माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA
Deemed to be University
(Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE

DETAILS OF NOVEL ENGAGING COURSES

Name of Faculty Mentor	**Aditya K. Agarwal**
Course Name/Code	**Environment Protection (Part I & Part II)**
Objectives	1. To imbibe habits & lifestyle for minimum waste generation and management. 2. To create awareness for proper management of waste with right attitude. 3. To implement efficient solid waste management practices in the city.
Content	**Part I** 1. Solid waste management & other environment issues. 2. Field Practices. 3. Preparation of inventory of waste management 4. Action against environmentally unsound practices like unsafe disposal of wastes etc. **Part II** 1. Solutions to waste management issues. 2. Wealth out of waste. 3.Importance of World Environment day, World Water day, etc.
Contact hrs. per semester	15
Outcomes	**Part I** After completion of the course, students will be able to: 1. Identify various environmental issues that concerns public. 2. Illustrate waste management practices.. 3. Devise innovative ideas for waste management. 4. Create environmental awareness in the society **Part II** 1. Apply various solutions to waste management problems. 2. Inculcate proper waste management practices among the public. 3. Create environmental awareness in the society 4. Plan an effective waste management system.

Name of Faculty Mentor	**M K Sagar**
Course Name/Code	**National Service Scheme (NSS) (Part I, Part II, Part III & Part IV)**
Objectives	• To understand the community in which the students work. • To understand themselves in relation to their community. • To identify the needs and problems of the community and involve in problem- solving. • To develop a sense of social and civic responsibility. • To utilize knowledge in finding practical solution to individual and community problems. • To develop competence required for group- living and sharing responsibilities. • To gain skills in mobilising community participation. • To acquire leadership qualities and democratic attitudes. • To develop capacity to meet emergencies, natural disasters, practice national integration and social harmony.

Content	Semester-I	Semester-II
	Service Scheme A. History, philosophy, aims & objectives of NSS B. Emblem, flag, motto, song, badge etc. C. Organizational structure of N.S.S. at National, State, University and College Levels D. Advisory committee and their functions with special reference to Director, Programme officer, N.S.S.group leader and N.S.S. volunteers in theimplementation. **Unit-II: NSS Programmes and Activities** A. Concept of Regular activities, special camping,Day Camps B. Basis of adoption of village/slums, Methodologyof conducting Survey C. Financial pattern of the scheme D. Other youth programme/schemes of GOI	**Unit-I: Social Harmony and National Integration** A. Need of National integration, B. Various obstacles in the way of National Integration; such as caste, religion, language and provisional problems etc. C. Indian history and culture D. Role of youth in peace-building and conflict resolution E. Role of youth in Nation building **Unit-II: Family and Society** A. Concept of family, community, and society B. Growing up in the family- dynamics and impact C. Human values **Unit III: Special Programme/ Activities-I** A. Health awareness B. Medical Camp C. First-aid D. One Day Camps E. Distribution of stationary/ study materialto needy students

	E. Coordination with different agencies F. Maintenance of the Diary **Unit-III: N.S.S. Regular Activities-I** A. Volunteerism and Shramdan B. Plantation C. Yoga and Meditation D. Voter Awareness Programme E. Literacy Cum Awareness Programme F. Traffic Awareness Programme G. Cultural event on NSS Day H. Blood Donation I. Swachchh Bharat Abhiyan J. Awareness on Air Pollution/ Rally on Eco-Deepawali K. Activities assigned by Government of India/StateGovernment/AICTE/ UGC/ University/Institute, etc.	F. Awareness programme on Economic Social Political and Cultural impacts. G. Food and Nutrition **Unit-IV: Special Camping programme-I** A. Nature and its objectives B. Selection of camp site and physical arrangement C. Organization of N.S.S. camp through various committees and discipline in the camp. D. Activities to be undertaken during the N.S.S. camp. Use of the mass media inthe N.S.S. activities.

	Semester-III	Semester-IV
	Unit -I: Citizenship A. Basic Features of Constitution of India B. Fundamental Rights and Duties C. Human Rights D. Consumer awareness and the legal rights of theconsumer E. RTI **Unit - II: Youth and Yoga** A. History, philosophy and concept of Yoga B. Myths and misconceptions about yoga C. Different Yoga traditions and their Impacts D. Yoga as a preventive, promotive ,and curativemethod E. Yoga as a tool for healthy lifestyle F. Home Nursing **Unit-III: N.S.S. Regular Activities-II** A. Gender equality/ Women empowerment/ Selfdefense B. Social Harmony and National Integration C. National Youth Day D. Rally/ awareness programme on HIV/ AIDS E. Anti- Tabacco- Rally/ Awareness programme F. Working with NGO/ Health Department/ Municipal Corporation/ City Administration G. Waste Management H. Natural resources management (Rain waterharvesting, energy conservation, waste landdevelopment, soil conservations and afforestation) I. One-day Camp for awareness regardinggovernment scheme at adopted village J. Awareness programme regarding How to	**Unit - 01: Disaster Management** A. Introduction to Disaster Management, classification of disasters B. Role of youth in Disaster Management **Unit III: Special Programme/ Activities-I** A. Health awareness B. Medical Camp C. First-aid D. One Day Camps E. Distribution of stationary/ study materialto needy students F. Awareness programme on Economic Social Political and Cultural impacts. G. Food and Nutrition **Unit-III: Special Camping programme-II** A. Nature and its objectives B. Selection of camp site and physical arrangement C. Organization of N.S.S. camp through various committees and discipline in the camp. D. Activities to be undertaken during the N.S.S. camp. E. Use of the mass media in the N.S.S.activities.

	qualifyfor Technical education	
Outcomes	After the completion of course, the student will be able to: 1. Understand the community and relation to their community 2. Develop the community problem-solving behavior 3. Develop a sense of social and civic responsibility. 4. Accept the new challenges and ready to face the problems with confidence. 5. Motivate themselves to participate and lead the work. 6. Enhance the reading, learning, communication, presentation & interpersonal skills.	

Name of Faculty Mentor	**B.P.S. Bhadoria**
Course Name/ Code	**National Cadet Corps(NCC) (Part I, Part II, Part III & Part IV)**
Objectives	1 .To create human resource of organized, trained & motivated youth, 2 .To provide a suitable environment to motivate the youth to take up a career in the Armed forces. 3.To develop character, comradeship, discipline, leadership, outlook, sprite of adventure and ideas of selfless serviceamongst the youth of the country
Content	**SEMESTER I** Personality development, leadership, Disaster management, Adventure, Border and coastal Areas. Drill, FC&BC, Map reading, weapon training, social service and community development, obstacle training, Camp. **SEMESTER II** Personality development, leadership, Disaster management, Environmental awareness and conservation, Generalawareness, Armed forces. Drill, FC&BC, Map reading, weapon training, social service and community development, Health and hygiene **SEMESTER III** Personality development, Border and coastal Infantry weapons, Military history. Drill, FC&BC, Map reading, weapon training, social service and community development, obstacle training, Camp. **SEMESTER IV** Personality development, Border and coastal areas, Armed forces, Communication, Military history. Drill, FC&BC, Map reading, weapon training, Communication, social service and community development, Infantryweapons.

Outcomes	**Semester I**. 1. Acquaint themselves with the different types of leadership 2. Recognize the importance of time and its management 3. Have an insight into weapon training for NCC cadets 4. Understand the technical terms their meaning and use them training with Arms. 5. Develop awareness to social service and community development. **Semester II**. 1. Analyze the different factors that influence personality and shape it 2. Appreciate the grace and dignity in the performance of drill. 3. Develop awareness social service, community development and health and hygiene. **Semester III** 1. Appreciate the improvement of drill, FC and BC, MR, WT 2. Examine the principles of effective communication and the barriers in communication **Semester IV** 1. Develop the qualities of patience and confidence and become better individuals 2. Assess the different steps to be followed while arms drill is conducted 3. Appreciate the diversity in personality of individuals and its influence on their behaviour 4. Improvement of drill FC and BC, MR, WT, communication, infantry weapons.

