

VEERMATA JIAJABAI TECHNOLOGICAL INSTITUTE, MUMBAI

Circular / Co-Curricular course / Semester I/ AY 2024-25

Date :-27th September 2024

Course contents of Co-Curricular courses to be offered for I semester of the Academic Year 2024-25 are given below. Students are requested to give three choices for the Co-Curricular course of the semester I (**from 27th September 2024 to 2nd October 2024**).

Once selected, the course will not be changed under any circumstances. Therefore students should be very careful while selecting the course.

- There are no pre-requisites for any course.
- Classes of the Co-Curricular courses will begin from **4th October 2024**.
- Minimum 25 students are required for running a course.
- Each course has a limit for maximum number of students. If number of students opting for a course is higher than the limit, the course will be offered on first come first serve basis.

Link for Google form –<https://forms.gle/rqZZP5yyT9XtkTwC6>

Associate Dean (AP)

Co-Curricular course at Institute Level (B. Tech Semester I Semester AY 2024-25)

Sr. No	Course Title	Sr. No	Course Title
1	Social Work	10	Introduction to Aeromodelling
2	Meditation	11	Yoga
3	Football	12	Data Structures and Algorithms (Community of Coders)
4	Robotics	13	Community Engagement
5	NCC	14	CANVA Environment
6	Integrated Personality Development Course (IPDC)-I	15	Self Defence (Only for Girls)
7	Comprehensive Personality Development	16	National Service Scheme (NSS)
8	Art & Craft	17	Dance (Kathak)
9	Engineering Motorsports and Electric Vehicles	18	Climate Change
10	Basketball		

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Social Work

- **Method:** Lecture, Group Discussion and Field Visit
- **Medium of Instruction:** English and Marathi
- **Medium of Writing Papers:** English and Marathi
- **Assessment:** Assignments & Project

Sr.No	Title		Description
1	Unit 01	Foundation Course I	<ul style="list-style-type: none">• Understanding Society• Society• Community• Family System
2	Unit 02	Contemporary Problems in Social Work	<ul style="list-style-type: none">• Professional and Voluntary Social Work in India• Understanding Social Problems• Road Safety• Police Administration• Women's and Child related issues• Field Visit and Project•

Meditation

Course Description: This course covers the basic concepts, exercises and meditation of Falun Dafa (Falun Gong), an ancient meditation and cultivation practice.

The students will systematically learn all five (5) sets of exercises of Falun Dafa including sitting meditation during the classes. They will also learn the importance of principles of Truthfulness, Compassion, and Tolerance in daily life and how they benefit us.

The students will experience first-hand the health benefits of the practice and ways to improve attentiveness and moral character.

Learning Objectives: Upon completion of this course, students should be able to understand:

- The culture of cultivation and meditation
- What is Falun Dafa (Falun Gong)
- The teachings of Falun Dafa by Master Li Hongzhi
- The characteristics of Falun Dafa
- The health benefits and morality enhancement of practicing in Falun Dafa

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Why is Falun Dafa persecuted by the Communist regime in China and situation around the world

- The five sets of exercises of Falun Dafa
- How to practice cultivation and meditate on your own

Reference books:

1. **Falun Gong** - An introductory book with illustrations of the exercises and explanation of the principles.
2. **Zhuan Falun** - Compilation of 9 lectures of Mr Li Hongzhi which reveals the truth of the universe, matter, space-time and the origins and evolution of human life.

Students can get above books from college library. (Website:

www.Falundafa.org)

Additional Requirement: Students need to arrange a small mat for sitting meditation. It can be a square or round mat, a flat pillow, or any exercise mat.

Assignments: There will be three type of tests:

- 1) Exercise Performance Tests (to evaluate correct performance and duration of exercises.)
- 2) An individual paper at the end of each month.
- 3) Individual Experience Sharing Report: Each student is required to write an experience sharing report on meditation and cultivation in Falun Dafa. The report is to be 2-4 pages in length and will be presented at the experience sharing conference at the end of the course.

The students need to address the following three questions in their experience report:

1. What have you learned from the principles and teachings of Falun Dafa?
2. What benefits did you get from exercises and meditation of Falun Dafa?
3. How do you think, will Falun Dafa practice help you in your present and/or future life?

