		Pro	ogramme						Course				- Employment/Career	Manad
S.No.	Institute	UG/PG	Name	Name	Code	MSC/Faculty Name	Course Essentials	Entry Requirements	Objectives	Content	Teaching and Structures	Outcomes	Possibilities	Mapped SDG
1	UIAHS	PG	M. Sc. Forensic Science	Forensic Entomology	20FSC-756	Mr. Sahil Sharma	Basic knowledge of Forensic Science, Biology and Zoology	Bachlor of	1. To provide overview of the entomology, it's significance in urban and rural area's. 2. To make students skilled in Forensic entomology; estimation of PMI post 72hrs. 3. To make students aware about the collection, preservation and identification of isects of Forensic significance.	Biology and Taxonomy of Entomology. 2. Insect Behaviour and response to environmental factors. 3. Stages of Metamorphosis. 4. Insects of Forensic importance. 5. Collection, preservation and identification of insects. 6. Artificial rearing of insects. 7. Insects of Urban and store products. 8. The concept of Aquatic entomology. 9. Chemical attraction and Maggot mass. 10. Estimation of PMI/PMSI	PPT/Lectures/Video	1. Understand and draw relevant conclusions from existing entomological studies. 2. Know about various factors affecting development time and succession rate if Insects. 3. To apply the knowledge of entomology in estimation of PMI/PMSI.	Forensic Labs, medical labs, Private detective/investigator.	10, 16
2	UIAHS	PG	M. Sc. Forensic Science	Law and Ethics in Forensic Science	20FST-755	Mr. Sahil Sharma	Basic knowledge of Forensic Science and Law	Bachlor of Science	To provide students with detailed knowledge of the various law related to Forensic Science and Expert testimony.     To familiarize students with different laws related to cognizable and non cognizable offences.	Importance of Daubert's law and Fries law. 3. Sections pertaining to Evidence and Expert witness.  4. Report writing. 5. Introduction to IPC and Dowry Prohibition Act. 6. IPC setions related to crime against women 7. Punishment provisions for taking, giving and demanding dowry. 8. The punishment provisions for dowry death in IPA and IPC. 9. International control of the IPC and IPC. 9. International control of the IPC and IPC. 9.	PPT/Lectures/Video	1. To apply the different sections of IEA in Forensic Science and laws related to cognizable and non cognizable offences and expert and expert opinion.  2. Know about various punishment provisions under DP-act act and IPC.  3. Know about various punishment provisions under IT act act and NDPS act act and NDPS act.	Forensic Labs, medical labs, Private detective/ investigator, law firms.	10, 16
3	UIAHS	PG	M. Sc. Forensic Science	Forensic Biology and Serology	21FSH-652	Dr. Priyanka Verma	The course further emphasizes on the concept of techniques that are highly used for identification and confirmation of evidences and their Forensic application .	Bachlor of Science	To familiarize students to identify & examine the biological evidences recovered at the crime scene and make them presentable in court of law	Blood grouping from wett and dried biological samples. 2. Collection and preservation of biological samples and its relavance to solve crime 3. plants yielding drugs of abuse and its forensic implication 4. Paternity dispute cases	practical and hand on training with demonstrations	participants will be skilled forensic biologists so as to gain the knowledge of forensic analysis of biological evidences to help investigating agencies.	in forensic or mobile labs , for justification in court of law, medical labs, private investigators	16

4	UIAHS	PG	M. Sc. Forensic Science	Questioned Documents	21FSH-614	Dr. Ridamjeet kaur	Forensic analysis pertaining to documents such as handwriting analysis, signature analysis, printed document anlaysis, forensic paper and ink analysis. alterations, secret writings examination.	M.Sc. Forensic science	skilled in any kind of forensic examination	Introduction to Questioned documents, Nature and scope, Forensic analysis of paper, Forensic analysis of inks, Forensic analysis of erasures, addditions, deletions and obliterations. Secret writing examination, handwriting analysis and its principles, signature comparison, forgery of signatures and its type, printed documents analysis	PPT/Lectures/Video	The students will be learning the fundamental of Questioned document analysis, handwrtign analysis and all the aspects of document examination related to criminal investigations.	Private investigator as Questioned document expert, Questioned documents expert in private companies such as banks, insurance, hospitals etc SSA, SO and SSO in documents division of SFSLa and CFSLs.	16
5	UIAHS	UG	B. Sc. Forensic Science	Fingerprint Examination	21FSH-152	Dr. Tina Sharma	The Course aims to provide students with brief overview of the various sections of importance of fingerprint as the most infallible means of identification, its classification system and other impressions importance in linking criminal to crime scene	12th with Medical or Non medical stream	The course attempts to address the specific topics relevant to Fingerprints. The focus is on the developing, examining, and handling of fingerprint evidence	The student will be able to produce the basic concepts of the Forensic Fingerprint Examination. The student will be able to identify the correct fingerprint, it's handling, and preservation for further representation.	PPT/Lectures/Video	The students will be learning the fundamental of Fingerprint analysis, and all the aspects of latent fingerprint development related to criminal investigations and objective report writing techniques.	Fingerprint Bureau, Forensic Labs, Courtroom expert witness	16
6	UIAHS	PG	M. Sc. Forensic Science	Environmental Forensics	21FST-763	Dr. Tina Sharma	The course begins with the study of importance of ecosystem and effect of pollution on air, water and soil. Various Biomarkers and concept of techniques that are highly used for determine the environmental details are studied. Identification parameters and significance of diatoms in pure and polluted	Bachlor of Science	To develop research skills in testing hypotheses relevant to applied environmental sciences. To make students skills in drawing relevant conclusions by estimating the methods of identification sudies. To apply nanotechnology in forensic and pure sciences	The student will be able to understand ecosystem and pollution of environment in detail	PPT/Lectures/Video	The students will be learning the fundamental of Environmental forensics, and all the aspects of Pollution related to air, water and soil.	Pollution Control Board, Forensic labs	13,16

7	UIAHS	UG	ВРТ	COMMUNITY REHABILITATION	21PTH206	SARFARAZ ALAM	The course begins with the study of importance of ecosystem and effect of pollution on air, water and soil. Various Biomarkers and concept of techniques that are highly used for determine the environmental details are studied. Identification parameters and significance of diatoms in pure and polluted	12th with Medical subjects	The subject serves to integrate the knowledge gained by the students in Community Physiotherapy.To introduce various advancement and evidence based practical knowledge of other areas with skills to apply these in clinical situations of health and disease and its prevention	This subject will help the students to gain knowledge of community based physiotherapy, rehabilitation and disability. Screening and evaluation methods of disability,rehabilitation and role of Physiotherapy.	PPT/Lectures/Video	The objective of the course is that after the specified hours of lectures and demonstrations the student will be able to identify rehabilitation methods to prevent disabilities and dysfunctions due to various disease conditions	PHC, community healthcare departments,hospitals	3
8	UIAHS	UG	ВРТ	SOCIOLOGY	21PTT104	SHIVANGI PATHANIA	The course begins with the study of social aspects, mental and health disorders, their managemnt and also about the society	12th with Medical subjects	This course is designed to introduce the students to basic of sociology in the field of healthcare. This course encourages students to learn and understand the main issues in the society and how all these put impact on the health of the individual and the society. They will also learn about the healthcare groups and social groups for differently able populations	Sociology will introduce student to the basic sociology concepts, principles and social process, social institutions in relation to the individual, family and community and the various social factors affectingl the family in rural and urban communities in India will be studied.	PPT/Lectures/Video	At the end of the course, the candidate will be able to correlate the health problems according to the social and culture of the society	NGOs, PHC, Healthcare centers	3
9	UIAHS	UG	ВРТ	HEALTH PROMOTION AND FITNESS	21PTT302	SAI KRIPA	The course include the definition of health, the need of good health and how to maintain the same.	12th with Medical subjects	The course aims to introduce the concept and application of healthcare delivery system in India. To introduce various advancement and evidence based practical knowledge of healthcare system.	This subject will help students to learn the new concepts of healthcare delivery system in India and in developed countries. The students will gain knowledge to the various programs and measures being initiated by the government and private sector in development of health care system.	PPT/Lectures/Video	Student will learn about the concept of health care system in India Student will learn about the concept and application of various health programs and policies in India and abroad.Student will learn about the clinical implication of various health policies and programs by the government.	PHC, Hospitals, NGOs	3