Name of Faculty Mentor	**B.P.S. Bhadoria**
Course Name/Code	**Games & Sports (Part I, Part II, Part III & Part IV)**
Objectives	1. To provide opportunity for every student to participate in sports 2. To Develop physical fitness 3. To Develop Leadership quality among students
Content	**Semester I** Basketball, Volleyball, Handball, Hockey History, Rules, Techniques, Tactics, Playfields, Equipment, Tournaments, Awards and personalities. **Semester II** Cricket, Table Tennis, Tennis, Badminton History, Rules, Techniques, Tactics, Playfields, Equipment, Tournaments, Awards and personalities. **Semester III** Athletics, Kho - Kho , Kabaddi, Chess. History, Rules, Techniques, Tactics, Playfield, Equipment, Tournaments, Awards and Personalities. **Semester IV** Football, Swimming, Yoga History, Rules, Techniques, Tactics, Playfield, Equipment, Tournaments, Awards and personalities.
Contact hrs. per semester	15
Outcomes	After completion of the course, students will be able to: **Semester I :** Apply the passing, receiving, dribbling, shooting skills in Basketball, Volleyball, Handball &Hockey; Develop team spirit **Semester II :** Apply batting, bowling, fielding, catching, grip, service, strokes, stance skills in Cricket,Table tennis, Tennis & Badminton; Develop team spirit **Semester III :** Track and field events, starting, finishing, jumps and throws, raiding, holding, raider,dodging, faking. Develop team spirit **Semester IV :** Develop Awareness and knowledge for dribbling, kicks, heading, goalkeeping, strokes,physical and mental development, Develop team spirit

Name of Faculty Mentor	**Vishal Chaudhary**
Course Name/Code	**Holistic Health (Part I & Part II)**
Objectives	• To inspire young minds and promote healthy living. • To spread holistic behaviour among colleagues and campus. • To promote positive mindset post covid-19 pandemic. • To develop kill enhancement and personality of the student.
Content	**Part I** Promoting positive mindset covid-19 post pandemic, yoga sessions, awareness campaigning.
	Part II Webinars on social topics, social and holistic conclave in the campus.
Contact hrs. per semester	15
Outcomes	After completion of the course, students will be able to: **Part I** • Perform yoga, meditation to improve health. • Promote healthy and inspired living in society • Spread happiness and skill enhancement in pandemic situation. **Part II** • Conduct holistic behaviour. • Develop awareness towards social problems • Act as a responsible team mate.

Name of Faculty Mentor	**Anjula Gaur**
Course Name/Code	**Food and Nutrition**
Objectives	To provides basic understanding of the correlation between food and health.
Content	1. Food, Nutrition, Health and Hygiene Interrelationship 2. Malnutrition and Assessment of Nutritional Status 3. Balance diet 4. Nutraceuticals and Functional Foods 5. Micro nutrients in food 6. Conserving and enhancing nutritive value of Food 7. Medicinal Properties of the Food Ingredients
Contact hrs. per semester	15
Outcomes	After completion of the course, students will be able to: • Utilize knowledge of food & nutrients in maintaining good health • Identify sources of nutrients in locally available food • Summarize the medicinal value of food.

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Name of Faculty Mentor	**Anshu Chaturvedi**
Novel Engaging Course	**Gender Sensitization**
Objectives	• To develop students' sensibility with regard to issues of gender in contemporary India. • To provide a critical perspective on the socialization of men and women. • To introduce students to information about some key biological aspects of genders. • To implement measures for ensuring safety of women and programmes for gender sensitization. • To develop an understanding about gender inequalities and their adverse effects. • To sensitise students about integrating gender sensitive practices in their private & professional life.
Content	1. Aims and objectives of gender sensitization 2. Socializing 3. Preparing for Womanhood. 4. Growing up Male. 5. Sex v/s Gender and barriers 6. Bioethics, Morals and Conditioning 7. Sexual Education 8. Feminism and Patriarchy, Feminist ideology 9. Feminist Movements in brief 10. Communication and Relation 11. Stress and how do the opposite sex cope with the stress? 12. Constitutional Laws and Fundamental rights, Human Rights, Women related Law 13. Women in Politics 14. Man and Woman relationship 15. LGBTQ+
Contact hrs	15
Outcomes	After completion of the course, students will be able to: • **Create** awareness about gender issues and gender inequalities prevalent in society. • **Develop** social consciousness • **Analyze** policy decisions to remove gender biases. • **Sensitize** Gender conscious workforce who aim at creating a congenial work environment. • **Attain** a finer grasp of how gender discrimination works in our society and how to counter it.

Name of Faculty Mentor	**Gautam Bhadoriya**
Course Title	**Craft practices in India**
Objectives of Course	The objective of this Novel engaging course is to impart knowledge of various Indian craft and its functioning. It's current scenario as well as factors influencing them.
Content	1. **Historical Background of Indian craft:** Introduction to the basic concept in the evolution of crafts. Journey of various crafts over several decades and centuries 2. **Zone wise Introduction of craft:** North, South, East, West, Central & North-east 3. **Types of craft:** Metal craft, Wood craft, Leather craft, Paper craft, Textile craft, Stone craft, Pottery / Clay work, Terracotta work, Gems and stone, Grass craft, Bamboo craft, etc. 4. **Current Scenario of Craft:** Current situation of Craft in Domestic and International Market. 5. **Factors influencing Craft:** Social, Economic, Technological, Psychological etc.
Contact hrs	15
Outcomes of Course	**At the end of the course the students will develop ability to:** **1.** Develop understanding of various Indian crafts. **2.** Analyze the impact of various factors such as Social, Economic, Technological, Psychological on crafts market.

Name of Faculty Mentor	**Jaimala Jha**
Novel Engaging Course	**Study of Historical Monuments of Gwalior**
Objectives	• To promote scientific approach toward the study of Historical Monuments of Gwalior • To design brochure based on observation skills and the history of monuments.
Content	1. Introduction about Historical monuments. 2. Observe a monument and construct the history of the monument. 3. Analyze need for preserving a historical monument. 4. Demonstrate their appreciation of the architecture through a sketch/Drawing. 5. Create a brochure and database of the monuments, using their knowledge.
Contact hrs	15
Outcomes	After completion of the course, students will be able to: • Develop monuments database & Brouchre using appropriate software.

Name of Faculty Mentor	**Vikas Sejwar**
Course Title	**Smart Home Technologies**
Objectives of Course	The objective of this course to make familiar the students with the latest technologies to reduce energy consumption and to create a comfortable family environment
Content	Internet, WiFi, Infrared, Sensors, Smart Lighting Solutions, Smart Entertainment Devices for the Home, Smart Home Appliances, Smart Home Utilities, Smart Blinds Solutions, Smart Home Surveillance Cameras, Smart Door Locks, Smart Garage Door Openers and Gadgets, Smart Home Sensors, Smart Voice Recognition and Voice Activated Products, Smart Home Window Solutions, Eco-Friendly Smart Home Products, Smart Remote Controls, Smart Home Apps,
Contact hrs	15 hrs
Outcomes of Course	Student will able to: 1. Know the basic framework of a home automation system 2. Analyze the technology of systems of control of lightning, security and their integration in smart houses

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Name of Faculty	**Vijay Bhuria**
Course Name/Code	**Electrical Safety**
Objectives	To aware about electric shock or other injuries resulting from either direct or indirect electrical contact
Content	• Introduction: Rules, Slogan, Poster, Devices • Principles, Working of Safety department • Safety Tips • Safety concerns • Electrical Safety-Related Work Practices • Electrical Hazards
Contact hrs. per semester	15
Outcomes	After completion of this course, the students will be able to: 1. Distinguish the importance of electrical safety in day to day life. 2. Classify the safety devices based on application 3. Acquire knowledge of electrical safety rules and Government policies issued time to time

Name of Faculty Mentor	**Neha Bhardwaj**
Course Title	**Know your Country History, Culture & Traditions**
Objectives of Course	• To understand Indian History; From Chanakya to Britishers & Britishers to Indian Govt. • To understand culture & traditions of various states wrt dress, dance, music and foods.
Content	1. Rulers 2. Winners & their struggle 3. State Power 4. State Culture 5. State Traditions
Contact hrs	15 hrs
Outcomes of Course	After completion of the course, students would be able to: 1. Identify cultures & traditions of various states. 2. Interpret qualitative and quantitative data in order to evaluate historical events

Name of Faculty Mentor	**Ankit Tiwari (Part I and Part II), Varun Sharma (Part III), Nitin Upadhyay (Part IV)**
Course Title	**Innovation- From Creativity to Entrepreneurship**
Part I- Idea Generation	
Objectives of Course	• To understand and apply certain methods of idea generation on any self chosen topic. • To understand and apply methods such as Mind Mapping &Clustering, Concept Mapping. • To understand Scenario Techniques, Roadmapping andmany more - always in a structured process.
Content	Idea Generation Process, Innovation Process and fuzzy front end, Design Aspects, Methods, Sources, Context Definition, Agenda Setting, Problem Representation, Present Situation and Future Assumptions, Bundling Projection, Interpretation of Scenario, Wild Cards, SWOT, Proposals for Action, Definition of a Road- mapping Topic, Needs Analysis, Analysis of Potentials, Establishing a Roadmap, Consistency Analysis and Evaluation.
Contact hrs	15 Hours per semester
Outcomes of Course	On completion of this course, the student will be able to: • Acquire an understanding about Idea Generation Process. • Acquire an understanding about context definition, agendasetting, and problem representation. • Conduct consistency analysis and evaluation. • Perform SWOT analysis
Part II-Technology, Science, Innovation, and Society	
Objectives of Course	Primary objective of the course is to understand the social shaping of technology (how science and technology together shape the waysto solve real life problem). Another objective of the course is to understand the meaning of innovation (as no single definition of innovation and therefore different researchers, scholars and scientistshifted their emphasis from its definition to innovation processes understanding and proposed different models) and its relevance for the development of the society.