Discussion Leader and In-class Q&A

Every student is going to be a discussion leader for one chapter/lecture, and he/she is responsible for leading the discussion and better understanding of the materials. The instructor will assign each and every student to a lecture and the assigned student needs to prepare a set of at least six (6) questions/quizzes for the class to discuss, digest, debate on, and answer.

Grading:

Class attendance: 30%

Class discussion and participation: 20% Exercise

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Performance Tests: 20%

Individual experience report (paper & presentation): 30%

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Total: 100%

Attendance Policy: Punctual attendance is expected of all students. You should miss a class only for an emergency. You are expected to be prepared for all classes and to participate in them as appropriate. When preparing for class, it is imperative you read the chapters before class. In order to obtain credit for the course, students must attend at least 75 percent of the classes.

Canceled Classes: All cancelled class period assignments and/or tests will be moved to the next class period.

Miscellaneous: Questions and Discussion sessions will be provided at the end of each class session. Please silence your cell phone during the class and meditation.

Course Schedule (subject to change at instructor's discretion): Week Date Lectures

Topic

Sr.No	Title	Description
1	Week 1:	Introduction, Description of syllabus, Role of discussion leader, Presentation – Introduction to Falun Dafa Exercise 1 <i>Buddha Stretching a Thousand Arms</i> Exercise 2 <i>Falun Standing Stance</i>
2	Week 2:	Falun Gong Lecture 1 Exercise 3 <i>Penetrating the Cosmic Extremes</i> Exercise 4 <i>Falun Cosmic Orbit</i> <i>Followed by discussion</i>
3	Week 3:	Falun Gong Lecture 2 <i>Followed by discussion.</i> Exercise 5 <i>Reinforcing Supernatural Powers</i>
4	Week 4:	Falun Gong Lecture 3 <i>Followed by discussion.</i> Practice Exercise 1 to 5 Monthly Test 1
5	Week 5:	Guest Speaker Practice Exercise 1 to 5

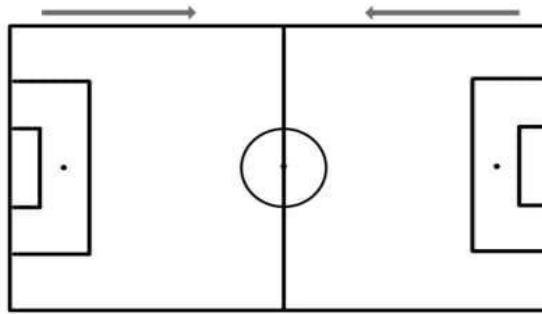
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6	Week 6:	Falun Gong Lecture 4 <i>Followed by discussion.</i> Practice Exercise 1 to 5
7	Week 7:	Falun Gong Lecture 5 <i>Followed by discussion.</i> Practice Exercise 1 to 5
8	Week 8:	Movie-1 Screening and discussion Guest Speaker Monthly Test 2(exercise)
9	Week 9:	Introduction to Zhuan Falun(Discussion) Introduction to the Art of Truth, Compassion and Tolerance Practice Exercise 1 to 5

		Outdoor activity Practice Exerciseto 5 *Start writing experience sharing
10	Week 10:	Documentary Screening and discussion Practice Exercise 1 to 5
11	Week 11:	Conclusion and Q&A Experience Sharing Report of student

3 Football

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12 WEEK - COACHING CALENDAR

TIME DAY	Time	Time
MON	• Off	• Off
TUE	<ul style="list-style-type: none"> • Topics – Dribbling • Warm Up- with Dynamic Stretching – 15min • Technical Ball mastering – 20 min • Tactical ball works and Co- ordination – 20 min • SSG (Small size of the Game) 20min • Deactivation – cooldown stretching communication- 10 min 	<ul style="list-style-type: none"> • Topic – Dribbling • Warm Up - with Dynamic stretching – 15min • Technical Ball mastering – 20 min • Technical & Tactical ball works and Co- ordination exercise – 20 min • SSG (small side of the game) 20min • Deactivation- cooldown stretching communication- 10 min
WED	• Off	• Off
THU	<ul style="list-style-type: none"> • Topics – Dribbling & Passing • Warm Up- with Dynamic Stretching – 15min • Technical Ball mastering – 20 min • Technical & Tactical ball works and Co- ordination – 20 min • SSG (Small size of the Game) 20min • Deactivation – cooldown stretching communication- 10 min 	<ul style="list-style-type: none"> • Topics – Dribbling & Passing • Warm Up- with Dynamic Stretching – 15min • Technical Ball mastering – 20 min • Technical & Tactical ball works and Co- ordination – 20 min • SSG Small size of the Game) 20min • Deactivation – cooldown stretching communication- 10 min
FRI		
SAT		
SUN	REST	REST

