors. Discuss how leaders can inspire trust, commitment, and loyalty through their actions.

4. Effective Delegation and Empowerment

- Delegation Skills: Provide strategies for delegating tasks and responsibilities effectively. Discuss how to match tasks with team members' skills, interests, and development needs.
- Empowering Team Members: Discuss the benefits of empowering team members and giving them autonomy and decision-making authority. Provide techniques for empowering team members while maintaining accountability.
- Coaching and Mentoring: Introduce coaching and mentoring as tools for developing team members' skills and capabilities. Discuss the role of leaders in providing feedback, guidance, and support to team members.

Conflict Resolution and Negotiation

1. Understanding Conflict

- Nature of Conflict: Define conflict and discuss its causes, types, and consequences in the workplace. Explore the positive and negative aspects of conflict.
- Conflict Resolution Styles: Introduce different conflict resolution styles, such as avoidance, accommodation, competition, compromise, and collaboration. Discuss the strengths and weaknesses of each style.
- Conflict Resolution Process: Provide a step-by-step process for resolving conflicts effectively, including identifying the issue, exploring perspectives, generating options, and reaching a resolution.

2. Negotiation Skills

- Definition of Negotiation: Define negotiation as the process of reaching mutually acceptable agreements through discussion and compromise. Discuss the importance of negotiation in resolving conflicts and reaching win-win outcomes.
- Principled Negotiation Approach: Introduce the principled negotiation approach developed by Roger Fisher and William Ury. Discuss the four principles of principled negotiation: separate the people from the problem, focus on interests, generate options for mutual gain, and insist on objective criteria.
- Negotiation Strategies and Tactics: Provide strategies and tactics for effective negotiation, such as active listening, asking open-ended questions, reframing, and exploring interests. Discuss how to handle difficult negotiators and challenging situations.

3. Managing Difficult Conversations

- Preparing for Difficult Conversations: Discuss the importance of preparation and planning before engaging in difficult conversations. Provide tips for managing emotions and maintaining professionalism.
- Active Listening and Empathy: Reinforce the importance of active listening and empathy in difficult conversations. Discuss how to validate others' perspectives and demonstrate understanding.
- Assertiveness and Conflict Resolution
- Assertiveness Techniques: Introduce assertiveness techniques for expressing needs, preferences, and boundaries assertively. Discuss how to assertively communicate concerns and address conflicts without resorting to aggression or passivity.
- Win-Win Conflict Resolution: Emphasize the importance of seeking win-win solutions in conflict resolution. Discuss how to collaborate with others to find mutually beneficial outcomes and preserve relationships.

Applied Soft Skills

1. Leadership in Action

- Case Studies in Leadership: Analyze case studies of successful leaders and leadership challenges in engineering and other industries. Discuss the leadership strategies, decisions, and outcomes depicted in the case studies.
- Role-Playing Leadership Scenarios: Engage participants in role-playing exercises to practice leadership skills in simulated scenarios. Provide feedback and debriefing to reinforce key learnings.

2. Negotiation Simulation

- Negotiation Exercise: Conduct a negotiation simulation where participants practice their negotiation skills in pairs or small groups. Assign roles and scenarios relevant to engineering projects or workplace situations.
- Debriefing and Reflection: Facilitate a debriefing session to discuss the negotiation outcomes, strategies, and lessons learned. Encourage participants to reflect on their negotiation performance and identify areas for improvement.

3. Conflict Resolution Workshop

- Conflict Resolution Case Studies: Analyze case studies of conflicts in engineering teams or projects. Discuss the underlying causes, dynamics, and resolutions of each conflict.
- Conflict Resolution Role-Playing: Engage participants in role-playing exercises to practice conflict resolution skills in realistic scenarios. Provide feedback and guidance to enhance participants' conflict resolution capabilities.

Soft Skills Application and Integration

1. Soft Skills Integration

- Integrating Soft Skills into Engineering Practice: Discuss strategies for integrating soft skills such as teamwork, leadership, and conflict resolution into engineering projects and workplace interactions.
- Reflection and Goal Setting: Provide time for participants to reflect on their learning journey throughout the workshop. Encourage them to set goals for applying and further developing their soft skills in their personal and professional lives.