10	UITTR	UG	BPED	Health Education	21EPT-112	Dr. Deepak Bangari	Course develop students in the domain of Physical Fitness and welness	Any graduation in Physical education or physical education as a subject	Provide theoretical and Practical inputs in order to provide an integrated and holistic understanding and developing positive attitude, values, skills and behavior related to Health Education.	Health: Introduction, Concept, Spectrum and Determinants of Health, Health Education: Introduction, Aims, Objectives, Principles of Health Education and Methods of Communication in Health Education, Health Problems: Introduction, Communicable and Non-Communicable Diseases, Obesity, Malnutrition and Adulteration in Food, Personal and Environmental Hygiene: Introduction, Personal and Environmental Hygiene for Schools, Objectives of School Health Services, Role of Health Education in School.	PPT/Lectures/Video/ Case Study	Accept individual and collective responsibility for healthy living at home, college, university and in the community and Health Status. Create awareness among students about safety Measures. Acquaint them with first Aids Measures about common sickness and injuries.	Physical education and health instructor, GYM instructor and fitness trainner	3
11	UITTR	UG	A.B.Ed and <u>B.Sc</u> .B.	I Peace and Value Education	EDT-408	Dr.Guneet kaur	Course help students to acquire knowledge and understanding about the importance of peace and value Education. This course helps the learner to be aware of various kinds of values and to inculcated them in their daily lives.	Graduation	To understand the concept of peace and value education along with the dynamics of transformation of violence into peace. To realize the significance of Values in Self-development and familiarize the nature of conflicts and their resolutions and to imbibe the knowledge, attitudes and skills needed to achieve and sustain a global culture of peace and values	Meaning, Nature and concepts of peace Education – Aims and objectives of peace Education-Status of peace education in the curriculum.  Non – Violence for Peace and Conflict Resolution, Relationship between peace and violence  Bases of conflicts-positive and negative aspects of conflicts-Types of conflict-conflict management, conflict resolution-Role of peace Education in resolving conflict Reducing conflicts among students  Value Education- Aims and objectives- status of value education in 21st century. Values: Meaning, Definitions, Nature and concepts of values- Classification of values, Sources of Values- Socio- Cultural tradition, Religion and Constitution. Global Issues and Peace Movements Human rights, Preservation of Ecology, population	PPT/Lectures/Video/ Case Study	Learn the dynamics of transformation of violence into peace and understand concept of peace and value education Equip the students with significance of Values in Self-development and the nature of conflicts and their resolutions Students will ascertain the knowledge, attitudes and skills needed to achieve and sustain a globa culture of peace and values and get aware of global	School Teachers(TGT/PGT)/Coa ching Centers/Tutions	16
12	UITTR	UG	B.A.B.Ed and B.Sc.B.Ed	Teaching and Learning	20EDT-257	Dr.Daisy	Course help students to acquire knowledge and understanding about the learner and the teaching- learning process to bring effectiveness in the learning outcomes	Graduation	To understand the process of teaching and learning. To acquire knowledge and understanding about the learner and the teaching-learning process to bring effectiveness in the learning outcomes To gain an understanding of factors affecting learning	Concept of teaching and learning, relationship between teaching and learning. Principles and characteristics of teaching and Learning. Principles and characteristics of teaching and Learning. Phases of teaching and Levels of Teaching. Concept and principles of selection and utilization of learning resources. Models of teaching: Meaning, Assumptions and Fundamental Elements of a Model of Teaching. Role of Information and Communication Technology (ICT) in teaching and learning. (Web based teaching learning, hybrid teaching-learning, flipped classroom) Action Research – Meaning, goals and steps in action research. Class Communication – Concept, Process and Types. Barriers and remedial measures of class room communication – Types of Classroom Problems. – Solutions of Classroom Problems. Soft Skills in teaching-learning process Evaluation: need and importance, tools of evaluation, formative, summative, diagnostic evaluation, continuous and comprehensive evaluation (CCE).	PPT/Lectures/Video	After completing this course students will be able to explainn and analyse the basis factors of teaching	School Teachers(TGT/PGT)/Coa ching Centers/Tutions	4

13	UITTR	UG	BPED	Yoga Education	21EPT-114	Ms. Vandana Singh	Course can supplement school and university education. It can prepare the students physically and mentally for the integration of their physical, mental and spiritual faculties so that the students can become healthier, saner and more integrated	Any graduation in Physical education or physical education as a subject	To enable the student to have good health. To practice mental hygiene. To possess emotional stability. To integrate moral values. To attain higher level of consciousness.	Yoga: Meaning and Definition. Systems of Yoga: Bhakti yoga – Jnana yoga – Raja yoga – Karma yoga. Eight limbs of yoga: Yama – Niyama – Asana – Pranayama – Pratyahara – Dharana – Dhyana – Samadhi. International Yoga Day. Effect of yoga on various systems of body: Muscular system – Circulatory system – Nervous system – Digestive system. Meaning of Asana – Classification – Guidelines for practicing asanas, difference between asana and physical exercise- Techniques and benefits. Standing Asana: Thadasana – Trikonasana – Padhahastasana. Sitting Asana: Padmasana – Patchimottasana. Supine position: Sarvangasana – Halasana. Influences of relaxative, meditative posture on various system of the body. Types of Bandhas and Mudras	PPT/Lectures/Video	To be a successful trainer in Yoga and contribute towards creating awareness among everyone about this old Indian tradition tha helps in transforming body and mind and promoting well being of the society.	V	3
14	UITTR	UG	B.A.B.Ed and B.Sc.B.Ed	Psychological Foundations of Education	22EDT-121	Ms.Vandana	integrated integrated members of the society and of the nation.  The course begins with understanding the concept of educational psychology as well as how we can use psychology to make our teaching learning process effective which has a great impact on our education system. This is widely utilized in all educational spheres. The students are also introduced with	Graduation	1. To provide students with detailed knowledge of the educational psychology. 2. To familiarize students with different stages of Growth and development. 3. To enable the students to understand the concept of Learning and Transfer of Learning. 4. To provide detail knowledge ofconcept of personality and factors affecting	Educational psychology-concept, nature, scope and importance. Importance of psychology for the teachers.  Growth and development: meaning, difference, principles, Influence of heredity and environment. Theories of Individual Development: Piaget, Kohlberg and Vygotsky-Constructs and Critical Perspectives.  Adolescence: the concept and its meaning in various perspectives namely physiological, cognitive, sociological and chronological Learning: Meaning, process and factors affecting learning of an individual, Trial and error theory, classical conditioning theory and insightful learning Transfer of Learning: Meaning, Types and Theories Intelligence: Nature and characteristics, Theories of intelligence (Critical perspectives of the construct of Intelligence), Spearman's two factor theory, Thornike's Theory, Thurstone's Primary Mental Abilities, Multi-Dimensional Intelligence.	PPT/Lectures/Video	At the end of the course students will be able to define and explain concept of Learning and Personality with special reference to exceptional children	School Teachers(TGT/PGT)/Coa ching Centers/Tutions/Research /NGO/Rehabilitation centers	4.10
15	UITTR	UG	BPED	Kinesiology And Biomechanies	20EPT-505	Dr. Bindiya Rawat	different concepts like  Course provides key information on the most effective and safest movement patterns, equipment, and relevant exercises to improve human	Any graduation in Physical education or physical education as a subject	personality  This course enable students to- Know the concept and purpose of  Biomechanics and  Kinesiology  Able to differentiate  Kinematic and  Kinetic Parameters  Knowledge about	Meaning and Definition of Kinesiology and Sports Biome, Importance of Kinesiology and Sports Biome, Importance of Kinesiology and Sports Biome, Importance of Kinesiology and Sports Biomechanics to Physical Local, Teacher. Athletes and Sports Coaches.  Terminology of Fundamental Movements Fundamental concepts of following terms - Axes and Planes. Centre of Gravity, Equilibrium, Line of Gravity Movement Coupling, Movement Rhythm, Movement Flow, Successive Movement, Simultaneous Movement, Cyclic and a Cyclic Movement, Movement Precision.	PPT/Lectures/Video/ Ground Activities	After completing this course, the students will be able to- Understand and to implement the practical application of Biomechanics in Sports and games. To enhance the knowledge of Auxiliary and Fundamental Movements in axes and planes To understand the basic structure and classification of Joint and Muscles To understand the nature of the novement	Sports and fitness experts, Physical Trainner, Fitness coach and health educators	3