Content	1. Techno science and the Interpenetration of Science & Technology (questioning the trans boundary between technology and science andhow science and technology shapes human experience) 2. Social-Psychological Theories of Innovation. 3. Innovation and its impact in the society. 4. Gender and Technology.
Contact hrs	15 hrs
Outcomes of Course	Students will be able to: 1. Develop an understanding of Science – Technology relationship 2. Acquire an understanding of transition in Socio-TechnicalSystems. 3. Recognize how gender influences technologies.

Part III: Challenges and Opportunities	
Objectives of Course	To introduce the basics of entrepreneurship skills. To introduce the existent entrepreneurial support systemTo introduce the concept of product/service selection To introduce the concept of formulation of business plan, analysis and extension
Content	Introduce the idea of entrepreneurship, the core competencies, creativity and innovation, basic case studies. Explaining the existing support system at various level including financial and tech support, basicoutlines of MSME act, Loans and Grants, Legislations and Acts Explaining the basics of opportunity sensing, idea generation by opportunity identification, productor service selection based on the idea. Essentials of the formulation and launch of business plan, team building and networking,understanding the art of pitching
Contact hrs	15 hrs

Outcomes of Course	Students will be able to: 1. Explain the basics of entrepreneurship 2. Acquire an understanding about the existing financial and tech support 3. Groom ideas as per the market needs by surveys and research 4. Setup a business plan
Part IV: Start-up: How to start, survey, Financial, Legal, Pitching and Funding	
Objectives of Course	The main objective of this course to help students get theirinnovation, ideas and ventures to the next level through learning. To promote the start activity.
Content	Identify your idea, idea assessment, market survey, customer, Legal foundation, fundamentalslike company registration, patent, compliances. Understanding basic of finance, how to buildeffective business model, fundraising, understand investor mindset, valuation of companies. Pitching, learn how to approach investors, key focusarea, various scheme funds offered by Govt. of India.
Contact hrs	15
Outcomes of Course	On completion of this course, the student will be able to: **1.** Plan new technology/ knowledge/ innovation basedstartups. **2.** Identify legal issues that impact financial and other risks affecting business. **3.** Prepare for Pitching & Term Sheet

Name of Faculty Mentor	**C S Malvi**
Novel Engaging Course	**Bhagwad Gita- An introduction**
Objectives	To familiarise students with the teachings of Bhagwad Gita to become successful in life.
Content	There are five main part of *Bhagwad Gita* course (i) depression and Motivation management, (ii) Living entity (Jiv), (iii) Prakriti (Material Nature), (iv) Kala (time) and (v) Karma (Action).
Contact hrs	15
No. of sem. required	1
Outcomes	After completion of the course, students will be able to: 1. Realize the scope and relevance of the pursuits of knowledge and action in the *Bhagavad Gita*. 2. Resolve paradoxes and seemingly competing viewpoints in the verses. 3. Gain clarity on the meaning of moksa, karmayoga, bhakti, and meditation, in the Gita. 4. Discern some of the paradigms that underlie various interpretations of the Gita.

Name of Faculty Mentor	**Sunil Kumar Shukla**
Novel Engaging Course Title	**Electrical Home Appliances**
Objectives of Course	The main objective of the course is to enrich the concepts of electrical practices and educate the students to apply those inrespective fields as well as in day-to-day life.
Content	**Wiring Techniques** Types of domestic and industrial wiring, selection of wire, load calculations. **Introduction to Electronic Components** Study of various electronic components like, power and signal diodes, zener diodes, BJTs, LED, Photo diode, general purpose ICs, use of bread board, overview of multimeter. **Introduction to Electrical Components** Study of different types of switches, solid state and electromagnetic relays, contactors, rheostats, different types of capacitors, resistors, variable inductor (choke), protective devices - fuses, MCB, ELCB and relays **Soldering Techniques** Basics of soldering techniques, effectiveness of soldering and problem associated with soldering, general purpose board soldering.**Basics of Household Electrical Equipment** Rewiring / replacement of fuse, switch board layout, functioning of switch, fan regulator, tube light, electric iron, electric heater.
Contact hrs	15 hrs
Mode of Delivery	Blended mode (Online/Offline)
Outcomes of Course	After completion of course, student will be able to – 1. Identify and propose appropriate electrical and electroniccomponents for relevant applications. 2. Design basic electronic and electrical circuits for electrical homeappliances 3. Build simple domestic and industrial wiring systems, 4. Apply basic maintenance and troubleshooting skills to household electrical appliances 5. Identify and propose appropriate protection scheme forelectrical home appliances
External Mentors / Collaborations	1. Tarun Kumar Tailor, Assistant Professor, Nirma University Ahmedabad, Gujrat

Name of Faculty Mentor	**Shubha Mishra**
Novel Engaging Course Title	**Internet as Social Media**
Objectives of Course	• To enable students to learn and understand aspects of socialmedia. • To make students aware about the possible consequences ofmisusing social media. • Developing understanding and intelligence for distinguishing among fake and genuine information prevalent across the web. • To acquire skills for dealing with fake data.
Content	Introduction to Social Media, its scope, need, utilities, pros and cons, demand, Social media as a part of Internet, Fake News- definition, types, understanding the nature of news and its impacts on society, Intro to Cyber Crime, types, legal remedies, initiatives by government, awareness on how to use social platforms.
Contact hrs	15
Mode of Delivery	Online/offline
Outcomes of Course	The students will be able to: • Use social media in safe and secure way. • Analyze online social user's behavior. • Write good quality review/research paper.
External Mentors / Collaborations	-

Name of FacultyMentor	**B.P.S. Bhadoria**
Novel EngagingCourse Title	**Umpiring of Sports**
Objectives of Course	To provide opportunity for students to learn basic concept ofumpiring/ Referee in different games / sports.
Content	Cricket, Basketball, Volleyball, Football, Badminton, Table-Tennis,Official and their duties, rules and regulations.
Contact hrs	15
Mode of Delivery	Blended
Outcomes of Course	The students will be able to: 1. Explain basic rules of umpiring in various sports. 2. Perform umpiring in friendly matches.
External Mentors / Collaborations	--

Name of Faculty Mentor	**Shourabh Singh Raghuwanshi**
Novel Engaging Course Title	**Capture & Create Digital Photography**
Objectives of Course	To Explore the principles of lighting and colour theory to a variety of photographic scenarios by measuring, evaluating, and adjusting light and colour to create quality images.
Content	Basics of Photography, Digital Photography, Photography lighting, Adobe Light room,Photoshop Retouching, Landscape photography, Photography composition, Image editing, Photoshop, Digital Camera Functionality, Portrait Photography
Contact hrs	15 hrs
Outcomes of Course	At the end of this course, the student will be able to: 1. Demonstrate the basic Technique of photography 2. Compare traditional film and digital cameras and photography 3. Analyze the various Equipment which can enhance photography 4. Create a quality photograph using basic rules and technology 5. Discuss the impact of photography in publications

Name of Faculty Mentor	**Arun Kumar**
Course Title	**Global Democratic Systems**
Objectives of Course	1. Understand fundamental democratic principles. 2. Compare democratic models. 3. Evaluate democratic practices
Content	Introduction to Democracy, Types of Democracies: Direct vs. Representative Democracy, Electoral Systems: Majoritarian, Proportional, and Mixed Systems, Comparative Political Institutions: Parliaments, Presidents, and Hybrid Systems, Constitutional Frameworks and Legal Foundations of Democracies, Political Parties and Their Roles in Democratic Systems, Civil Society and Its Influence on Democratic Governance, Citizen Participation, Checks and Balances: Separation of Powers, Federalism vs. Unitarism, Case Studies of Established Democracies, Case Studies of Emerging Democracies, Challenges to Democracy, Reforms and Innovations in Democratic Practices, Future of Democracy: Trends, Opportunities, and Threats
Contact hrs	15 hrs
Outcomes of Course	After completion of this course, the students will be able to: 1. Describe the fundamental principles and core values of democratic systems. 2. Distinguish between various democratic models. 3. Evaluate the effectiveness of different democratic practices. 4. Analyze case studies of specific countries to identify the successes, challenges and reforms required. 5. Access the strength and weakness of different democratic systems.

Name of Faculty	**Arzoo Choubey**
Course Name/Code	**Lessons of life and times from the Mahabharata**
Objectives	• To understand ethical and moral values conflicts with the universal and situational values. • To establish a critical outlook about heroism and conceptualization of characters and of heroes in the text.
Content	1. Style of Narratology, embedded and mini narratives in the text 2. Adi Parva as the prequal to the entire text 3. Women Heroes as vehicular agencies of the battle 4. Shastra and Shāstra in the Mahabharata: The genesis of Heroism and warfare 5. The Significance of learning the text in Kal yuga
Contact hrs. persemester	15
Outcomes	After completion of the course, students will be able to: • Inculcate the true spirit of the text of the Mahabharata. • Apply and imitate the conduct and the relevance of the text in 21st century.