2. Personal Development Planning

- Personal Development Goals: Guide participants in identifying their strengths, areas for improvement, and personal development goals related to soft skills. Discuss strategies for continuous learning and growth.
- Action Planning: Facilitate the development of action plans for achieving personal development goals. Encourage participants to identify specific actions, timelines, and resources needed to accomplish their goals.

3. Workshop Conclusion and Celebration

- Workshop Reflections: Provide time for participants to share their reflections on the workshop and the impact it has had on their soft skills development. Encourage participants to celebrate their achievements and acknowledge their growth.
- Certificate Presentation: Conclude the workshop with a certificate presentation ceremony to recognize participants' completion of the soft skills training program. Thank participants for their active participation and commitment to their professional development.

S.P.B. Patel Engineering College

NOTICE

Date: 22nd June 2019

All students of Degree Engineering and faculty members are hereby informed that the Institute has started a local chapter in association with NPTEL.

All are requested to take advantage of this opportunity and enroll in the courses of your interest.

If you have any queries related to NPTEL Programs, please contact Prof. Nirav Joshi, the resource person for NPTEL.

Principal

S.P.B. Patel Engineering College Linch

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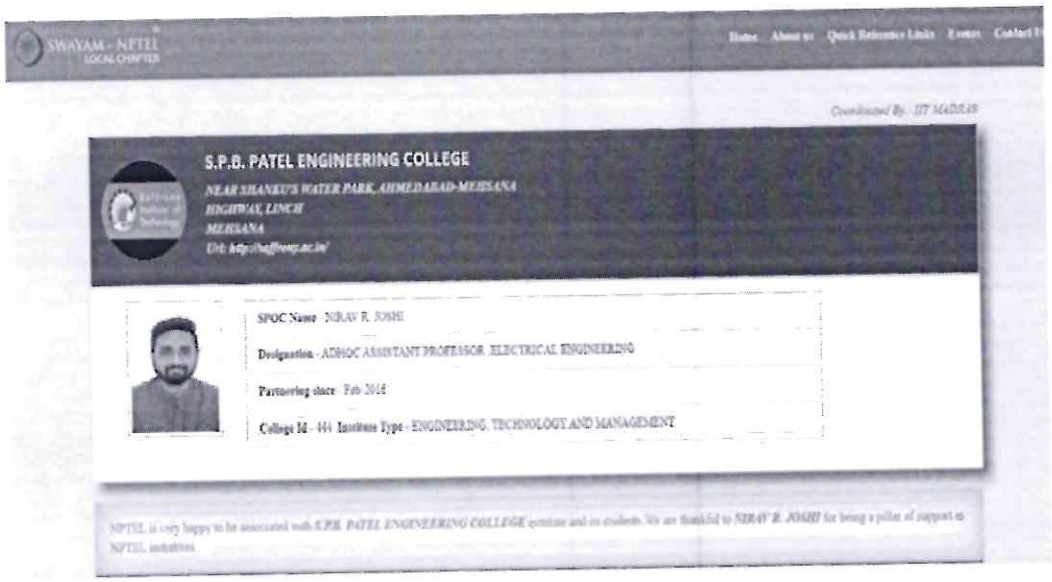

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To
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RAILWAY CROSSING, GHATLODIYA, AHMEDABAD
AHMEDABAD
GUJARAT-380061
PH. NO :7226826990

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

Covid-19 impacted January 2020 semester

This certificate is awarded to

PATEL BHARGAVKUMAR SHAILESHBHAI

for passing the course

The Joy of Computing using Python

*with Score** **97** %

Devendra Jalihal

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2020
(12 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

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Roll No: NPTEL20CS35S1452534

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VISNAGAR
VISNAGAR
MEHSANA
GUJARAT - 384315
PH. NO :9328695819

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

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*Continuous online assessment score

To validate and check scores: https://nptel.ac.in/noc

S.P.B. Patel Engineering College

NOTICE

Date: 27th November 2019

All Degree Engineering students are hereby informed that the Institute is going to organize a soft skills course in December 2019.