1a, Dribbling		1b, Passing & Receiving		1c, Finishing		2a, Protecting the Ball		3a, Set plays			4, Transition
Dribbling Basics	Dribbling Basics	Passing Basics	Passing & Receiving	Finishing Basics	Finishing Creating Space	Staying on the ball	Twisting & Turning	Corners Kicks	Free Kicks	All dead ball free kicks	Attack / Defense Press/Delay
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12

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Robotics

Contents and Evaluation:

There are three components of Course:

1. Attending a 20 hours workshop organized by SRA-VJTI and completing evaluation. Attendance monitoring and evaluating is done by Faculty. (30% weightage).
2. Working on mini-project during the semester (3 hours/week) at SRA-VJTI under the guidance of faculty and student mentor from SRA. (30% weightage). Attendance will be taken every week by faculty.
3. Final evaluation of the project in terms of exam/competition during last week of semester. (40% weightage). Faculty will conduct the final evaluation.

Details of 20-hours SRA- VJTI workshop:

All the students who have opted for this course will attend 20 Hours workshop organized by Society of Robotics and Automation (SRA-VJTI) Team. The workshop is designed for beginners who want to learn how to build and control their own robots using ESP-32, and a custom SRA development board. All the students will prepare their own bot from scratch with their assigned mentor's assistance to perform tasks like Line Following and Self Balancing.

Introduction to Aeromodelling

Contents and Evaluation:

1. Lecture series on Basics of Aeromodelling, which includes basic concepts of Aeromodelling, electronic propulsion system and Aircraft structure. Attendance will be taken in each lecture. (Weightage: 10%)
2. Design workshop by AEROVJTI. Workshop will include teaching of different software for aeromodelling and assignments. Every student will be assigned mentor. Evaluation will be done on the basis of assignments. Attendance will be taken for each session. (Weightage: 50%)
3. Project in terms of problem statement will be given. Period: 1 month). Final evaluation of the project in terms of exam during last week of semester. (Weightage: 40%). Faculty will conduct the final evaluation.

Comprehensive personal development course

1. Personal Development Modules:

- Harnessing the Mind (4 hours)
 - Power of Mind
 - Managing the Mind
 - Desire Management
- Habits for Life (3.5 hours)
 - Reprogram Habits
 - Reprogram Time
- Stress Management (1.5 hours)

2. Skill Development:

- Art of Smart Work (3 hours)
 - Convert STRESS to SMILE
 - Book of Life
 - Know the Personality Type
 - Expand the Time (Time Management)
- Self Esteem (2 hours)
 - Inferiority Complex vs. Self Esteem
 - Overcoming Inferiority Complex
 - Transformation of Insecurity to Self-Worth

3. Life Leadership:

- Winning Life's Goal (3 hours)
 - Choice and Determination
 - Long-term Goals vs. Short-term Rewards
 - Instant Gratification
 - Overcoming Temptations
 - Putting Purpose to Life
- Life's Essential Motivating Factors (3 hours)
 - Range of Factors
 - Pros and Cons
 - Live, Love, and Let Go
- Leadership Sutras (2 hours)
 - Art of Forgiveness (1 hour)
 - Art of Discipline (1 hour)
 - Power of Now (1.5 hours)
- Meaningful Living (1 hour)
 - Finding Purpose
 - Acting on Purpose
 - The Power of Values
 - Happiness
- Balanced Life (3 hours)
 - Physical, Intellectual, Emotional, and Spiritual Quotients