16	UITTR	UG	BPED	Sports Training	20EPT-454	Ms. Dilpreet Kaur	Sports training is a special process of preparation of sports persons based on scientific principles aimed at improving and maintaining higher performance capacity in different sports activities. It is a particular type of training designed to improve fitness and abilities to perform in a given sport. It includes strength in training.	Any graduation in	This course enable students to- To promote concepts of scientific sports training approach To describe evident facts about training load, adaptation and recovery To provide diagnosis to improve motor components To inculcate periodized sports training practices for efficient sports performance	Strength– Definition, Types, Mean and Methods of Strength Development Speed– Definition, Types, Mean and Methods of Speed Development Endurance-Definition, Types, Mean and Methods of Endurance Development Coordination– Definition, Types, Mean and Methods of coordination Development Flexibility– Definition, Types, Mean and Methods of Flexibility– Definition, Types, Mean and Methods of Flexibility Development.	PPT/Lectures/Video/ Ground Activities	After completing this course, the students will be able to- Understand scientific sports training means and methods patterns Understand importance of training load, adaptation, and recovery to improve sports performance Enhance understanding about tailor-made diagnostic means and methods to develop motor components Encourage	GYm Instrucor, Personal Trainnner and Physical training Instructor	3
17	UITTR	UG	B.A.B.Ed and B.Sc.B.Ed	Enviironmental Scienceand Waste Management-1	22EDT-157	Dr.Guneet	The course begins with the basic scientific knowledge and understanding of world from an environmental perspective. Following that, this introduces to different types of disaster and measures involved in strengthening the capacity to reduce the impact of disaster. The course further provides an overview on the complexities	Senior Secondary	To familiarize students with basics of environmental sciences, waste, and disaster management.	Environment & Surroundings -Definition, components, segments, basic need for Public Awareness. Biodiversity-introduction & its conservation. Introduction to Environmental Impact Assessment.  Air and its composition-structure and composition of Atmosphere, Hydrosphere, Lithosphere and Biosphere.  Environmental education and awareness. Body pats & its function and use of First Aid. Learning principles-Scope relation to science and social science Natural Resources and its care –Renewable &Non Renewable resources Forest resources, Water Resources, Mineral resources, Land resources, Energy resources  Ecology as an inter-disciplinary science. Origin of life and speciation. Human Ecology and Settlement. Ecosystem Structure and functions: Structures - Biotic and Abiotic components.  Ecosystems -Energy flow models, Shelter, Food chains and Food webs. Food &food crops	ppt	After completing this course students will be able to dsfine different dimensions of environmental studies; problems related to the environmental degradation & the remedial steps taken to address them. and able to explain different type of disaster that occur in nature consequently learning to develop the preparedness and remedial techniques and can dear the course of the consequently learning to develop the preparedness and remedial	School Teachers(TGT/PGT)/Coa ching Centers/Tutions	7,13
18	UIE	UG	BE Mech	Total Quality Management	MEY-356	Dr. Amman Jakhar	Basics concept of Quality and management	12th with Non medical stream	Apply the concepts of quality, total quality management, JIT, planning, process management, bench marking and quality systems	Concept and definition of quality Total quality control (TQC) and Total Quality Management (TQM), salient features of TQC and TQM. Total Quality Management Models, benefits of TQM. Quality Management Models, benefits of TQM. Quality and Total Quality Management: Excellence in manufacturing/service, factors of excellence, relevance of TQM. Just-in-time (JIT): Definition: Elements, benefits, equipment layout for JIT system, Kanban system MRP (Material Requirement planning) vs JIT system, Waste elimination, workers involvement through JIT: JIT cause and effect chain, JIT implementation. Customer Satisfaction, data collection and complaint, redressal mechanism. Planning Process: Policy development and implementation: plan formulation and implementation. Process Management: Factors affecting process management, Quality function development (QFD), and quality assurance system. Total Employees Involvement (TEI): Empowering employees: team building: quality circles: reward	PPT/Lectures/Video/ Case Study	Apply the concepts of quality, total quality management, JIT, planning, process management, bench marking and quality systems. Classify the quality total quality management, JIT, planning, process management, bench marking and quality systems. Compare the functions of different types of quality, total quality management, JIT, planning, process management, JIT, planning, process management.	Quality Control Engineering, QCA advisor, Supervisior QCA	4,8

19	UIAHS	UG	MLT	Social and Preventive Medicines	MLO-260	Ms Shanoo	Course is related to community health , Public Health & for disease prevention.	BSc	The student would be able to produce knowledge regarding Community health.Students would be able to produce socially abused drugs effects.	Concept and Overview of Community health relacted to drug abuse .Cocepts regarding commonable disease . Senitization programmes.	Lecture/PPT/Practicla s/videos	To awear students regading community health. To prepare students how to prevent from transmisssion of different disese.	In Medical Laboratory & Hospitals	3
20	UIHAS	PG	M.Sc. Forensic Science	Crime scene Management and Criminal Justice system	21FST-611	Priya Sharma	This course introduces students about Criminal Justice system in India and imporatnee of a Forensic expert in the court of law.	B.Sc.	The course begins with the theoretical study of crime scene, criminal, criminology and different type of physical and trace evidences used for Forensic examinations. The students are then introduced to different Laws which are related to general crimes and opinion of a Forensic expert in court of law	I.Organizational setup of Forensic Science 2. Crime Scene Management 3. Indian Evidence Act 4.     Forensic Examination of Physical evidences 5.     Hierarchy and powers of Courts in India 6.     Constitution of India 7. Fundamental Rights 8.     Structure of Police Organizations in India	Lecture/PPT/Case studies/Practicals	To understand organizational set up of the forensic science laboratories, the court procedures and how to apply precise and standard evidence analysis techniques for crime scene investigations, To judge the intentions, criminal behaviour and criminal profile of the person involved in the crime and able to sequentially form the opinion about it. To apply the different laws and		10.16
21	UIAHS	PG	M. Sc. Forensic Science	Forensic Pharmacology	20FSA-755	Gaurav Singh	Basic knowledge about drugs, poison and their metabolism.	BSc.	that the student	General pharmacology, Routes of admintration, Introductory Toxicokinetics, Biotransformation, Basic idea of mechanism of Drug action, Drug metabolism and Drug Toxicity, movement of drug molecules across cell membranes, the blood-brain barrier and the placental filter, Drug distribution, metabolism and elimination. Drug bioavailability and half-life.Detection of poison on the basis of their metabolic studies, Identification of the drugs & their metabolites by GC-Mass & LC-Mass.	Lecture/PPT/Case studies	Skilled in interpreting all types of poisons from the dead body symptomatically, qualitatively as wel as quantitatively. Qualified experts to handle any type of toxicological evidences and analyse them. Will be able to describe Basic principles of Toxicology and categorized/ifferent type of poisons.	Pharmacovigilence officer, Forensic Expert, Scientific officer, Scientific assitant, Chemical laboratories , Forensic Lab, Dope test laboratory	3,16