Interested students should provide their names to their respective departments.

Principal

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S.P.B. Patel Engineering College Linch

S.P.B. Patel Engineering College

NOTICE

Date: 26th February 2020

All Degree Engineering students are hereby informed that, to minimize the gap between academia and industry, the Institute is going to organize an Entrepreneurship and Innovation Course in March 2020.

Interested students should provide their names to their respective departments.

Principal

S.P.B. Patel Engineering College Linch

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Report on

ENTREPRENEURSHIP AND INNOVATION COURSE

S.P.B. Patel Engineering College

Program Overview:

In March 2020, S.P.B. Patel Engineering College organized an Entrepreneurship and Innovation Course. The main aim was to help engineering students develop strong entrepreneurial skills and spark innovation. The goal was to give participants a solid understanding of entrepreneurship, making sure they have the knowledge and skills needed to navigate the changing worlds of technology and business.

Expert Leadership:

Steering the course was the seasoned professional, Prof.Avani Dedhia, whose extensive experience in entrepreneurship and innovation breathed life into the program. Prof.Avani Dedhia's, wealth of knowledge and practical insights not only enriched the learning experience but also provided participants with a unique vantage point on the intricacies of the entrepreneurial journey.

The Entrepreneurship and Innovation course conducted by S.P.B. Patel Engineering College in March 2020 aimed to equip students with essential skills and knowledge in entrepreneurship and innovation. The course spanned 35 hours and witnessed the active participation of 103 students.

The key objectives of the course were:

1. Introduction to Entrepreneurship: Provide students with a foundational understanding of entrepreneurship, its principles, and its role in the business ecosystem.

2. Innovation Fundamentals: Explore the concepts and importance of innovation, encouraging students to think creatively and identify opportunities for innovation.

3. Business Planning: Equip students with the skills needed to develop comprehensive business plans, emphasizing strategic thinking and feasibility analysis.

4. Risk Management: Familiarize students with the risks associated with entrepreneurship and how to identify, assess, and mitigate these risks effectively.

5. Leadership and Team Building: Develop leadership and team-building skills to prepare students for the collaborative nature of entrepreneurial ventures.

Course Structure

The 32-hour course was divided into modules to address each of the key objectives. Interactive sessions, case studies, and practical exercises were incorporated to ensure a holistic learning experience.

1. Module 1: Entrepreneurship Fundamentals
   - Introduction to entrepreneurship
   - Characteristics of successful entrepreneurs

2. Module 2: Innovation Workshop
   - Creative thinking exercises
   - Case studies on successful innovations

3. Module 3: Business Planning
   - Business model canvas
   - Financial planning and analysis

4. Module 4: Risk Management
   - Identifying and mitigating entrepreneurial risks

5. Module 5: Leadership and Team Building
   - Leadership skills development

- Team-building activities

Outcomes

Knowledge and Skills Acquired Upon completion of the course, students demonstrated:

1. Understanding of Entrepreneurship: A clear grasp of entrepreneurial concepts and principles.

2. Innovation Capabilities: Enhanced creative thinking skills and an ability to identify innovative opportunities.

3. Business Planning Proficiency: Competence in developing comprehensive business plans.

4. Risk Management Competence: Skill in identifying and managing entrepreneurial risks.

5. Leadership and Teamwork: Improved leadership and team-building skills necessary for entrepreneurial endeavors.

Conclusion

The Entrepreneurship and Innovation course at S.P.B. Patel Engineering College in March 2020 successfully achieved its objectives, providing students with a robust foundation in entrepreneurship and innovation. The active participation of 103 students and the positive outcomes underscore the effectiveness of the program in preparing future entrepreneurs.