4. Professional and Social Impact:

- Work-Life Flow (3 hours)
 - Finding Strength
 - Facing Challenges
 - Achieving Results
 - Leading and Contributing to Society
- Live to Give (1.5 hours)
 - Virtue of Selflessness
 - Society as an Extended Family

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- Art of Thinking Win-Win (2 hours)
- Engineering the Better World (2 hours)
 - Rhythm of Give and Take
 - Work as Worship
 - From "I and Me" to "We and Us"
 - Ethical Values in Engineering for a Better World
 - Principles of Living in Society
- Servant Leadership in Society (2.5 hours)
 - Types of Leadership
 - Concept and Characteristics of Servant Leadership
 - Building a Sustainable Society
- Meaningful Relationships (2 hours)
 - Encouraging Potential
 - Appreciating Good
 - Tolerating the Unchangeable
 - Respecting Differences
 - Forgiving Mistakes

Art and Craft

- 3D pen rendering
- Soap carving installation
- Glass painting
- Water colour and oil Painting
- Acrylic painting
- Cold ceramic
- Seforex carving
- Mosaic
- Calligraphy
- Charcoal
- Portraits
- Print making
- Surface Development
- Paper quiling
- Human anatomy Sketching
- Perspective & view rendering
- Art & Craft
- Pen & Ink

Integrated Personality Development Course (IPDC)-I

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Designed for future leaders, the Integrated Personality Development Course (IPDC) by BAPS Swaminarayan Sanstha is a transformative journey tailored for university students for seamlessly integrating holistic development with your academic path.

The course is designed to be the passport to success by paving the way for a stellar professional future.

What and how? Here's your answer key -

1. Seamless Integration

IPDC isn't just another course; it's your sidekick for academic excellence and professional prowess. It effortlessly syncs with your university studies, enhancing your skills for the challenges that lie ahead.

2. Beyond Academics

In sync with the New Education Policy (NEP), IPDC prioritizes globally coveted real-world skills, ensuring you possess the qualities that make you stand out to employers worldwide and excel in the competitive job market!

3. Unleash Your Potential

IPDC goes beyond rote learning; it's about transforming obstacles into opportunities, promoting unity in diverse teams. Spanning across 7 modules, it empowers you to redefine yourself, enhance connections, tackle challenges, make a meaningful impact on society, and draw inspiration from legends to unveil your true purpose. Craft yourself into a leader equipped with impactful habits and a distinctive skill set.

4. Your Professional Toolkit

This isn't just a syllabus supplement; it's your complete toolkit for professional growth. Strengthen familial bonds, become a considerate citizen, and gain a competitive edge that propels you to success.

Ready to transform education into your career catalyst? Don't miss out! IPDC is your bridge if you are ready to embark on a path to a brighter, more fulfilling professional future.

Embrace the journey, embrace success!

ENGINEERING MOTORSPORTS AND ELECTRIC VEHICLES

Module 1: Basics of Computer Aided Design, around 3-4 hours of lecture series on Solidworks. Students will be introduced to basics CAD commands (20% weightage)

Module 2: Learning about basic automobile components and their manufacturing. Additive and subtractive manufacturing basics.

Students are expected to learn about 3D printing technology. (20% weightage)

At the end of Module 2, students are expected to design their own automobile components, 3D print it and learn about the different material properties of 3D printed components.

Module 3: Use of power tools; Welding, Profiling, Drilling, Grinding.(20% weightage)

Module 4: Workshop practice, Students are expected to manufacture some automobile

components, like inserts for suspensions, tie rods, and shafts on their own. (20% weightage)
Students are expected to compare the material properties of components manufactured through additive and subtractive manufacturing.

Module 5: Basics of electronic circuit board, PCBs, Breadboard printing, basics of soldering practice.(10 % weightage) Develop a code to program BMS of battery pack, optimizing the mechanical design of battery pack.(10% weightage)

Students will be able to customize their own battery pack that can be used for electric vehicles and will be able to understand how to make a circuit.

Evaluation Scheme:

- Students will be evaluated based on their active participation in all modules.
- Each module has a submission towards the end, either in the form of a component that they made in the workshop or an online submission. They will be evaluated on that basis.
- We have divided the modules in such a way that they benefit students from all branches.