Name of Faculty Mentor	**Punit Kumar Johari**
Course Name/Code	**Digital Learning (Part I & Part II)**
Objectives	1. To understand principles, concepts and issues concerning the use of digital technologies tosupport learning, and apply these in their own practice 2. To understand the effect of Computer Based Information Systems (CBIS) on an organization 3. To acquire sufficient IT skills and knowledge to appreciate (evaluate) a CBIS
Content	**Part I :** Introduction to Spreadsheet Modelling, Presentation of Quantitative Data, Analysis of Quantitative Data, Presentation of Qualitative Data, Analysis of Qualitative Data, Inferential Statistical Analysis ofData.
	Part II: Advance Data Analysis: Modelling and Simulation, Solver, Scenarios, and Goal Seek Tools, DataVisualization Tools and Techniques like Excel, Tableau etc.
Contact hrs. per semester	15
Outcomes	**Part I:** After completion of the course, students will be able to: • Analyse a range of locally available digital technologies • Explore digital technologies that can be used to support analytical learning. • Participate in an organization's information systems and technology decision-making processes. • Identify ways information systems & technology may improve an organization's performance,including improving organizational processes, decision-making, and collaboration.
	Part II: After completion of the course, students will be able to: • Use computer-based information systems and technologies to solve business problems. • Analyze business scenarios and make recommendations regarding the strategic use of IT. • Demonstrate competency in using tools, techniques, methodologies, and practices of variousforms of the systems development life cycle. • Apply MIS knowledge sets, skills, and tools to a real-world complex problem

Name of Faculty Mentor	**Sanjeev Khanna**
Course Name/Code	**English Literary Skills**
Objectives	• To hone the talent of students toward literary and artistic activities and interests of a student. • To provide a socio-cultural platform to students to reveal the artist in him and to socialisewith other students.
Content	Literary Activities like creative writings, open mic, skit, brain storming sessions, debates, etc.
Contact hrs. per semester	15
Outcomes	After completion of the course, students will be able to: • Infer meanings of text from what is written and what is not written • Present his thought lucidly • Inculcate fluency in spoken English • Socialise with others

Name of Faculty Mentor	**Anish P. Jacob**
Course Name/Code	**Preliminary Journalism Skills**
Objectives	• To impart the basic knowledge of Journalism and related areas of studies. • To equip the learner with reporting & writing skill • To inculcate professional ethics in the learner.
Content	Basics of journalism, Types of Journalism, Journalist Vs Reporter, Content writing, reporting skills, communication skills, creative writing, technical writing, social media & its impact, public relations
Contact hrs. per semester	15
Outcomes	After completion of the course, students will be able to : • Explain the basics of journalism • Apply basic writing skills • Analyze the types of journalism • Display good oral communication skills

Name of Faculty Mentor	**Abhilash Shukla**
Novel Engaging Course Title	**Basic and Advanced Excel**
Objectives of Course	Build a solid understanding on the Basics of Microsoft Excel
Content	Introduction to spreadsheets, reading data, manipulating data. Basic spreadsheet operationsand functions Introduction to the Data filtering capabilities of Excel, the construction of Pivot Tables to organize data and introduction to charts in Excel. Constructing various Lines, Bar and Pie charts. Using the Pivot chart features of Excel. Understanding and constructing Histograms and Scatterplots Review Basic Formulas and Functions and explore Formula Tab Use advanced Financial Functions to calculate time value of money metrics. Write and use Logic functions. Write and use formulas and functions in Excel to perform text functions Write and use formulas and functions in Excel to perform lookup and reference functions
Contact hrs	15 hrs
Outcomes of Course	At the end of the course, the student will be able to: • Edit the worksheet (including inserting/deleting cells, columns, and rows), • Manage the Data by using sorting, filtering, consolidating, removing duplicates, data validation, and one-way lookups. • Create and apply several advanced excel functions to real world examples. • Create mathematical predictive regression models using the Regression tool in Excel • Visualize the data using scatter plots, column charts, pie charts, Slicers, Sparklines,and Pivot Tables.

माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत
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NAAC ACCREDITED WITH A++ GRADE

Name of Faculty Mentor	**Abhilash Sonker**
Course Title	**Microsoft Office -Excel Skills**
Objectives of Course	In this student will familiarize with basics of spreadsheet construction and formatting with a basic overview of how to generate formulas and use of functions for data analysis.
Content	Create Worksheets and Workbooks, Navigate in Worksheets and Workbooks, Format Worksheets andWorkbooks, Customize Options and Views for Worksheets and Workbooks, Configure Worksheets and Workbooks for Distribution, Apply Custom Data Formats and Validation, Apply Advanced Conditional Formatting and Filtering, Create and Modify Custom Workbook Elements, Create and Manage Tables, Manage Table Styles and Options, Filter and Sort a Table, Summarize Data by using Functions, Perform Conditional Operations by using Functions, Format and Modify Text by using Functions,Create Charts, Format Charts, Insert and Format Objects.
Contact hrs	15 hrs
Outcomes of Course	After completing this course, the students will be able to: 1. Gain the basic skills needed to operate and navigate MS Excel. 2. Calculate, organize, and evaluate quantitative data .

Name of Faculty Mentor	**Pooja Sahoo**
Novel Engaging Course Title	**Microsoft word and PowerPoint for Beginners**
Objectives of Course	Identify the various benefits of using word processing software and the main parts of the Microsoft power point window.
Content	Create and Manage Documents, Format a Document, Customize Options and Views for Documents, Print and save documents, Format Text, Paragraphs, and Sections, Create Tables and Lists, Create and Manage References, Manage document options and settings, Design advanced documents using power point software, Create Advanced References
Contact hrs	15 hrs
Mode of Delivery	Blended Mode
Outcomes of Course	At the end of the course, the student will be able to: Utilize word and Power Point in a variety of professional, educational and personal situations.
External Mentors / Collaborations	No

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Name of Faculty Mentor	**Vibha Tiwari**
Novel Engaging Course Title	**The Art of Mandala Meditation**
Objectives of Course	1. Relieve Stress 2. Improve Focus 3. Reduce Anxiety
Content	Mandala is a Sanskrit word that means circles. Mandala is made using geometric patterns. The purpose of this is to relax and find harmony in oneness with the universe, making it both art and a form of meditation. This mandala course teaches students how to self- soothe by using pen and paper and making various different types of Mandalas.
Contact hrs	15 hrs
Mode of Delivery	Offline
Outcomes of Course	1. Improve concentration 2. Develop creativity 3. Build self confidence
External Mentors / Collaborations	-

Name of Faculty Mentor	**Abhishek Bhatt**
Course Title	**Ramayana- An Epic Story**
Objectives of Course	• To gain a deep understanding of the seven kandas of the Ramayana. • To explore the epic's profound teachings on life, duty, and morality. • To reflect on the practical implications of these teachings in your own life. • To cultivate a deeper appreciation for the divine pastimes of Sri Rama and Mata Sita.
Content	In this Ramayana course, we will go through the whole epic through selected sub-stories. Each sub-story, and the characters involved, will elucidate a quintessential lesson. Students will be invited to engage with a real-life scenario and enquire into what a Ramayana character would have done in that situation. Throughout this course, students will explore the following kandas of the Ramayana: • Bala Kanda: Childhood pastimes of Rama and Laxmana. • Ayodhya Kanda: Exile of Rama, Sita, and Laxmana into the forest. • Aranya Kanda: Pastimes of Sita, Rama, and Laxmana in the forest and the abduction of Sita by Ravana. • Kishkindha Kanda: Rama's search for Sita, Hanumana's meeting with Rama and Laxmana, the friendship between Rama and Sugriva, and the dispatching of monkey soldiers in search of Sita. • Sundara Kanda: Hanumana's journey to Lanka in search of Sita, his discovery of her in Ashoka Vatika, and the burning of Lanka. • Yuddha Kanda: Rama and Laxmana, along with the army of monkeys, attacking Ravana, the slaying of Ravana, and the reunion with Sita. • Uttara Kanda: Background stories of different characters in the Ramayana and Rama's performance of the Ashvamedha sacrifice.
Contact Hrs	15 hrs.
Outcomes of Course	After completion of this course, the students would be able to: 1. identify historical and cultural narrative with characters of Ramayana 2. apply ethical Decision-Making using interpersonal skills in modern context 3. analyse critically the utilization of Ramayana in modern context 4. justify the value formation with empathy learn from various character of Ramayana

Name of Faculty Mentor	**Aditya Dubey**
Course Title	**Competitive Reasoning Practices**
Objectives of Course	The main objective aims to enhance the critical thinking, analytical, and problem-solving skills of students to excel in competitive exams.
Content	• Analogies • Series Completion • Coding-Decoding • Blood Relations • Directions • Syllogisms • Statements and Assumptions • Statements and Conclusions • Statements and Arguments • Cause and Effect
Contact hrs	15
Outcomes of Course	After completion of this course, students will be able to: 1. identify fundamental concepts of logical reasoning, verbal ability, and quantitative aptitude used in competitive exams. 2. apply appropriate reasoning and analytical techniques to solve problems related to logical puzzles, data interpretation, and numerical reasoning commonly found in competitive exams. 3. analyze complex reasoning questions by breaking down the problems into smaller components and determining the underlying principles and patterns.