Photographs:

ATTENDENCE SHEET OF STUDENTS

List of Students Participated:

Sr.No	BR_NAME	Enrolment number	Name
1	CIVIL ENGINEERING	160390106006	VAGHASIYA PARIN SURESHBHAI
2	COMPUTER ENGINEERING	160390107001	BARVA POORVA BHAGWAN
3	COMPUTER ENGINEERING	160390107002	BHUVA NIRAV VRAJLAL
4	COMPUTER ENGINEERING	160390107003	CHAUHAN NIKHIL AVINASHBHAI
5	COMPUTER ENGINEERING	160390107004	CHELANA ANILKUMAR MAFABHAI
6	COMPUTER ENGINEERING	160390107005	CHOVATIYA BANSI DHARMENDRABHAI
7	COMPUTER ENGINEERING	160390107006	CHOVATIYA DENISH SHIVLALBHAI
8	COMPUTER ENGINEERING	160390107007	DESAI DEVASYA DIPAKKUMAR
9	COMPUTER ENGINEERING	160390107008	GANDHI KRUSHANG HEMANTKUMAR
10	COMPUTER ENGINEERING	160390107009	JAYADITYA PARLIA
11	COMPUTER ENGINEERING	160390107010	JOSHI BINALKUMARI KIRITBHAI
12	COMPUTER ENGINEERING	160390107011	KHAMAR NEEL DHARMESHBHAI
13	COMPUTER ENGINEERING	160390107013	PRATIK MEHTA
14	COMPUTER ENGINEERING	160390107015	PATEL APURV HITENDRAKUMAR
15	COMPUTER ENGINEERING	160390107017	PATEL DHRUVALBEN HITESHBHAI
16	COMPUTER ENGINEERING	160390107019	PATEL HEMAL DINESHKUMAR
17	COMPUTER ENGINEERING	160390107020	PATEL HITANSHU VINODCHANDRA
18	COMPUTER ENGINEERING	160390107021	PATEL HONEY HARESH
19	COMPUTER ENGINEERING	160390107024	PATEL LIPSHABEN ASHWINKUMAR
20	COMPUTER ENGINEERING	160390107025	PRAJAPATI HETAV RASHMINBHAI
21	COMPUTER ENGINEERING	160390107029	RADADIYA BHARAT DINESHBHAI
22	COMPUTER ENGINEERING	160390107031	SHAH ARIHANT PRITESHBHAI
23	COMPUTER ENGINEERING	160390107032	SHRIVASTAV ASHUTOSH SATISHKUMAR
24	COMPUTER ENGINEERING	160390107033	SUNASARA MOSIN MUSTAK
25	COMPUTER ENGINEERING	160390107034	SURANI HEVAN KANUBHAI
26	COMPUTER ENGINEERING	160390107035	VAGHANI HARMISHABEN GHANSHYAMBHAI
27	INFORMATION TECHNOLOGY	160390116002	BHIMANI KULDEEP VIRJIBHAI
28	INFORMATION TECHNOLOGY	160390116003	CHAPLA RUTVIK MAHESHKUMAR
29	INFORMATION TECHNOLOGY	160390116004	CHAUHAN DHAVALKUMAR AMRUTLAL
30	INFORMATION TECHNOLOGY	160390116006	GOSWAMI NISARG ALPESHGIRI
31	INFORMATION TECHNOLOGY	160390116010	MEHTA HARSHIL UMESHBHAI
32	INFORMATION TECHNOLOGY	160390116011	OZA HEMIL HASMUKHBHAI
33	INFORMATION TECHNOLOGY	160390116012	PADHIYAR BHARATKUMAR DILIPBHAI
34	INFORMATION TECHNOLOGY	160390116015	PATEL JAY RAKESHBHAI
35	INFORMATION TECHNOLOGY	160390116016	PATEL MINAL ASHVINBHAI
36	INFORMATION TECHNOLOGY	160390116017	PATEL NIYATI MANISHKUMAR
37	INFORMATION TECHNOLOGY	160390116018	PATEL SAHILKUMAR ARVINDBHAI
38	INFORMATION TECHNOLOGY	160390116019	PATEL SMIT KIRITBHAI