22	UIE	UG	BE - AME	Alternative Fuels and Emissions	AEC-451	Dr. Navdeep Sharma Dugala	Identify the need for alternate fuels with respect to growing environmetal concerns and characterize prospective alternate fuels. The hazards and emissions caused by the combustion of conventional fossil fuels and methods developed to control them.	12th Non Medica or Diploma in Engineering Course	Alternate fuels and Emissions is the major research area in the field of Automotive Engineering with respect to environment. The main objective of this course is to look for potential substitutes to the presently used conventional fuels and reduce hazardous harmful emissions.	Introduction to Alternative Fuels, Alcohols, CNG, LPG, Biodiesels, Hydrogen Gas and Hydrogen Fuel Cell Technology, Biogas and Electric Vehicles. Emission Control in SI and CI Engines, Emission Measurement Principles and Techniques. Emission Norms, Standards and set Regulaions.	PPT/Lectures/Videos	1. Identify the nece for alternate fuels and characterize prospective alternate fuels 2. Categorize, interpret and understand the essential properties of fuels for IC engines 3. Compare the working and operations of various emission measurement devices 4. Investigate the emission control factors for SI and CI engines 5. Analyze the implement		7, 13
23	UIE	UG	Mechatronics engineering	Mechatronics engineering	MTB-451	vinay shah	Industry 4.0 is to make manufacturing — and related industries such as logistics — faster, more efficient and more customer-centric, while at the same time going beyond automation and optimization and detect new business opportunities and models.	12th Non Medica or Diploma in Engineering Course	This course is designed to offer learners an introduction to Industry 4.0 (or the Industry 4.0 (or the Industrial Internet), its applications in the business world. Learners will gain deep insights into how smartness is being harnessed from data and appreciate what needs to be done in order to overcome some of the challenges.	The Various Industrial Revolutions, Digitalization and the Networked Economy, Drivers, Enablers, Compelling Forces and Challenges for Industry 4.0, The Journey so far: Developments in USA, Europe, China and other countries, Comparison of Industry 4.0 Factory and Today's Factory. Trends of Industry Big Data and Predictive Analytics for Smart Business Transformation, Internet of Things (IoT) & Internet of Services, Smart Manufacturing, Smart Devices and Products, Smart Logistics, Smart Cities, Predictive Analytics	PPT/Lectures/Videos	Demonstrate an understanding of the standardisation framework for Industry 4.0Identif and distinguish technologies under the Industry 4.0 principles in a national and global context. Evaluate the enabling technologies of Industry 4.0. Elaborate the case studies, applications and business issues in Industry 4.0	Quality Control Engineering, QCA advisor, Supervisior QCA,Controls Systems Engineer - Automation	4,9
24	UIAHS	PG	MSc Forensic Sc	Advanced Questioned document examination	21FST 723	Dr O P Jasuja	Examination of handwriting, signature and other artefacts of a document	BSc	Comparison and identification of signature, handwriting, typewritten and printed matters, detection of forgery of documents	Documents Examination: Scope, Ink examination, writing instruments, Printing techniques, identification of printing devices, Sequesnee of strokes determination	Lecture/PPT/Demons ration/videos	To examine the Challenged document from the eye of an expert., To understand and apply the concepts in determining the sequence of two intersecting ink lines., To give expert testimony ir court on forged signatures, printed material, currency notes and important documents.	Forensic sciLab, independent consultant	10,16

25	UIAS	UG	BSe Agriculture Hons	Introductory Agro- meteorology & Climate Change	21AGH218	Dr. Asma	: The course introduces the study of agrometeorology, general climatology and factors of weather and climate affecting growth and development of crops. The course further emphasizes on weather forecasting and effect of climate		Understanding the basic of principles of agro-meteorology.     Expose the students to basic concepts of different weather elements.     Provide orientation to the students regarding the effect of climate change on agriculture.	Meaning and scope of agricultural meteorology, Earth atmosphere- its composition, extent and structure, Atmospheric weather variables, Atmospheric pressure, its variation with height. Wind, types of wind, daily and seasonal variation of wind speed, cyclone, anticyclone, land breeze and sea breeze. Nature and properties of solar radiation, solar constant, depletion of solar radiation, short wave, longwave and thermal radiation, net radiation, albedo. Atmospheric temperature, temperature inversion, lapse rate, daily and seasonal variations of temperature, vertical profile of temperature, Energy balance of earth. Atmospheric humidity, concept of saturation, vapor pressure, process of condensation, formation of dew, fog, mist, frost, cloud. Precipitation, process of precipitation, types of precipitation such as rain, snow, sleet, and hail, cloud formation and classification. Artificial rainmaking, Monsoon- mechanism and importance		Articulate and retain knowledge relevant to principle of agrometeorology Gain the information of weather and climate which are considered as basic input in agricultural planning viz., land preparation, ploughing, harrowing etc. Explain Weather hazards, Weather forecasting and impact of climate	consultant, Specialistin Construction agencies, transport firms, and energy production, and agricultural departments	13
							change on agriculture.			in Indian agriculture, Weather hazards . Agriculture and weather relations. Modifications of crop microclimate, climatic normals for crop and livestock production. Weather forecasting-types of		change on agriculture Acquaint with the meteorological Understand the basic concepts of food science and		
26	UIAS	UG	BSc Agriculture Hons	Principles of Food Science and Nutrition	21AGT209	Dr. Reeshu	The course is a detailed description of food nutrition. The students wil be learning the basic concepts of food science, food composition and chemistry, food microbiology, food processing and fermentation etc.	12th with Medical or non- medicaland Agriculture subjects	To understand the basic concepts of food science and composition.     To understand about fermentation and food processing.     To understand food microbiology	Concepts of Food Science , Food composition and chemistry , Food composition and chemistry ; Food microbiology (Production of fermented foods); Principles and methods of food processing and preservation , Food and nutrition, Malnutrition (over and under nutrition), nutritional disorders Energy metabolism; Balanced/ modified diets Menu planning, New trends in food science and nutrition	Lecture/PPT/Demons ration/videos	able to identify the spoilage of various foods both raw and processed and their cause of spoilage Practical implementation of methods of food processing and preservation Clear	Dieticians, Food industry	3
27	UIAS	UG	BSc Agriculture Hons	Renewable Energy and Green Technology	21AGH212	Dr. Harpal	The course begins with introduction farm machinery and sources of power in agriculture industry. This course deals with utilization of modern machinery to increase the growth of production of crops to fulfill the upcoming requirement of food industry in country. Moreover this course also explain about	12th with Medica or non-subjects and Agriculture subjects	. To acquaint the students with fundamental concepts and principles of Renewable energy and green technology used in agriculture industry.  2. To provide the knowledge of various gadgets used in different sectors of agriculture industry.  3. Understanding the future perspectives and application of various innovative technologies in agriculture production improvement	Classification of energy sources, contribution of these of sources in agricultural sector, and their application, Familiarization with biomass utilization for biofuel production. Application of biofuels. Familiarization with types of biogas plants, solar energy gadgets Implementation of solar cooker and solar water heater operations., gasifers and their utilization and applications. Introduction of bio alcohol, biodiesel and bio oils with their production. Applications of bio alcohol, biodiesel and bio oils and their utilization as bio energy resource, solar energy, collection and their application Introduction and applications of solar drying Introduction and applications of solar pond Introduction and applications of solar pond Introduction of solar photovoltaic system and their application	Lecture/PPT/Demons ration/videos	understandine of Understand the need and status of renewable energy and green technologies. Identify the different types of innovations used to produce renewable energy. Elaborate renewable energy and green technologies used in agriculture industry. Learn the basic concept and technologies associated with of solar energy, wind energy. Application of	Conservation Scientists, E	7