Name of Faculty Mentor	**Aftab Ahmed Ansari**
Course Title	**Electoral Dynamics: Understanding the Indian Election System**
Objectives of Course	1. To understand the fundamentals of the Indian election system 2. To analyze the dynamics of electoral politics in India 3. To develop critical thinking skills in evaluating election-related data and information
Content	Introduction to Indian Election System (2 hours) - Hour 1: Overview of Indian Constitution and electoral process - Hour 2: Types of elections in India (Lok Sabha, Rajya Sabha, State Assemblies, etc.) Electoral Machinery (2 hours) - Hour 1: Election Commission of India (ECI): structure, functions, and powers - Hour 2: Role of electoral officers and polling personnel Electoral Process (2 hours) - Hour 1: Voter registration and electoral rolls - Hour 2: Nomination and scrutiny of candidates Political Parties (2 hours) - Hour 1: Role of political parties in Indian democracy - Hour 2: Party systems and alliances Electoral Dynamics (2 hours) - Hour 1: Voter behavior and electoral trends - Hour 2: Factors influencing voting decisions (caste, religion, region, etc.) Election Laws (2 hours) - Hour 1: Representation of People's Act (RPA) and other relevant laws - Hour 2: Electoral reforms: past, present, and future Case Studies (2 hours) - Hour 1: In-depth analysis of recent Indian elections (e.g., 2024 Lok Sabha elections) - Hour 2: Comparison with international election systems Assignment Test (1 hour)
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	After completion of this course, the students would be able to: 1. Explain the structure and processes of the Indian electoral system, including the roles of the Election Commission and various types of elections. 2. Distinguish the various factors that impact voter decisions and behavior during elections. 3. Importance of political parties, media, and other stakeholders in the electoral process. 4. Develop skills to interpret and analyse electoral data to understand voting patterns and trends.

Name of the faculty Mentor	**Ashok Kumar Sharma**
Course Name/Code	**Scientific Temperament of Indian Thoughts and traditions**
Objectives	To familiarise students about the Basic science behind Indian culture.
Contents	Indian culture is an oldest culture of the world, It provides the solution of each and every moment of human routine life, and some are (1). Time management of human life. (2) Habits and society. (3). What is good and what is not good? (4) Social learning, the base of future stands. (5) Celebration of Indian festivals.
Contact hrs	15 Hrs
Outcomes	After completion of the course, Students will be able to: 1. Explain the social awareness. 2. Identify traditional and scientific approach. 3. analyse the correlation between our past and present. 4. Create awareness about Indian traditions.

Name of Faculty Mentor	**Baljinder Kaur**
Course Title	**Plasmonic sensors: surface plasmon resonance-based applications**
Objectives of Course	To learn about research and development in the field of plasmonics biosensing applications and highlights challenges and its impact on daily life.
Content	1) Introduction to basics of controlling, guiding, and manipulating electromagnetic radiation at the nanoscale level. 2) Principles of metal optics, surface plasmon resonance 3) Biosensing applications cancer, tuberculosis and virus detection 4) Sensor structure 5) Fabrication 6) Commercial aspects and challenges
Contact hrs	15 hrs.
Outcomes of Course	After completion of the course, students will be able to; 1. Explain the basics concepts of physics behind plasmonic sensor. 2. illustrate principles of metal optics and surface plasmon resonance 3. Apply biosensing and fabrication techniques in various applications. 4. Discuss commercial potential and real-world applications of plasmonic technologies.

Name of Faculty Mentor	**Devanshu Tiwari**
Novel Engaging Course Title	**TechWell Health**
Objectives of Course	1. To learn how technology can be used to enhance fitness and nutrition. 2. To gain knowledge about healthy lifestyle habits through the use of tech tools. 3. To encourage teamwork and peer support in achieving fitness and nutrition goals.
Content	**Module 1: Introduction to Fitness, Nutrition, and Technology** • Overview of course objectives and structure • Importance of fitness and nutrition for first-year students • Role of technology in supporting a healthy lifestyle **Activity:** Ice-breaker session and brainstorming on how students currently use technology for health and fitness. **Module 2: Fitness Trackers and Apps** • Overview of popular fitness trackers and apps • How to set up and use fitness trackers • Benefits of tracking physical activity **Activity:** Workshop on setting up fitness trackers and exploring features of popular fitness apps (e.g., step counting, heart rate monitoring, workout tracking). **Module 3: Nutrition Apps and Tools** • Introduction to nutrition and diet tracking apps • How to log meals and track nutrient intake? • Using apps to plan balanced meals **Activity:** Hands-on session where students log their meals using a nutrition app and analyze their diet for nutritional balance. Teach and involve students to prepare healthy snacks which is easy to prepare and involves no gas. Healthy and vegetarian alternatives to junk food like Maggi, Patties and other Deep fried snacks.

Module 4: Designing a Tech-Enhanced Fitness Plan

- How to create a personalized fitness plan using technology?
- Setting goals and monitoring progress
- Adjusting plans based on data insights

Activity: Workshop where students design their own fitness plans using apps and trackers, followed by peer reviews and feedback.

Module 5: Meal Planning with Tech Support

- Basics of meal planning and prep using tech tools
- Importance of balanced meals and portion control
- Using technology for efficient grocery shopping and meal prep

Activity: Collaborative session where students create weekly meal plans using nutrition apps, followed by a demonstration on using tech tools for meal prep.

Module 6: Tech-Supported Mindfulness and Stress Management

- Introduction to mindfulness and its benefits
- Apps and tools for mindfulness and stress management
- Incorporating mindfulness into daily routines

Activity: Guided mindfulness and meditation session using a mindfulness app, followed by a discussion on stress management strategies.

Module 7: Assessment and Future Planning

- Review of key concepts and activities
- Self-assessment and reflection on personal progress
- Setting future goals for maintaining a tech-enhanced healthy lifestyle

Activity: Group discussion and individual reflection exercises to assess progress, share experiences, and set future health and fitness goals using technology.

Contact Hours	15 hours
Mode of Delivery	offline and activity-based learning
Outcomes of Course	After completion of this course, the students would be able to: 1. Explain the effective use of technology to enhance their fitness routines. 2. Select appropriate tech tools to track and improve their dietary habits. 3. Identify tech-supported healthy habits that enhance their overall well-being. 4. Develop a balanced approach to good health through the integration of fitness, nutrition, and technology.

Name of Faculty Mentor	**Dheeraj Kumar Dixit**
Course Title	**Tableau Hands-on Training for Data Science**
Objectives of Course	• To understand the role and importance of data visualization in the data analysis process. • To design static and dynamic tables, data visualizations, dashboards, and stories using Tableau. • To optimize and manage large datasets to efficiently analyze real-world industry data.
Content	Tableau basics, data extraction, aggregation, filter, Map, Scatterplots, Create Dashboard and storytelling with tableau, Data preparation, Clusters, custom territories, design features, Tableau toolkit.
Contact hrs	15 hrs.
Outcomes of Course	After completion of this course, students will be able to: 1. explain the basics of Tableau. 2. apply clustering techniques to identify patterns within data. 3. create comprehensive dashboards and stories.

Name of Faculty Mentor	**Deep Kishore Parsediya**
Course Title	**Competency and Skills of Sustainability Goals**
Objectives of Course	• To aware the students about the sustainability development goals. • To empower the students to work for sustainable development.
Content	Knowledge about Sustainability goals: No poverty, Zero Hunger, Gender equality, quality education, climate action etc. Activities to achieve sustainability goals.
Contact hrs	15 hrs.
Outcomes of Course	After completion of this course, students will be able to: • Acquire the knowledge of sustainability goals. • Work towards sustainable developement. • Apply the different engineering techniques to maintain the sustainability goals.

Name of Faculty Mentor	**Nishant Jain**
Course Title	**Smart Device-Smart Use**
Objectives of Course	1. To introduce students to the concept and applications of smart devices in various fields. 2. To enhance our comprehension of the fundamental technologies that drive smart devices. 3. To investigate the principles of efficient and responsible utilization of smart devices. 4. To analyze the impact of smart devices on society, privacy, and daily life.
Content	**Module 1:** Introduction to Smart Devices (2 hours) #Definition of smart devices and their evolution, #Classification of smart devices (wearables, smartphones, home automation, etc.), #Impact of smart devices on daily life and society, #Ethical considerations in smart device development and use, **Module 2:** Operating Systems for Smart Devices (3 hours) #Overview of mobile operating systems (Android, iOS), #Key features and differences, #Primary interface and navigation, #App ecosystems and app stores, **Module 3:** Mobile Applications (2 hours) #App ecosystems and stores, #Types of apps (native, web, hybrid), #App development basics, **Module 4:** Smart Device Security (2 hours) #Common security threats, #Best practices for device and data protection, #Privacy settings and permissions,

	Module 5: Productivity and Time Management (2 hours) #Productivity apps and tools, #Time management techniques using smart devices **Module 6:** Digital Well-being (1 hours) #Impact of excessive smart device use, #Strategies for maintaining digital balance, **Module 7:** Internet of Things (IoT) and Smart Home (2 hours) #Introduction to IoT, #Smart home devices and integration, **Module 8:** Emerging Technologies in Smart Devices (1 hours) #Artificial Intelligence and Machine Learning, #Augmented and Virtual Reality,
Contact hrs	15 hrs.
Outcomes of Course	After completion this course, students will be able to: 1. explain the fundamental concepts and technologies behind smart devices. 2. identify various types of smart devices and their applications in different sectors. 3. analyze the potential benefits and risks associated with smart device usage. 4. evaluate the effects of smart devices on personal productivity, communication, and lifestyle. 5. discuss ethical considerations and privacy concerns related to smart device usage.