Sr.No	BR_NAME	Enrolment number	Name
39	INFORMATION TECHNOLOGY	160390116020	PATEL UTSAV KAUSHIKKUMAR
40	INFORMATION TECHNOLOGY	160390116021	PATEL YASH VIPULBHAI
41	INFORMATION TECHNOLOGY	160390116022	RAWAL DHRU SHAILESH
42	INFORMATION TECHNOLOGY	160390116023	SACHIN SHARMA
43	INFORMATION TECHNOLOGY	160390116024	SHAH HIMALI NARENDRA
44	INFORMATION TECHNOLOGY	160390116026	VAGHELA MEHULSING VIJUBHA
45	INFORMATION TECHNOLOGY	160390116027	VALERA HIRENKUMAR MUKESHBHAI
46	MECHANICAL ENGINEERING	160390119011	PRAJAPATI RAJ KAUSHIK
47	AUTOMOBILE ENGINEERING	160393102015	SHUKLA PAVAN SANJAYKUMAR
48	AUTOMOBILE ENGINEERING	150390102022	SIROYA SAMIR NURMAHAMMAD
49	INFORMATION TECHNOLOGY	150390116014	PATEL RAHUL BABUBHAI
50	AUTOMOBILE ENGINEERING	140390102002	AKHANI HARSHIL HIMMATLAL
51	CIVIL ENGINEERING	170393106001	JAYANT MEWARA
52	CIVIL ENGINEERING	170393106003	PANCHAL PRAGNESH LALJIBHAI
53	CIVIL ENGINEERING	170393106004	VAGHASIYA BHAUTIKKUMAR MANOJBHAI
54	COMPUTER ENGINEERING	170393107001	GAJERA HETALBEN PARSOTAMBHAI
55	COMPUTER ENGINEERING	170393107002	KAPDIYA DIPALI ASHWINBHAI
56	COMPUTER ENGINEERING	170393107004	PATEL NISHI DHIREN KUMAR
57	COMPUTER ENGINEERING	170393107006	TRIVEDI APURV DOLARKUMAR
58	INFORMATION TECHNOLOGY	170393116002	PATEL UTSAV HITENDRA
59	INFORMATION TECHNOLOGY	170393116003	VEGAD SHIVANI DEEPAKBHAI
60	MECHANICAL ENGINEERING	170393119006	PATEL JAY HARSHADBHAI
61	MECHANICAL ENGINEERING	170393119011	PRAJAPATI PREET ARVINDBHAI
62	AUTOMOBILE ENGINEERING	160390102003	PARMAR RAJVEESINH RAJENDRASINH
63	AUTOMOBILE ENGINEERING	160390102006	PATEL ZEEL VIPULKUMAR
64	CIVIL ENGINEERING	160390106004	PRAJAPATI KRUNAL BHARATBHAI
65	CIVIL ENGINEERING	160390106007	ZALA KULDIPSINH JIVUJI
66	COMPUTER ENGINEERING	160390107022	PATEL JIGNA JITENDRAKUMAR
67	INFORMATION TECHNOLOGY	160390116007	HIRVANIYA SIDDHARTH SURESHBHAI
68	MECHANICAL ENGINEERING	160390119001	ACHARYA VIMARSH INDRAKUMAR
69	MECHANICAL ENGINEERING	160390119003	MAKAVANA NIRMALDEV UDAYSINH
70	MECHANICAL ENGINEERING	160390119004	MAKWANA KARTIK PRAKASHKUMAR
71	MECHANICAL ENGINEERING	160390119005	MANGUKIYA ABHAY UMESHBHAI
72	MECHANICAL ENGINEERING	160390119006	PATEL KETUL SANJAYKUMAR
73	MECHANICAL ENGINEERING	160390119009	PATHAN IRSHADKHAN RAIZKHAN
74	MECHANICAL ENGINEERING	160390119010	PATHAN MUKHTARKHAN ISHRARKHAN
75	MECHANICAL ENGINEERING	160390119014	ROSHAN PONNACHEN
76	MECHANICAL ENGINEERING	160390119016	SOLANKI VIJAYSINH KHUMANSINH
77	AUTOMOBILE ENGINEERING	170393102001	GOHIL TUSHAR VIJAY
78	AUTOMOBILE ENGINEERING	170393102002	JOSHI DARSHANKUMAR RAJENDRAKUMAR
79	AUTOMOBILE ENGINEERING	170393102003	PATEL SHIVAM KALYANBHAI
80	AUTOMOBILE ENGINEERING	170393102006	RAVAL RAVIBHAI DASHARATHBHAI
81	AUTOMOBILE ENGINEERING	170393102007	SATAVARA GURUKUMAR DEVIDASBHAI
82	AUTOMOBILE ENGINEERING	170393102009	BABARIYA SHASVAT JIGNESHBHAI
83	CIVIL ENGINEERING	170393106002	MAKWANA SACHINKUMAR RAMESHBHAI