28		UG	BE - PE	Unconventional Energy Resources	PET-361	Abhishek Ranjan	This course provides an introduction to Coal bed Methane, from a basic understanding of CBM to exploration, appraisal and development of the resource. The goals of course is to provide the students with a detailed insight into the physical and thermodynamic nature of hydrate as they appear as and industrial	12th Non Medical or Diploma in Engineering Course	1. The objective of the course is to know geographic distribution of unconventional hydrocarbon resources. 2. To understand characterization of source and reservoir rocks and to understand methodology to produce these reserves as well as understanding the environmental consequences of producing these reserves.	Unit I: Coal Bed Methane: Survey of energy resources: Global vis-à-vis Indian energy scenario – demand and supply, and future projection; introduction to conventional, unconventional, renewable, nonrenewable energy resources, comparison between formations and mode of occurrences of various conventional and unconventional hydrocarbon energy resources. Coal Bed Methane: Definition and prospect, CBM, CMM, and AMM; an Overview on CBM vs. Conventional Reservoir. Fundamentals of Coal Geology: Genesis of Coal; Major Stratigraphic Periods of Coal Formation. Significance of Rank of coal. Formation and properties of coal bed methane. Exploration & Evaluation of coal bed methane. Exploration & Evaluation of coal bed methane wells. Hydro-fracturing of coal, seam activation of well. Testing of coal bed methane wells. Unit II: Gas hydrates: Formation of Gas Hydrates: Introduction and present status of gas hydrates. History of Hydrate R&D. Types of methane hydrate deposits, chemistry and structure of natural methane	Lecture/PPT/videos	CO1: Classify various types of conventional and unconventional energy resources. CO2: Apply different technology to Explore & evaluate of coal bed methane and Gas hydrates and other unconventional energy. CO3: Analyse mode of formation and properties of Coal bed methane, gas hydrates and shale gas.	Energy Sector	7
29	USB	PG	M.A.(Economics)	Labour Economics	21SET623	Dr. Farah Naaz	The course attempts to create understanding about the various aspects of the labour, their challenges and the measures taken by the govt. towards the betterment.	UG in any stream		Introductory Concepts- Labour Economics, Paradigms of Labour Market Analysis, Employment and Unemployment in Developing Countries, Wage determination, Trade Unions, Industrial Disputes, Social Security Measures	Lecture/PPT/videos/ Workshop	To understand, describe and discuss the key concepts, theories and approaches of economics of labour, To deepen understanding about the critical issues pertaining to employment and social security, To comprehend concepts like trade unions, dispute settlement and social security.	Small Business Owners,Business Consultants,Business Reporters,Fundraisers and Development officers,Sales Managers,Financial Analysts	7
30	USB	PG	M.A.(Economics)	Environmental Economics and Sustainable Development	21SET626	Dr. Bharti Kapoor	The course begins with the basic scientific knowledge and understanding of world from an environmental perspective. Following that, this introduces to different types of sustainable measure that can be taken to reduce environmental degradation.	UG in any stream	To familiarize students with basics of environmental sciences, issues and how t go for sutainability	Economics and the Environment, Evolution and Growth of Environmental Economics, Relation between Environmental Economics, Relation between Environment and Growth, Public Goods and Externalities, Common Property Resources, resource degradation and market efficiency. Coase theorem, social cost-benefit analysis, cost effective analysis for environment protection, environmental regulations – command and control, incentive based, promoting clean technology, energy policy, Poverty, population and environment, global agreements, trade and environment under WTO regime. Concepts and measurement of sustainable development. Sustainability – neo-classical and ecological views, Environmental Kuznets hypothesis, theory of Krutilla-Fisher Equation for preservation or development; Endogenous growth theory and sustainable development	Lecture/PPT/videos/ Workshop	To gain a thorough knowledge about the fundamentals of economics of environment in a lucid and analytical manner. To develop an understanding regarding the various concepts and theories related to sustainable development.	1.Environmental Auditor 2. Sustainability consultant 3.Disaster recovery manager	8,11,13

31	UITHM	UG	BSc Travel and Tourism Management	Sustainable Tourism Planning and Development	TTT-361	Dr Sunil Tiwari	The course begins with the basic concepts of sustainability and the theoretical background of tourism policy and planning. The students are introduced to the basics of sustainable development and planning, its role and functions. They are also introduced to the influence of different stakeholders in destination	12th with any stream	To familiarize students with the basics of sustainability and tourism policies.     To introduce the students with the sustainable tourism planning process and policies.     To impart knowledge of different sustainable approaches in the development of tourism.	Concept of Sustainability, Sustainable Development -history, Definitions, Different Perspectives, Environmental Ethics, Principles of International Environment Agreements. Introduction to sustainability Problems and sustainable Development Goals Community Ecology, Biodiversity and Human Dimensions, Community based Management with Sustainability Science and Approaches. Self-Study – UNESCO AND UNICEF Sustainable Development Goals Chicago Convention, Warsaw Convention, Open Sky Policy, Bermuda Convention, Euro Agreement, Schengen Agreement	PPT/Lectures/Video	development with application of sustainability principles and approaches. 3. Examine the role, functions and influence of different stakeholders involved in tourism	Tourism Planning and Development Executive, Travel Agent, Tour Operator	11
32	UIE	UG	BE (Mechanical Engineering)	NON-CONVENTIONAL ENERGY RESOURCES	MEA-453	Er. Parvinkal Mann	Basic Knowledge of Energy resources	12th Non Medica or Diploma in Engineering Course	To introduce the student about solar energy its radiation, collection, storage and application. It also introduces the Wind energy, Biomass energy, Geothermal energy and ocean energy as alternative energy sources.	Various non-conventional energy resources, Solar Cells:, Geothermal Energy, Magneto-hydrodynamics (MHD) and Fuel cells, Thermo-electrical and thermionic Conversions, Wind Energy, Tidal and wave energy	Lecture/PPT/videos/ Workshop	Apply the concepts of various non conventional enery resources for the solution of engineering problems. Categorize the various types of non conventional energy resources on the basis of different factors Distinguish the different types of solar cells, geothermal energy systems, MHD, thermo-electric conversion, wind, tidal and bio mass energy systems lnspect the	Energy Auditor	7
33	UIA	UG	Bechelors of Architecture	Building Technology and Services-I (Plumbing, Sewerage & SWM)	21ART-176	Adite Dhadwal	This course aims to give an overview of the various building services and the architectural requirements for their accommodation in buildings.	10 + 2 ( NATA Qualification )	Introduction to elementary building services of water supply & sanitation.	Water- Role & Importance, Sources, Quality, Impurities. Water Supply- Introduction, Basic Principles, Systems of Water Supply Water Storage – Systems, Capacity and Location. Calculation of Water consumption. Domestic, hot and cold-water supply systems. Pipes- Size and their jointing details. Fittings- sanitary fittings like Ferrule, Stopcock, Bibcock etc. Metering- Various kinds of Water Meters and connections. Sanitation- Role, Importance, Basic principles of disposal of waste from buildings. Dry and Wet Carriage Systems. Solid Waste Management: Calculation of waste generation, Garbage Shoot, Segregation of waste of various building types	PPT/Lectures/Video	Fundamentals and application of Water supply system used in buildings. Fundamentals and application of Sanitation system, and Drainage system used in buildings.	MEPS in Building design	6,9

34	UIA	UG	Bechelors of Architecture	Building Technology and Services -II (Electrical, Lighting & Mechanical Circulation)	21ART 223	Neelam Kumari	This course aims to give an overview of the various building services and the architectural requirements for their accommodation in buildings.	10 + 2 ( NATA Qualification )	Introduction to elementary building services of electricity & air conditioning and to make students understand the basics of air conditioning services in various buildings.	Introduction to electrical energy, basic definitions and related theorems to understand distribution of electrical energy.  Assessment of electricity requirements in buildings, study of fittings and accessories used in electrical system, Load Calculation.  Systematic diagrams for electricity distribution, different types of wiring, various circuit diagrams for bedroom lighting, staircase lighting, Lightning Protection, Substation etc.  Introduction to illumination  Illumination Schemes- Types and their design considerations - Residential, commercial, industry and street lighting, Lux requirement for different spaces, Methods for Lux Calculation.  Artificial lighting — Direct and Indirect methods of lighting  Types of Luminaries for interior and exterior lighting.  Lifts-Types Control and Operation, Carrying	PPT/Lectures/Video	able to implement their knowledge in their designing of concepts for buildings as well as site in context of sustainability and energy	MEPS in Building design	3,9,12
35	UIA	UG	Bechelors of Architecture	Building energy simulation (Employability enhancement)	21ART 276	Chetan Verma	The Course will make the students aware of the basic techniques involved in properly applying simulation tools during the building design process	10 + 2 ( NATA Qualification )	simulation technology as an energy	Capacity, Rated Load, Rated Speed, RTT and Calculation for no of lifts etc.  * Lift - Sections, Machine Room, Components, Lift  Introduction and trends in building simulation; Environmental Controls; Solar Geometry and Energy Flow in Buildings; energy use and energy demand of buildings; internal loads, and schedules; Impact on building performance; Building Envelope, Weather Data, and Internal Gains; specific materials and construction. Performance based design and operation - the role of weather data - integrated airflow simulation and (hybrid) ventilation aspects - HVAC systems performance; Occupant comfort. Principles and tools of energy simulation; role and reliability of simulation in the design process; Integration of simulation in design: urban energy simulation, lighting simulation, acousties - thermal comfort.	PPT/Lectures/Video	efficiency. Ability to workout electrical networks Students get familiar with state- of-the-art theories and methods in building simulation research, with emphasis on the current state. Students will be able to learn and have access to future directions in simulation methods, tools and computational methods. Utilization of the energy modelling and simulation technologies to analyse the energy and thermal performance of	Energy Simulation Software Expert for Designing Sustainable Buildings	9,12
36	UIA	UG	Bechelors of Architecture	Landscape in Architecture	21ART 326	Garima Gandhi	The course aims to discuss the practices in Landscape relevant to architecture. The focus shall be to train students and sensitize regarding contemporary practices and Historical practises.	10 + 2 ( NATA Qualification )	To familiarise the students with the attributes, use and importance of basic elements of landscape.	Introduction to Landscape Architecture.Elements of Landscape design and its relation to the built environment. Plant characteristics, impact of climate & soil.Plant Materials: Trees & Its Classification, Shrubs, Ground Covers, Creepers. Classification Structure, Color, Form, Foliage of various types of Trees, Shrubs and Creepers etc.Identification and study of a few Indian plants (Trees, Shrubs, Ground cover & Creepers)Development of Landscape Plan of a Neighborhood garden of a sector.		Students will understand the fundamental aspects and need of Landscape design.Students will learn about the attributes, use and importance of basic clements of landscape.Students	Landscape Expert in Neighbourhood planning as well as Building Design	3,11,12