Name of Faculty Mentor	**Geetam Shukla**
Course Title	**Power of Motivation**
Objectives of Course	To apply the power of motivation to enhance workability. To motivate learners to view clear vision for goal. To utilize power of psychology.
Content	1. Introduction to power of motivation 2. Historical review of theory of motivation 3. Classification of motivation 4. Overcoming Motivational Barriers 5. Innovations in Motivation 6. Practical Exercises
Contact hrs	15 hrs.
Outcomes of Course	After completion of this course, the students would be able to: 1. explain the power of motivation to enhance workability. 2. identify common barriers to motivation and develop strategies to overcome these obstacles. 3. apply motivational principles to lead and manage teams effectively, fostering a positive and productive work environment. 4. analyze various motivational techniques to enhance personal and team performance. 5. evaluate gain strategies to improve their own motivation and maintain high levels of personal drive and productivity

Name of Faculty Mentor	**Himanshu Singh**
Course Title	**Microsoft Power BI: Data Visualization for Beginners**
Objectives of Course	To understand the basics of Power BI (Business Intelligence) To create and customize visualizations To connect and transform data To build and share interactive dashboards To understand Basic Data modeling
Content	1. Getting Started with Power BI. 2. Connecting Power BI to Your Data. 3. Cleaning and Shaping Data. 4. From Data to Insight. 5. Modeling Data in Model View. 6. Building Your First Report. 7. Creating Basic and Advanced Data Visualizations. 8. Enhancing Your Report. 9. Refreshing, Sharing, and Collaborating. 10. Introducing DAX. 11. Creating Interactive Reports. 12. Publishing Reports and Dashboards.
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	After completion of the course, students will be able to: 1. apply data connection and preparation techniques. 2. evaluate data models and also optimize them. 3. design interactive reports and dashboards for advanced data visualizations. 4. maximize report functionality.

Name of Faculty Mentor	**Mahesh Parmar**
Course Title	**Mindfulness, Meditation & Stress Management**
Objectives of Course	To provide students with practical mindfulness and meditation techniques that can be easily integrated into their daily routines to effectively manage stress and improve well-being.
Content	Understanding Meditation, What meditation is, How meditation works, Experiencing Guided Meditations, Exploring Techniques for Meditation Exercises, Guided cleaning, Guide Prayer, Adopting Useful Methods and Tools for Mindfulness Meditation Practice.
Contact hrs	15
Outcomes of Course	After completion of this course, the students would be able to: 1. define mindfulness principles and their applications. 2. apply mindfulness techniques into both formal and informal meditation practices as part of daily routines. 3. identify various techniques to enhance personal resilience, especially during times of uncertainty. 4. minimize stress while increasing clarity, calmness, contentment, and compassion. 5. develop the ability to maintain mindful awareness in the present moment.

Name of Faculty Mentor	**Mukesh Kumar Mishra**
Course Title	**Engineering for Social Reform-I**
Objectives of Course	To provide students with the knowledge and skills to apply engineering principles and practices to address social challenges. This course aims to encourage an understanding of the role of engineers in promoting social equity, sustainability, and community well-being. Students will learn to design, implement, and evaluate engineering solutions that contributing to positive social change.
Content	Definition and scope of social reform, Historical examples of engineering-driven social changes, The role of engineers in society, Ethical considerations in engineering for social good, Identifying and analyzing social problems, Case studies of engineering solutions addressing social challenges, Designing environmentally friendly and resource-efficient solutions, Innovation and creativity in problem-solving, Tools and techniques for developing impactful engineering solutions, Prototyping and testing solutions with community feedback, Resource allocation and time management, Long-term responsibility and legacy of engineering projects.
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	By the end of this course, students will be able to: 1. show strong teamwork, project management, and leadership abilities in collaborative settings. 2. identify needs and co-create solutions by collaborate effectively with community members, organizations, and policymakers. 3. Analyze the social, cultural, and ethical implications of engineering projects. 4. Develop innovative engineering solutions to address social issues such as health, education, and the environment.

Name of Faculty Mentor	**NAMITA ARYA**
Course Title	**Personality Development in various dimensions**
Objectives of Course	The main goal of the course is to give applicants the abilities necessary to manage the working world with exceptional efficiency. It also covers subjects like human nature, personal grooming, positive attitude, attractive personality, learning potential, creating strong family bonds, behavior, language, and positive peer connections.
Content	• **Introduction of Personality:** Types of personality, Personality Development • **Factors of Association:** Relationship, Personality Traits, Developing Effective Habits, Emotional Intelligence. • **Self-Assessment:** Motivation, Introspection, Self-Appraisal & Self-development • **Types of Personalities:** Traits and individual benefits of each trait, – Introvert, Extrovert & Ambivert person, Effective Communication & Its key aspects. • **Confidence:** Decision-making skills, Leadership & Qualities of Successful Leader. • **Grooming:** Definition of Inner and Outer beauty, how to look attractive • **Relationships:** Management of change, good manners & Etiquties, Effective Speech, Understanding Body language, projective positive body language. • **Attitude:** Concept -Significance, Ways to develop a positive attitude. • **Stress Management:** Introduction, Causes, stress management techniques, Time management: Importance of time management, Techniques of time management
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	• After completion of the course, Students will be improving their Presentation Skills, Communication Skills, Interpersonal Skills

	• This course will be very helpful in work Place Etiquette, Meetings / Telephone / Group Etiquette • Students will learn a good Body Language, Self Confidence, Positive Attitude • Students will feel Self Motivated. • Students will learn how they can make their personality attractive by inner as well as outer grooming. • Students will understand the importance of Time management and Stress Management

Name of Faculty Mentor	**Rahul Dubey**
Course Title	**Static Web Development**
Objectives of Course	• Understand the Fundamentals of Web Technologies: • Learn and Apply HTML & CSS for Web Design
Content	**Introduction** Introduction to WWW, HTTP, Web Browser and Web Server. **HTML** Introduction, HTML Structure and tags Formatting Tags Style tag HTML Color Coding Anchor (Hyperlinks) <a> List, Grouping using div span Table Tag, Table headers, Table cells & rows, Colspan & Rowspan, Table design Attributes, Table Boarders, Table Exercise, HTML Image, HTML Audio & Video HTML Marquee Form Attributes Form Elements Form Validation Output, Options, opt group **CSS** Introduction, Advantages & Need Syntax & Types Attributes Color and Background CSS Cursor Text Fonts List Table Links Box model CSS Dimensions, CSS Selectors Element Selector ID Selectors Class Selectors Grouping Selectors Universal Selector CSS Display Positioning CSS visibility CSS Display CSS Scroll Bar CSS Positioning
Contact hrs	15 hrs.
Outcomes of Course	After completion of the course, students will be able to: 1. Apply various HTML tags and use them to Develop the user-friendly web pages. 2. Develop the modern web pages using CSS features with different layouts as per need of applications. 3. Create HTML pages with table and forms using CSS features with different HTML Tags. 4. Design responsive web pages using HTML & CSS.

Name of Faculty Mentor	**Rahul Kumar**
Course Title	**Digital Detox and Wellness (Part I, Part II, Part III & Part IV)**
Objectives of Course	1. To understand digital addiction, its types, causes, and symptoms. 2. To analyze the impact of digital consumption on various aspects of health. 3. To develop strategies for physical wellness, self-awareness, self-care, spiritualism, and engaging in hobbies. 4. To promote responsible technology use through effective time management, digital literacy, and online safety.
Content	• **Part I: Introduction to Digital Addiction/Toxification** **Week 1: Introduction to Digital Addiction** 1. Introduction and meaning of digital addiction 2. Types of digital addiction 3. Causes and contributing factors 4. Symptoms and signs of digital addiction **Activities:** Initial self-assessment of digital usage, group discussion on personal experiences with technology • **Part II: Impact/Side-effects** **Week 2: Impact on Physical Health** 1. Effects of prolonged screen time on physical health 2. Posture and ergonomic practices 3. Sleep disturbances and blue light exposure Activities: Workshop on ergonomic practices, sleep quality tracking for a week **Week 3: Impact on Mental Health** 1. Digital consumption and mental health issues: anxiety, depression, and stress 2. Social media and self-esteem

3. Digital fatigue and burnout

   Activities: Mindfulness meditation session, reflection journal on social media use

Week 4: Impact on Social Health

1. Social isolation and relationship issues due to digital overuse
2. Impact on communication skills and social interactions
3. Strategies to improve social connections

   Activities: Group discussion on social interactions, role-playing exercises

Week 5: Neurological Effects

1. Neurological impacts of excessive digital use
2. Brain function and digital addiction
3. Research findings on the neurological effects of digital consumption