Sr.No	BR_NAME	Enrolment number	Name
84	COMPUTER ENGINEERING	170393107005	TANNA KUNJAN VIJAYBHAI
85	INFORMATION TECHNOLOGY	170393116001	PATEL KENIBEN RAKESHKUMAR
86	MECHANICAL ENGINEERING	170393119002	DANTANI AJAYBHAI VINODBHAI
87	MECHANICAL ENGINEERING	170393119003	JADEJA MAHIPATSINH BABUBHA
88	MECHANICAL ENGINEERING	170393119004	PARMAR NIRAVKUMAR YOGESHKUMAR
89	MECHANICAL ENGINEERING	170393119005	PATEL APOORVA NAVINCHANDRA
90	MECHANICAL ENGINEERING	170393119007	PATEL KAUSHALKUMAR HASMUKHBHAI
91	MECHANICAL ENGINEERING	170393119008	PATEL MAYANKKUMAR VASUDEVBHAI
92	MECHANICAL ENGINEERING	170393119010	PRAJAPATI DHAVALKUMAR SHAILESHBHAI
93	MECHANICAL ENGINEERING	170393119012	SHAH YASHKUMAR HIMANSHUBHAI
94	MECHANICAL ENGINEERING	170393119013	SOLANKI RAVIBHAI BALDEVBHAI
95	MECHANICAL ENGINEERING	170393119014	SOLANKI VIRENDRASINH VIKRAMSINH
96	ELECTRICAL ENGINEERING	130390109018	NAYEE HITESHKUMAR VINUBHAI
97	ELECTRICAL ENGINEERING	140390109026	SATHVARA VISHAL JAGDISHBHAI
98	MECHANICAL ENGINEERING	140390119130	ZALA JAYDEEPSINHJI DILIPSINHJI
99	AUTOMOBILE ENGINEERING	150390102002	CHAUDHARI YASH HARSHADBHAI
100	MECHANICAL ENGINEERING	150390119004	CHAUDHARY ASMITBHAI RAMSANGBHAI
101	MECHANICAL ENGINEERING	150390119043	RAJPUT NIMESHKUMAR AMRUTJI
102	MECHANICAL ENGINEERING	170393119015	SUTHAR SAHILKUMAR ARVINDBHAI
103	MECHANICAL ENGINEERING	170393119016	TAPODHAN KULDEEP DIPINBHAI

Course Curriculum: Entrepreneurship and Innovation

Module 1: Engineering Entrepreneurship: Building Foundations and Drawing Inspiration

The first day of the program begins with an exploration of entrepreneurship tailored specifically to engineering students. We delve into the fundamental concepts, starting with defining entrepreneurship and its significance within the engineering domain. Students learn about the traits and characteristics commonly found in successful entrepreneurs, emphasizing the importance of resilience, creativity, and adaptability. Through engaging discussions and interactive activities, participants gain insights into how these traits contribute to entrepreneurial success.

To provide concrete examples and inspiration, we examine case studies of renowned engineering entrepreneurs. These case studies offer valuable lessons and practical insights into the challenges and triumphs faced by entrepreneurs in the engineering field. By analyzing real-world examples, students can better understand the entrepreneurial journey and glean insights that may inform their own ventures in the future.