37	UIA	UG	Bechelors of Architecture	Town Planning	21ART 372	Vimal Preet	Course Description - The development of contemporary planning concepts and principles; the nature, purpose and scope of urban planning; the planning process and decision-making in a democratic society.	10 + 2 ( NATA Qualification )	To make students understand the genesis, role and importance of town planning in the evolution of human settlements and urban forms - both in the historically and modern context.	Planning History- Relevance of the study of Evolution of planning through the civilizations. Human settlements as an expression of civilization. Town planning and city evolution in ancient India .Planning Theory- Basic elements of the city, Concepts of space, time, scale of citiesStudy of Cities: Chandigath, New Delhi, Gandhinagar, Bhuvneshwar, Paris, Washington DC, New York, London, Brasilia, Hong Kong, Singapore etc. Planning Techniques and Tools: Types of Development Plans and their hierarchy. Introduction to land acquisition and town planning scheme. Master plans: Goal formulation, objective, scope, limitations; Plan making process, planning methodology and case studies. Transit oriented development, Town planning acts, Demographics, Zoning, Land use structure, Transfer of Development Rights (TDR), Transit Oriented Development-TOD, Special Economic Zones (SEZ)	PPT/Lectures/Video	are expected to have a basic understanding of land dynamics and the hierarchy of planning process. Students will be able to develop a multi- disciplinary approach along	Town Planner with a sustainable approach to design cities and communities	11
38	UIA	UG	Bechelors of Architecture	Urban Design	21ART 373	Sakshi Gahlawat	- It introduces students to the practice of urban design and development, using national and international examples. The course analyses the forces which act to shape and to change cities; This course includes models of urban analysis, contemporary theories of urban design, and implementation strategies.	10 + 2 ( NATA Qualification )	Introduction of the student to the realm of urban design the objective is to expose them to the complexities of the design process.	Urban Design terminologies, definitions and methodologies for shaping and understanding of urban form; derived from both theory and empirical evidence. Drawing references from text such as those of Speirigen, Lynch, Alexander, Jacobs, Venturi, Rossi, etc. Concepts of Imageability. Elements of the city's image. Paths, nodes, landmarks, edges, and districts – their characteristics, role and interrelationship. Types of Urban Spaces - street, square, precinct, piazza, mall, etc. Case studies of well-known urban spaces from various periods of history to illustrate their design and performance aspects- Chandigarh and Delhi. Types of urban controls: FAR, Incentive Zoning, Density, Planned Unit Development, Building height, Building Bulk etc. Special provisions of Town planning Acts. Analysis of urban legislation in Delhi, Mumbai, etc.	PPT/Lectures/Video	Students are expected to have obtained the skills in understanding the various parameters of urban design. The students will be able to understand the language of the city and the art of	with a sustainable approach to design cities and communities	11,15
39	UIA	UG	Bechelors of Architecture	Housing	21ART 374	Shruti Sidhu	The course will help student understand the concept of housing, its typologies, distribution, services, and building requirement. The student will be introduced to the concept of neighborhood development, affordable housing, low cost housing and various housing standards	10 + 2 ( NATA Qualification )	To make them understand the housing problems and Need, typology of the housing and Contextualise different types of housing historically and socially.	Definition of house and housing, housing typology—detached, semi-detached, row housing, walk up apartments, multi-storeyed housing, plotted and flatted development; housing density-gross and net density, role of density indices and measures in housing layout. Basic housing norms and standards. Housing standards—meaning, purpose and criteria, standards prescribed by HUDCO, NBC etc. Status of Housing in India; Housing problems and solutions. Low cost and Affordable housing in India; Incremental housing, Techniques of appraisal of housing enclaves, physical, social, economic and environmental components; Housing surveys—definitions, importance, types, advantages, disadvantages, sample, sampling, preparation of questionnaire—types, sequence and format of questions.	PPT/Lectures/Video	Students will be able to identify the cultural context and time of diffusion of housing types. Students will be able to understand the issues, problem of housing in urban	Design of Sustainable Housing	11,17

40	UIA	UG	Bechelors of Architecture	Disaster Management	21ART 427	Garima Gandhi	The course aims at analyzingthe key concepts in disaster management theory, research, policy and practice, including vulnerability, governance, disaster risk reduction, and enhancing resilience to	10 + 2 ( NATA Qualification )	To provide basic conceptual understanding of disasters and its relationships with development.	Understanding the Concepts and definitions of Disaster, Hazard, Vulnerability, Risk, Capacity — Disaster and Development, and disaster management. Types, Trends, Causes, Consequences and Control of Disasters a) Geological Disasters (earthquakes, landslides, tsunami, mining); b) Hydro-Meteorological Disasters (floods, cyclones, lightning, thunder-storms, hail storms, avalanches, droughts, cold and heat waves) c) Biological Disasters (epidemics, pest attacks, forest fire); d) Technological Disasters (chemical, industrial, radiological, nuclear) and e) Manmade Disasters (building collapse, rural and urban fire, road and rail accidents, nuclear, radiological, chemicals and biological disasters)	PPT/Lectures/Video		Expert will help in mitigation and controlling Disaster damages and also planning for sustainable cities.	13,17
							disasters through prevention, preparedness, response and recovery efforts.			Disaster Management Cycle, a) Risk Assessment and Analysis, Risk Mapping, Prevention and Mitigation of Disasters b) Early Warning System; Preparedness, Capacity Development; Awareness During Disaster – Evacuation – Disaster Communication – Search and		processes in India.Students will be able to understand Pre- and Post- disaster design and The student will be		
41	UIA	PG	Masters in Architecture	Ecology & Natural Resources	21MAT-653	Vivek Kumar	to familiarize the students with the students with the data related to the ecological system their impact and effective utilization for a successful planning and design approach. Ecology plays an important role in human settlement which had to be considered before planning any development program so that sustainable development can	B.Architecture	To make students understand various environmental management systems sustainable and resource planning, and allocation of natural resources.	Introduction to Ecology and its importance. Its relationship with environment. EIA (Environmental Impact Assessment) methods and laws. Structure and function of ecological system. Man's relationship with nature in past and present. Urbanization and its impact on nature. Relevance and growing importance of ecology in an urbanized and technological world. Ecological application to architecture and planning in relation to designing settlements and other man made ecosystems. National Environmental laws, relevance of institutions viz. CPCB, International Environmental laws, relevance of institutions viz. CPCB	PPT/Lectures/Video	able to gain fundamental knowledge of the Ecological systems and its relation to human activity. The student will be able to understand the impact of urbanization on the ecology. The student will understand the National and International laws pertaining to the environment. The student will analyze the Ecological application to architecture and polanning. The	The expert will take care of the Ecological, Natural Resourses and environments! balance in the development of cities and Population growth.	12,15
42	UIA	PG	Masters in Architecture	Sustainable Energy Efficiency	21MAT-692	Geetanjali Kapoor	Building on the general appreciation of this area in the core studies, students will be required to have a greater insight into matters relating to specific issues concerning the need for energy efficiency.	B.Architecture	To expand students' knowledge base for developing solutions for sustainability of Built environment scientifically.	Need for implementing energy efficiency on an international, national and individual basis in the context of the building industry & environmental issues, extent of the energy and environmental crises facing the world, Introduction to Indoor environment - Thermal conductivity, emissivity, radiation, Reflectivity and convection. Density, specific heat, latent heat, thermal bridging, diffusivity, thermal insulation. Heat loss through common building elements due to transmission, R-values and U-values - imperial and SI units. Reduction Heat Transfer or Enhancement, insulation properties of materials and built forms. Radiation versus other Heat Transfer Methods,	Students will be able to evaluate various built form and its components / or materials for comfort conditions with respect to thermal, visual and air movement.	The student will understand the fundamental aspects and need of energy efficiency. The students learn to evaluate the energy consumption and its management. Students will	The Expert will design Building based on Climate of the region and will build self sustainable buildings as per the requirement and make the buildings energy efficient.	7,9,12,13