   Activities: Guest lecture by a neuroscientist, case study analysis

- **Part III: Digital Detox Strategies**

Week 6: Physical Wellness

1. Importance of sleep and relaxation techniques
2. Exercise and physical activity benefits
3. Nutrition and healthy eating habits

   Activities: Group fitness session, nutrition workshop with a dietitian, relaxation techniques practice

Week 7: Self-Awareness and Self-Care

1. Identifying personal digital habits
2. Setting goals and creating a digital wellness plan
3. Mindful self-care practices

   Activities: Personal action plan development, guided mindfulness meditation, self-reflection exercises

Week 8: Spiritualism and Meditation

1. Understanding spiritualism and its role in digital detox
2. Meditation techniques and benefits
3. Integrating spiritual practices into daily life

   Activities: Guided meditation session, discussion on spiritual practices, personal

	spirituality plan creation **Week 9: Hobbies and Creative Activities** 1. Exploring hobbies like music, dance, singing, painting, etc. 2. Benefits of engaging in creative activities for digital detox 3. Finding and pursuing personal interests Activities: Hobby exploration workshops, creative activity sessions, group presentations on hobbies • **Part IV: Responsible Technology Use** **Week 10: Time Management and Prioritization** 1. Techniques for effective time management 2. Prioritizing tasks and activities 3. Balancing digital and non-digital activities Activities: Time management workshop, creating a balanced schedule, time tracking exercises **Week 11: Digital Literacy and Critical Thinking** 1. Understanding digital literacy and its importance 2. Developing critical thinking skills for digital content 3. Evaluating online information and sources Activities: Digital literacy exercises, critical thinking workshops, online content analysis **Week 12: Online Safety and Security** 1. Importance of online safety and security 2. Protecting personal information and privacy 3. Safe online behavior and practices Activities: Online safety workshop, developing a personal safety plan, discussion on cybersecurity threats **Week 13-15: Miscellaneous Activities.**
Contact hrs	15 hrs.

Outcomes of Course	After completion of the course, students will be able to: 1. Apply practical techniques for physical wellness, self-awareness, and self-care. 2. Identify the causes, types, and symptoms of digital addiction. 3. Take part in spiritual practices, meditation, and creative hobbies into daily routines. 4. Evaluate Health Impacts: Assess the effects of digital overuse on physical, mental, and social health. 5. Develop a personalized digital wellness plan to balance technology use.

Name of Faculty Mentor	**Rakesh Narvey**
Course Title	**Hindi language Poem and Songs writing**
Objectives of Course	1.To enhance the basic understanding of Hindi grammar in songs and poems 2. To analyze and critique notable Hindi essays. 3. To create the ability of drafting in Hindi 4. To create efficiency of expressing views in Hindi effectively and grammatically correct.
Content	General introduction of Hindi literature as Kavita, Kahani, Natak and Gaana.
Contact hrs	15
Outcomes of Course (As per OBE)	After completion of the course, students will be able to: • Write grammatically correct Hindi songs and poems. • Speak Hindi confidently • Qualify Hindi paper in various competitive exams. • Students will be able to present their literary works to an audience and receive feedback.

Name of the faculty Mentor	**Shailendra Kumar Dwivedi**
Course Name/Code	**Contribution of Indian Scientists in Scientific Development.**
Objectives	To motivate and educate the students about India's contribution from traditional to modern to the world of science & technology.
Contents	Indian Contribution of Bramhagupta, Aryabhata and Bhaskaracharya to Astrophysics in ancient times, Basic information of ancient and modern observation in India. Contribution of Indian Physicist J. C Boss (in the field of microwave optics). C.V. Raman (Discovery of Raman Effect), Meghnad Saha (Thermal Ionization) , Homi Bhabha (Role in the birth of the Indian Space Programme & Indian Nuclear Programme), Vikram Sarabhai (Nuclear Power in India), S.N. Boss (in the field of Quantum Mechanics), Raja Ramanna (Nuclear Programme) & A.P.J Abdul Kalam (in the field of Aerospace Engineering).
Contact hrs	15 Hrs
Outcomes	After completion of the course, students will be able to: 1. explain basic laws of physics and invention of indian physicists in Science & Technology. 2. solve many engineering problems through scientific approach. 3. create new ideas for the implementation of new technology.

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Name of Faculty Mentor	**Vaibhav Shivhare**
Novel Engaging Course Title	"भारत में विज्ञान की गौरवशाली परंपरा" (**Glorious Tradition of Science in India**)
Objectives of Course	**Objective of the Course:** The course explores India's rich scientific heritage, examining contributions from ancient to modern times, and highlights the connection between scientific thought and Indian philosophy. It fosters pride, critical thinking, and research, emphasizing the relevance of ancient wisdom in contemporary scientific research and sustainable development. **कोर्स का उद्देश्य:** यह कोर्स प्राचीन काल से आधुनिक काल तक भारत की समृद्ध विज्ञानिक धरोहर की खोज करता है, वैज्ञानिकों, गणितज्ञों, खगोलज्ञों और चिकित्सकों के योगदानों का अध्ययन करता है, और विज्ञान और भारतीय दर्शन के संबंध को उजागर करता है। यह गर्व, प्रतिक्रियाशील सोच, और शोध को प्रोत्साहित करता है, और आधुनिक विज्ञानिक शोध और स्थायी विकास में पारंपरिक ज्ञान के महत्व को रेखांकित करता है
Content	This course explores India's scientific contributions from ancient to modern times, covering key achievements in mathematics, astronomy, and medicine. Students will learn about the works of Indian scholars, the fusion of science with philosophy and spirituality, Ayurveda, and contemporary advancements such as ISRO's space missions and technological innovations. The course aims to provide a comprehensive view of India's rich scientific heritage and its impact on modern science. यह कोर्स प्राचीन से आधुनिक काल तक भारत के विज्ञानिक योगदानों का अध्ययन करता है, जिसमें गणित, खगोलशास्त्र और चिकित्सा में प्रमुख उपलब्धियों को शामिल किया गया है। छात्र भारतीय विद्वानों के कार्यों, विज्ञान के दर्शन और आध्यात्मिकता के संगम, आयुर्वेद और इसरो के अंतरिक्ष मिशन जैसी आधुनिक प्रगतियों के बारे में जानेंगे। यह पाठ्यक्रम भारत की समृद्ध विज्ञानिक धरोहर और आधुनिक विज्ञान पर इसके प्रभाव की व्यापक दृष्टि प्रदान करता है।
Contact Hours	15
Mode of Delivery	Blended
Outcomes of Course	1. Analyze the scientific heritage of India and its contributions to global knowledge. 2. Evaluate the integration of science, philosophy, and spirituality in Indian scientific thought. 3. Promote critical thinking and scientific exploration to foster innovation and sustainable development.
External Mentors / Collaborations	Dr Sadanand Damodar Sapre, former professor MANIT Bhopal Prof. C S Malvi, MITS Gwalior

Name of Faculty Mentor	**Shweta Chauhan**
Course Title	**Mastering Traditional Warli Art**
Objectives of Course	• To understand the historical context and cultural significance of Warli art. • To learn and apply traditional Warli painting techniques. • To develop artistic skills in intricate line work and symbolic representation. • To foster an appreciation for the Warli culture and its artistic expressions. • To encourage creative expression while respecting traditional methods and themes. • To engage with the role of Warli art in community rituals and storytelling
Content	**Introduction to Warli Art:** Overview of Warli tribe and their culture, Historical background and significance of Warli art, Exploration of traditional themes and motifs in Warli paintings **Traditional Techniques and Materials**: Introduction to traditional materials: natural dyes, rice paste, handmade brushes, Preparation of the earthen background, Techniques for creating the characteristic line work and patterns **Symbolism in Warli Art:** Understanding the symbolic representation of human figures, animals, and nature, Analysis of common Warli motifs and their meanings, creating a composition using traditional Warli symbols **Hands-on Practice:** Basic Compositions, Step-by-step guidance on creating a simple Warli painting, Practice sessions on drawing human figures, animals, and trees, Techniques for maintaining symmetry and balance in compositions **Advanced Techniques and Complex Compositions:** Exploring more intricate designs and patterns, combining multiple elements to create complex scenes, Techniques for depicting movement and storytelling in Warli art **Project Work**: Creating a Warli Painting, Conceptualizing and planning a final Warli painting project Applying learned techniques to create an original Warli painting
Contact hrs	15 hrs.
Outcomes of Course	After completion of the course, students will be able to: 1. Explain historical and cultural context. 2. Develop traditional materials such as natural dyes, rice paste, and handmade brushes. 3. Apply the characteristic line work and patterns of Warli art using traditional techniques. 4. Create a range of Warli motifs, including human figures, animals, trees, and natural elements.