In the afternoon session, we shift our focus to startup fundamentals, laying the groundwork for understanding the intricacies of launching and managing a startup in the engineering sector. We begin by defining what constitutes a startup and explore its relevance and potential within the engineering landscape. Students learn to identify opportunities for startups within various engineering disciplines, considering emerging technologies, market gaps, and societal needs.

Legal and regulatory considerations are crucial aspects of entrepreneurship that often go overlooked. Therefore, we dedicate time to discussing the legal and regulatory frameworks that impact engineering startups. Topics covered include intellectual property rights, business registration, and compliance with industry standards and regulations. By familiarizing themselves with these considerations early on, students can navigate the complex legal landscape more effectively as they pursue entrepreneurial endeavors.

To enrich the learning experience, we invite a guest speaker—a successful startup founder from the engineering sector—to share their personal journey and insights with the participants. This firsthand account provides valuable perspectives and practical advice, inspiring students and offering tangible examples of entrepreneurial success within the engineering field. The guest speaker session also allows for interactive Q&A sessions, enabling students to engage directly with an experienced entrepreneur and gain valuable insights into the realities of startup life.

Module 2: Mastering Startup Development and Business Model Innovation

Building on the foundation laid on the first day, we delve deeper into the intricacies of startup development and business model innovation. The morning session begins with an exploration of the essential components of a successful business model, emphasizing the importance of value creation, customer segments, revenue streams, and cost structure. Through interactive discussions and case studies, students gain a comprehensive understanding of the various elements that contribute to a viable and scalable business model.

Students are introduced to the lean startup methodology—a proven approach to startup development that emphasizes rapid experimentation, iterative learning, and customer feedback. They learn how to apply lean principles to validate their startup ideas, identify market opportunities, and refine their business models based on real-world feedback. Through practical exercises and group activities, students develop the skills and mindset necessary to navigate the uncertainties and challenges inherent in the startup journey.

The afternoon session focuses on practical tools and frameworks for business model development, with a particular emphasis on the business model canvas. Students engage in hands-on workshops where they apply the canvas to their own startup ideas, mapping out key components such as value proposition, customer segments, channels, and revenue streams. This interactive exercise allows students to visualize and iterate on their business models in real time, soliciting feedback from peers and instructors to refine their strategies further.

Throughout the workshop, facilitators provide guidance and support, helping students identify potential pitfalls, clarify assumptions, and uncover new opportunities for innovation. By the end of the session, students have developed a preliminary version of their business model canvas, laying the foundation for future iterations and refinement.

Module 3: Empowering Innovation: Unleashing Creativity through Design Thinking

The third day of the program is dedicated to exploring the vital role of innovation in driving engineering advancements and fostering entrepreneurial success. We begin by defining innovation and examining its various forms, from incremental improvements to disruptive breakthroughs. Students gain an appreciation for the importance of innovation in addressing complex challenges, driving economic growth, and creating value for society.

Design thinking emerges as a powerful framework for fostering innovation, particularly in the context of engineering entrepreneurship. We introduce students to the core principles and methodologies of design thinking, emphasizing empathy, iteration, and collaboration. Through interactive exercises and case studies, students learn how to apply design thinking principles to identify user needs, generate creative solutions, and prototype new products and services.

In the afternoon session, students dive deeper into the design thinking process, focusing on key phases such as empathizing, defining, ideating, prototyping, and testing. Guided by experienced facilitators, students engage in hands-on activities and group discussions aimed at developing their empathy and problem-solving skills. They learn to view challenges from the perspective of the end-user, gaining valuable insights that inform the design and development process.

Ideation techniques are introduced to stimulate creative thinking and generate innovative solutions to complex problems. Through brainstorming sessions, mind mapping exercises, and rapid prototyping activities, students learn to generate and evaluate a diverse range of ideas, iterating on concepts until they arrive at viable solutions. The emphasis is placed on fostering a culture of experimentation and iteration, where failure is seen as an opportunity for learning and growth.