YOGA FOR POSITIVE HEALTH

- Yoga means union or merger, the union of the Individual Soul with the Supreme Soul (God).
- A person practicing yoga can control his/her mind, body and soul to a great extent. It brings together mental and physical disciplines to achieve a peaceful mind and body and helps in managing stress and anxiety and keep you relaxed. It also helps in enhancing muscle strength, flexibility and body tone and improves respiration, energy and vitality.
- You might feel that practicing yoga is just stretching, but it can do much more for your body, from the way you feel, look and move. This fact itself speaks volumes about the popularity of Yoga in the modern day world. This event has united the world on a common platform. Along with yoga, meditation also plays an important role in developing the inner self in our daily life; it can be extremely helpful in eliminating several physical as well as psychological problems.
- Yoga is a traditional method of meditation developed by the saints of ancient India. They practiced yoga as an effective method of controlling their mind and bodily activities. When the body is physically healthy, the mind is clear, focused and stress is under control. This gives the space to connect with loved ones and maintain socially healthy relationships.
- When you are healthy you are in touch with your inner Self, with others and your surroundings on a much deeper level, which adds to your spiritual health.

Kathak Foundation Syllabus for VJTI Engineering stream, Academic Year _____

Theory

1. A brief history of Indian dance and kathak (evaluation of Kathak dance - Pracheen Kal/Mandir Kal, Madhya Kal/Darbar kal, Adhunik Kal and post independent era till the present time.
2. Aesthetic of Kathak with Taal and lay
 - Different taal info – Dadra, Keharva, Teentaal, Rupak (correlate with Indian classical songs)
 - Ability to understand notation of different types of Lay (thaay, dugun, chaugun laya.)
3. Acquaintance with basic definitions
Sam, tali, khali, lay, vibhag, gatnikas, kavitta
4. Distinctive aspects of Kathak (Using Ghungroos, Chakkars, Costume etc).
5. Benefits of Learning Kathak : Physical, Psychological and Intellectual aspect

Practical

1. Basic Movements of Hastak (Practice of exercise of different movement (hastak) (Practical of basic standing position)
2. Unique features of Bhramari (Practical of basic standing position)
3. Various patterns of Tatkar.
4. Expression session based on Navras (through different short stories)

Course Title: Climate Change and the Earth's Living Systems: A Focus on

Soil, Carbon, and Plants

Course Description: This course will delve into the critical role of soil, carbon, and plants in mitigating climate change. Students will explore the complex interactions between these elements and their impact on global warming, greenhouse gas emissions, and ecosystem health. The course will cover topics such as:

- Soil as a Carbon Sink: The role of soil in sequestering carbon and its implications for

climate change mitigation.

- Plant-Soil Interactions: How plants influence soil carbon storage and nutrient cycling.
- Carbon Cycle Dynamics: Understanding the global carbon cycle and its key components.
- Agricultural Practices and Climate Change: The impact of agriculture on soil health, carbon emissions, and climate change.
- Forestry and Carbon Sequestration: The role of forests in mitigating climate change through carbon sequestration.
- Climate-Smart Agriculture: Exploring sustainable agricultural practices that promote soil health and reduce greenhouse gas emissions.
- Policy and Governance: Examining international and national policies related to climate change, agriculture, and land use.

Outcome: By the end of this course, students will be able to:

- Understand the critical role of soil, carbon, and plants in the Earth's climate system.
- Analyze the impact of human activities on soil health, carbon emissions, and plant biodiversity.
- Evaluate the potential of soil, carbon, and plant-based solutions to mitigate climate change.
- Develop a critical understanding of climate change policies and governance.
- Apply their knowledge to real-world challenges and propose sustainable solutions.

Potential Course Activities:

- Field Trips: Visits to local farms, forests, and research institutions to study soil health, carbon sequestration, and sustainable agricultural practices.
- Guest Lectures: Inviting experts in soil science, plant biology, climate change policy, and agriculture to share their insights.
- Group Projects: Students can work on projects related to climate change mitigation, such as designing a sustainable farming system or developing a carbon sequestration strategy.
- Case Studies: Analyzing real-world case studies of climate change impacts and mitigation efforts.
- Discussions and Debates: Engaging in discussions and debates on controversial topics related to climate change and agriculture.