Name of Faculty Mentor	**SOUMYAJIT GHOSH**
Course Title	**Smart meter- A gift to Sustainable Modern Society**
Objectives of Course	• To understand how smart meter works and promote sustainable energy practices • To enhance energy efficiency in our daily lives using smart electricity meter • To monitor health and fault detection of household appliances with the help of smart meters • To detect and prevent electricity theft.
Content	**Lecture 1**: Introduction to Smart Electricity Meters for a Sustainable Society **Lecture 2**: Evolution and Adoption of Smart Meters **Lecture 3**: Current and Future Trends in Smart Meter Technology **Lecture 4**: Overview of Home Appliances and Energy Consumption **Lecture 5**: Electricity Tariff Framework for a Sustainable Future [Time of Use (ToU) Pricing] **Lecture 6**: Overview of Electricity Theft **Lecture 7**: Electricity Theft Detection or identification with the help of Smart Meter **Lecture 8**: Role of Smart Meters in the Development of the Modern Electricity Grid (Smart Grid) **Lecture 9**: Home Energy Management using Smart Meter technology **Lecture 10**: Health monitoring & fault detection of Home Appliances **Lecture 11**: Educating consumers about their consumption patterns and encourages them to adopt more energy-efficient behaviors. **Lecture 12**: Demand Response and Load Management **Lecture 13**: Data Analytics for Energy Efficiency **Lecture 14**: Challenges in Smart Meter Implementation **Lecture 15**: Course Summary and Future Outlook
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	After completion of the course, students will be able to: 1. explain the functionality of smart electricity meter. 2. illustrate demand response and load management. 3. analyze energy consumption patterns of residential users for future prediction (forecasting). 4. maximize energy efficiency with the implementation of ToU (time of use price setting). 5. develop a modern sustainable society.

Name of Faculty Mentor	**Pranshi Jain**
Course Name/Code	**Sculpture Making (Part I & Part II)**

Objectives	**Part I (Sculpture Making: Clay)** This course will enable students to: 1. Build curiosity and creativity. 2. Enhance sculpting skills. 3. Learn the associated theories and history. 4. Develop the thought process into physical model. 5. Enhance innovative thinking. **Part II (Sculpture Making: Wood, Metal and Waste)** This course will enable students to: 1. Improve Sculpting skills. 2. Develop understanding of tools and techniques for carving hard materials. 3. Transform ideas into physical products. 4. Enhance innovative thinking. 5. Develop understanding of sculpting with varied materials.
Content	**Part I:** 1. Importance of course 2. Clay as a Sculpting material 3. Basics of Sculpting, concept making. 4. History and Importance in Architectural education. 5. Other materials (Epoxy clay, air-dry clay, polymer clay etc) 6. Hands-on modelling and exercises **Part II:** 7. Importance of course 8. Sculpting with Hard Materials like wood and metal. 9. Theories and history of Sculpting on Hard materials. 10. Tools and techniques for wood carving. Hands-on exercise on wood. 11. Tools and techniques for Metal carving. Hands-on exercise on metal. 12. Waste as a Sculpting material.
Contact hrs.	15

Outcomes	**Part I** After completion of the course, students will be able to: • Use pottery clay as sculpting material. • Evolve concept into a model. • **Express** ideas through modeling. • **Use** new materials like polymer clay, epoxy clay for sculpture. • **Develop** innovative designs and forms. **Part II** After completion of the course, students will be able to: • **Implement** the basics of sculpting with hard materials. • **Use** various tool and techniques associated with sculpture making • **Create** models in readable scales. • **Develop** innovative products and forms.

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Name of Faculty Mentor	**Versha Sinha**
Course Name/Code	**Photo Editing Software: Adobe Photoshop (2000070)**
Objectives	● **Introduction** to the Basics ● **Learn** all of the editing tools available in Photoshop. ● **Design** actual graphics that can be used for business or for fun.
Content	**Prerequisites**: Adobe Photoshop software downloaded & Laptop to practice on. Week 1: Introduction to the software : To use the Home Screen, create new files, set up the Photoshop interface, open images, work with multiple files that are open at once, save and export files in different file formats. Week 2: Quick Start Photoshop for Image Editing : To make your images "POP", retouch your photos in Photoshop, resize and save yourimages for social media. Week 3: Photoshop Layers : What layers are & how to use them, an overview of the layers panel, power of Photoshop Adjustment Layer. Week 4: Photoshop Tools : How to crop, straighten and fix perspective in Photoshop. Week 5: Photoshop Tools : How to color Images to B&W and B&W to color images. Week 6: Photoshop Tools : How to precisely edit photos in Photoshop using dodge, burn and sponge tools forediting, smudging, blending. Week 7: Photoshop Tools : How to Use the Tone Curve in Photoshop, basic color corrections that can be donewith the curves tool, the Levels tool to edit photos, how to add contrast with it. Week 8: Photoshop Tools : How to use the Stamp Tool, the Healing Tools for all retouching and the Eraser Tool inPhotoshop. Week 9: Photoshop Tools : "Selecting", in Photoshop. Using the Marquee Selection tool, the Lasso tool, the Magic Wand tool, the Quick Mask mode, the Mask selection, etc and editing the photos. Week 10: Photoshop Tools : How to Use Photoshop filters and brushes for more creative edits. Taking creativity to the next level with Photoshop filters. Week 11: Adobe Photoshop Bridge : How to use free plugin Adobe Photoshop Bridge to manage digital assets, Week 12: Adobe Photoshop Actions : How to Use Photoshop Actions, a powerful tool for helping streamline the workflow. how to record specific steps taken to edit the photos and save it (as an action) to be re-used on other photos. Week 13: Light Effects : How to add light, enhance existing light, enhance and add color to the sunsets and sunrises, create lens leaks, add lens flare and much more. Week 14: Other Photo Editing Softwares : Information about other advanced photo editing softwares Adobe Lightroom,Coreldraw, etc.
Contact hrs. per semester	15
Outcomes	Get a thorough **understanding** of how to **use** Adobe Photoshop for **fun activities,college assignments** or as a **career opportunity.**

Name of Faculty Mentor	**Khushboo Punia**
Course Title	**Sustainable materials for a green future.**
Objectives of Course	Explore the development and application of sustainable materials, including green composites, biodegradable polymers and ecofriendly alternatives to traditional materials.
Content	7) Introduction to Sustainability and Materials Science. 8) Categories of Sustainable materials. 9) Sustainable material design and development. 10) Innovations in Sustainable materials. 11) Overview of several synthesis techniques. 12) Practical applications and Industry case study.
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	After completion of the course, Students will be able to; 1) Understand the need for sustainable materials. 2) A comprehensive and practical approach to understanding and innovating in sustainable materials. 3) Blend theoretical knowledge with real-world applications. 4) Contribute to the development of a more sustainable future.

Name of Faculty Mentor	**Dablu Kumar**
Course Title	**Electronics Workshop: PCB Design & Fabrication**
Objectives of Course	To create interest in software & hardware technology and hands-on experience on WET PCB fabrication process in electronics domain.
Content	• Introduction: Understand the electronic components, measuring instruments and tools. • Study of PCB designing using CAD based software. • Understand the schematic, layout and tracing of Electronic Circuits in LTSPICE or EAGLE software. • Study of PCB fabrication using WET process. • Finaly, Construction of a small project as per student's interest, in electronics based on certain applications.
Contact hrs	15 hrs.
Outcomes of Course	After completion of this course, the students will be able to: 1. build schematic and layout of an electronic circuits. 2. design and fabricate PCBs for different electronics circuits.

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Name of Faculty Mentor	**Hardev Singh Pal**
Course Title	**Mastering LaTeX: Typesetting for Scientific Writing**
Objectives of Course	1. To familiarize the students with a scientific writing tool LaTex. 2. To help the students to excel at typesetting equations while writing long, structured documents. 3. To make the students excel to create professional documents in a smarter way.
Content	Introduction to LaTex, advantages over conventional typesetting software, Installing the LaTex Software. Document Structure: Creating a Title, Sections, Labelling, Table of Contents etc. Typesetting Text: Font Effects, Colored Text Font Sizes Lists, Comments & Spacing, Special Characters. How to add Tables and Figures. Equations: Inserting Equations, Mathematical Symbols, and formulas. Inserting References: Inserting the Bibliography Styles. Technical Report: Writing Thesis, Book Chapter, and Journal Paper Preparation.
Contact hrs	15 hrs.
Outcomes of Course **(As per OBE)**	After completion this course, students will be able to: 1. define LaTeX syntax and document structure for effective typesetting. 2. build graphs, tables, and mathematical expressions into LaTeX documents proficiently. 3. explain technical information clearly through well-organized and visually appealing LaTeX documents. 4. solve LaTeX-related problems and errors encountered during document preparation. 5. create professional-quality documents using LaTeX.

Name of Faculty Mentor	**Varun Mishra**
Course Title	**Analytical Modeling of Semiconductor Devices**
Objectives of Course	To gain knowledge and designing skills related to mathematical modeling of semiconductor devices.
Content	• Introduction: Basic of PN-junction diode. • Analytical modeling: Derivations of current expression for diode. • Implementation in MATLAB: Basic equations representations and derived current expression of semiconductor devices. • Introduction to other MOS-based devices.
Contact hrs	15 hrs.
Outcomes of Course (As per OBE)	After completion this course, students will be able to: • Analyze semiconductor devices. • Develop analytical/compact models for diode. • Implementation of analytical models using MATLAB.