By the end of the day, students have gained a deeper understanding of the innovation process and acquired practical tools and techniques for driving innovation within their own ventures. They leave feeling inspired and empowered to apply design thinking principles to tackle real-world challenges and create meaningful impact through entrepreneurship.

Module 4: Navigating the Innovation Landscape in Engineering Entrepreneurship

Building on the foundation laid in the previous days, the fourth day of the program explores the intersection of innovation and engineering in greater depth. We begin by examining real-world examples of innovative engineering products and technologies, highlighting the diverse range of applications and industries where engineering innovation plays a transformative role. Case studies and success stories showcase how engineering entrepreneurs have leveraged innovation to address pressing societal needs, disrupt traditional industries, and create value for stakeholders.

Intellectual property rights and patents are essential considerations for engineering entrepreneurs seeking to protect their innovations and maintain a competitive advantage in the market. We provide an overview of intellectual property law, discussing different types of intellectual property rights, such as patents, trademarks, copyrights, and trade secrets. Students learn how to navigate the patenting process, from conducting prior art searches to filing patent applications, ensuring that their innovations are adequately protected.

In the afternoon session, we delve into the organizational aspects of innovation, exploring how companies can foster a culture of innovation and create an environment conducive to creativity and experimentation. We discuss the role of leadership, organizational structure, and incentive systems in promoting innovation within engineering organizations. Case studies of innovative companies provide valuable insights into the strategies and best practices employed to cultivate a culture of innovation and drive sustained growth.

Scaling innovation is a critical challenge faced by engineering companies as they seek to expand their reach and impact. We examine the strategies and tactics employed by successful companies to scale their innovations effectively, from strategic partnerships and alliances to mergers and acquisitions. Through interactive discussions and group activities, students gain an appreciation for the complexities of scaling innovation and the importance of strategic planning and execution.

A highlight of the day is the guest speaker session, featuring an innovation leader from the engineering industry. The guest speaker shares their firsthand experiences and insights, offering valuable perspectives on the opportunities and challenges associated with driving innovation within a corporate setting. Students have the opportunity to engage directly with the guest speaker, asking questions and seeking advice on how to navigate the complexities of the engineering innovation landscape.

Module 5: Empowering Entrepreneurs: From Startup Ideas to Final Presentations

The final day of the program is dedicated to helping students refine their startup ideas and prepare for the culminating event: the final presentations. We begin by guiding how to effectively pitch and present startup ideas to potential investors, partners, and stakeholders. Students learn key strategies for crafting compelling narratives, articulating value propositions, and delivering engaging presentations that resonate with audiences.

A workshop on business model refinement allows students to iterate on their business models based on feedback and insights gained throughout the program. Facilitators provide personalized guidance and support, helping students identify areas for improvement and refine their strategies for maximum impact. By the end of the workshop, students have honed their business models and developed a clear roadmap for moving forward with their ventures.

The highlight of the final day is the culminating event: the final presentations by student teams. Each team has the opportunity to showcase their startup idea and business model to a panel of judges and their peers. Presentations are evaluated based on criteria such as innovation, feasibility, scalability, and market potential. Students receive constructive feedback from the judges and their peers, providing valuable insights and recommendations for further refinement.

The final presentations serve as a celebration of the student's hard work and creativity throughout the program. It is a chance for students to showcase their entrepreneurial spirit and innovative thinking to a wider audience, including potential investors, industry professionals, and fellow students. The event concludes with a certificate distribution ceremony and closing remarks, where we reflect on the journey of entrepreneurship and innovation and celebrate the achievements of the participants.

Overall, the five-day program provides engineering students with a comprehensive understanding of entrepreneurship and innovation, equipping them with the knowledge, skills, and confidence to pursue entrepreneurial ventures and drive innovation within the engineering industry. Through a combination of interactive lectures, hands-on workshops, guest speaker sessions, and final presentations, students gain practical insights and real-world experience that prepare them for success in the dynamic and ever-evolving world of entrepreneurship.