43	UIPS	UG	B. PHARMACY	Social and Preventive Pharmacy	PHT-452	Ms. Bhupinder Kaur	The candidate should have a background or basic understanding of health, hygiene and its socioeconomic status.	Under Graduate ir Allied/Applied Health Sciences	To provide students with an understanding of good health and hygiene and its relationship with socio-economic status of a community. It will fecilitate the students with information on various national and international programs initiated to target better health and hygiene of public and awareness of the	Unit-1 Concept of health and disease: Definition, concepts, and evaluation of public health. Understanding the concept of prevention and control of disease, social causes of diseases, and social problems of the sick. Social and health education: Food in relation to nutrition and health, Balanced diet, Nutritional deficiencies, Vitamin deficiencies, Malnutrition, and its prevention. Sociology and health: Socio-cultural factors related to health and disease, Impact of urbanization on health and disease, Poverty and health Hygiene and health: personal hygiene and health care; avoidable habits Unit-2 Preventive medicine: General principles of prevention and control of diseases such as	Lectures/Videos/Ques tionnaire/Discussions/ Case study		Patient counselor in hospitals and clinics, Healthcare Assistant in NHM, Health Awareness Volunteer	3
									public.	cholera, SARS, Ebola virus, influenza, acute respiratory infections, malaria, chicken guinea, dengue, lymphatic filariasis, pneumonia. Unit-1 Introduction to Drug Discovery and Development		counseling & provide health screening services After completing the course the		
44	UIPS	UG	B. PHARMACY	Computer Aided Drug Design	PHE-457	Ms. Rajwant Kaur	The candidate should have basic understanding or background of chemical structures and their potentials to support their utilization in drug design.	Under Graduate ir Chemistry	To expand the knowledge of the candidate in the domain of drug design and its role in process of drug discovery. The course content will also help in understanding the basic concept of QSAR as well as docking and their importance in drug discovery.	Stages of drug discovery and development Lead discovery and Analog Based Drug Design Rational approaches to lead discovery based on traditional medicine Random screening, Non-random screening, screndipitous drug discovery, lead discovery based on or drug metabolism, lead discovery based on clinical observation. Analog Based Drug Design: Bioisosterism, Classification, Bioisosteric replacement. Any three case studies. Unit-2 Quantitative Structure-Activity Relationship (QSAR) SAR versus QSAR, History and development of QSAR, Types of physicochemical parameters, experimental and theoretical approaches for the determination of physicochemical parameters such as Partition coefficient, Hammet's substituent constant, and Tafts steric constant. Hansch analysis. Free Wilson analysis. 3D-OSAR	Lectures/Videos	candidates will be able to: * Understand about the role of drug design in the drug discovery process. * Acquire	Teaching and research in academics, Research, and Development Executive in the industry involved in the production of APIs.	9
45	UIPS	UG	B. PHARMACY	Cosmetic Science	PHE-459	Dr. Hitesh Kumar Dewangan	The candidate is required to have some essence of design, development and production of cosmetic products.	Under Graduate ir Chemistry	The major objective of this course is to provide fundamental knowledge about the principles of formulating and manufacturing cosmetics, along with a basic understanding of the regulatory aspects associated with therein production and marketing of cosmetics. The content will offer an extended understanding of the use and restriction of chemicals used in the manufacturing of cosmetics.	Unit-1 Classification of cosmetic and cosmeceutical products Definition of cosmetics as per Indian and EU regulations, Evolution of cosmecuticals from cosmetics, cosmetics as quasi and OTC drugs Cosmetic excipients: Surfactants, rheologymodifiers, humectants, emollients, support of the company of the comp	study.	using motecular After completing the course the candidates will be able to:  * Acquire knowledge about the regulations associated with the manufacturing and marketing of cosmetics.  * Understand the principles of formulating some common cosmetics like creams, deodorants, and hair products.  * Understand and learn to evaluate the efficacy of cosmetics.  * Attain	Manufacturing chemist/executive in the cosmetic industry, Analyst.	9

46	UIPS	UG	B. PHARMACY	Herbal Drug Technology	PHT-353	Dr. Neeraj Bainsal	The candidate should have knowledge as well as interest in the processing of herbals and their utilization in various product domains for healthcare like nutraceuticals, ayurvedics etc.	Under Graduate in Chemistry / Nutrition & Dietecties	This course introduces candidates to herbal medicine and its use as an alternative form of medicine. Students learn basic terminology, the various uses, as well as applications of common herbs, and the advantages of using them. This course also examines the qualities and characteristics of herbs. Students learn about the proper use and dosage of herbs	Unit-1 Herbs as raw material: Definition of herb, herbal medicine, herbal medicinal product, herbal drug preparation, Source of Herbs, Selection, identification and authentication of herbal materials, Processing of herbal raw material, Biodynamic Agriculture: Good agricultural practices in cultivation of medicinal plants including Organic farming. Pest and Pest management in medicinal plants: Biopesticides / Bioinsecticides., Indian Systems of Medicine: Basic principles involved in Ayurveda, Siddha, Unani and Homeopathy, Preparation and standardization of Ayurvedic formulations viz Aristas and Asawas, Ghutika, Churna, Lehya and Bhasma. Herbal-Drug and Herb-Food Interactions: General introduction to interaction and. classification. Study of following drugs and their possible side effects	Lectures, videos, Discussions.	On the completion of the course the candidate will be able to:  * Acquire knowledge on natural raw materials as a source of herbal drugs from cultivation to herbal drug product.  * Understand guidelines for evaluation of herbal drugs, herbal cosmetics, natural sweeteners	Production/QC Chemist in Herbal drug and cosmetic industry.	9
									to treat ailments. This class reviews herb and drug interactions, as well as how herbs This course introduces candidates	and interactions: Hypercium, kava-kava, Ginko biloba, Ginseng, Garlic, Pepper & Ephedra.  Unit-1 Contact Hours (12-15 Hours)  Experiment-1 To perform preliminary		and nutraceuticals. * Attain expertise in manufacturing practice used in On the completion of the course the		
47	UIPS	UG	B. PHARMACY	Herbal Drug Technology Lab	PHP-358	Dr. Neeraj Bainsal	The candidate should have knowledge as well as interest in the processing of herbals and their utilization in various product domains for healthcare like nutraceuticals, ayurvedics etc.	Under Graduate in Chemistry / Nutrition & Dietectics	to herbal medicine and its use as an alternative form of medicine. Students learn basic terminology, the various uses, as well as applications of common herbs, and the advantages of using them. This course also examines the qualities and characteristics of herbs. Students learn about the proper use and dosage of herbs to treat ailments. This class reviews herb and drug interactions, as well as how herbs as well as how herbs.	phytochemical screening of crude drugs.  Experiment-2  Determination of the alcohol content of Asava and Arsta  Experiment-3  Evaluation of excipients of natural origin.  Unit-2  Experiment-4  Extraction of active phytoconstituents (Extracts and their fractionation)  Experiment-5  Incorporation of a prepared and standardized extract in formulations like syrups, mixtures and tablets and their evaluation as per Pharmacopoeial requirements.  Experiment-6  Incorporation of a prepared and standardized extract in formulations like creams, lotions and shampoos and their evaluation.  Unit-3  Contact Hours (15-20 Hours)	Demonstrations, videos, Lab Exercises.	candidate will be able to:  * Acquire knowledge on natural raw materials as a source of herbal drugs from cultivation to herbal drug product.  * Understand guidelines for evaluation of herbal drugs, herbal cosmetics, natural sweeteners and nutraccuticals.  * Attain expertise in manufacturing practice used in	Production/QC Chemist in Herbal drug and cosmetic industry.	9
48	UIPS	UG	M. PHARMACY	Quality Management System	21PHT-613	Dr. Vimal Arora	The candidate should have basic knowledge about the concepts of quality and customer satisfaction with respect to the delivery of the product and/or service, along with a background in the production process.	Under Graduate in Science/ Engineering/ Management	This course is designed to impart knowledge and skills necessary for the fundamental need for designing and implementing an effective Quality Management System in industry and thus inculcate competence for global opportunities in the pharma sector.	Unit-1 Chapter 1: Concepts of Quality and Quality Management (3 Hours) Concepts of Quality: Definition and concept of Quality control, Quality assurance, and GMP Total Quality Management (TQM): Definition, elements, concepts, and philosophy. Chapter 2: Factors affecting Quality (4 Hours) Factors affecting quality: M4 rule, factors affecting quality, quality loop and quality policy. TQM Tools: Types of TQM tools, classification, and utilization. Chapter 3: Customer Satisfaction (4 Hours) Customer Satisfaction: Concept, practices, and documentation.  Linit-2 Chapter 1: ISO Standards (2 Hours) Introduction to ISO and ISO quality standards. Chapter 2: Quality Management System (4 Hours)	Lectures, Videos, discussions and case study.	At the completion of the course the candidate will be able to:  * Learn and understand the fundamentals of Quality and Quality Management systems.  * Understand the principles, and tools of QMS and EMS.  * Create and interpret the documentation used in implementing QMS.	QC/QA Chemist, IQAC Executive, Compliance Officer	9

49	UIPS	UG	PHARM. D.	Community Pharmacy	20PST-295	Dr. Atul Kabra	The candidate should have a background or basic understanding of working of a hospital and the responsibilities of community health workers.	Under Graduate in Allied/Applied Health Sciences	To provide students with opportunities to develop proficiency in carrying out the health/pharmaceutica care process. The course is aiming to develop basic dispensing and collect and interpret data from the practice site. Students practice inquiry skills by generating questionnaire using a systematic approach for answering treatment-related questions.	questionnaires that are to be answered using a systematic approach for answering health and drug- related questions.	Lectures/Videos/Ques tionnaire/Discussions/ Case study	After completing the course the candidates will be able to: * Get knowledge about pharmaceutical and healthcare services. * Understand the business and professional practice management skills in community pharmacies. * Learn and utilize the skills of patient counseling & provide health screening services to the patients.	Patient counselor in hospitals and clinics, Pharmacy Assistant, Health Awareness Volunteer	3
50	UIPS	UG	B. PHARMACY	Pharmacovigilance	PHE-455	Dr. Gaurav Joshi	The candidate should have a background or fundamentals in parameters for health assessment, factors affecting health, data collection, data handling and data interpretation.	Under Graduate in Allied/Applied Health Sciences	To offer a brief knowledge about the scope of pharmacovigilance at the national and global level, with insight about its emergence as well as associated regulatory aspects in India. It also offers knowledge about data management and handling in the healthcare sector, along with technological terms and formats associated with pharmacovigilance.	Unit-1 Introduction to Pharmacovigilance Contact Hours: 20 Introduction to Pharmacovigilance and ADRs: History and development of Pharmacovigilance, Importance of safety monitoring of Medicine, WHO international drug monitoring program, Pharmacovigilance Program of India (PvPI). Definitions and classification of ADRs, Detection and reporting, Methods in Causality assessment Severity and seriousness assessment, Predictability and preventability assessment, Management of adverse drug reactions. Drug and disease Classification: Basic terminologies used in pharmacovigilance, Terminologies of adverse medication-related events, Regulatory terminologies Anatomical, therapeutic and chemical classification of drugs, International classification of diseases, Daily defined doses, International Non-proprietary Names for drugs. Drug dictionaries and coding in pharmacovigilance: WHO adverse reaction terminologies, MedDRA and Standardised MedDRA dureies. WHO drue	Lectures/Videos/Ques tionnaire/Discussions/ Case study	After completing the course the candidates will be able to:  * Get knowledge about pharmaceutical and healthcare services.  * Understand the business and professional practice management skills in community pharmacies.  * Learn and utilize the skills of patient counseling & provide health screening services to the patients.	Data Analyst, Pharmacovigilance Officer, Clinical Data Expert.	3
51	UITHM	UG	BSc Hotel & Hospitality Management (HM 202)	Sustainable Tourism Planning and Development	HHT-365	Dr Sunil Tiwari	The course begins with the basic concepts of sustainability and the theoretical background of tourism policy and planning. The students are introduced to the basics of sustainable development and planning, its role and functions. They are also introduced to the influence of different stakeholders in destination	12th with any stream	1. To familiarize students with the basics of sustainability and tourism policies. 2. To introduce the students with the sustainable tourism planning process and policies. 3. To impart knowledge of different sustainable approaches in the development of tourism.	Concept of Sustainability, Sustainable Development -history, Definitions, Different Perspectives, Environmental Ethics, Principles of International Environment Agreements. Introduction to sustainability Problems and sustainable Development Goals Community Ecology, Biodiversity and Human Dimensions, Community based Management with Sustainability Science and Approaches. Self-Study – UNESCO AND UNICEF Sustainable Development Goals Chicago Convention, Warsaw Convention, Open Sky Policy, Bermuda Convention, Euro Agreement, Schengen Agreement	PPT/Lectures/Video	Apply the basic knowledge of sustainability in formulating tourism policy and planning in order to promote international tourist destinations . 2.     Assess key perspectives in relation to tourism development with application of sustainability principles and approaches. 3.     Examine the role, functions and influence of different stakeholders linvolved in tourism	Tourism Planning and Development Executive, Travel Agent, Tour Operator	11

52	UIE	UG	B.E. Chemical	Process Plant Design	CHT-352	Dr. Deepak	To know design layouts of plant /equipment's and the relevant application for equipment design.	Heta Transfer, Mass Transfer	To learn steps involved in the process design of heat & mass transfer equipment's.	Introduction to Shell & Tube heat exchangers, double pipe heat exchanger & Plate type heat exchanger functions of its various parts, General design method of shell & tube heat exchanger, selection criteria among Fixed Tube sheet, U Tube & Floating Head heat exchanger. Introduction, equipment selection for distillation, Design of Distillation column, Key components selection for multi-component distillation, Determination of operating pressure for distillation column, Advantages & disadvantages of vacuum distillation, Determination of nos. of theoretical stages for binary distillation using McCabe Thiele method, Calculations for tower diameter & pressure drop of sieve tray tower, Checking of conditions for weeping, down comer flooding, liquid entrainment, etc, tray efficiency, Jet Flooding & down comer Flooding, Different. Introduction, selection criteria among different types of absorption equipment, Process Design of packed tower type absorber:	PPT/Lectures/Video	l Define the basic concepts of process design development and general design considerations, 2. Construct a bridge between theoretical and practical concepts used for designing the equipment in any process industry, 3 Analyse & understanding of different equipmen design. 4 Design process equipment and modify the design of existing equipment to new process conditions or new	Process Engineer, Design Engineer	8,9
53	UIE	UG	B.E. Chemical	Waste water treatment	CHA-359	Dr. Navneet	fundamental wate	Chemistry	The objective of the course is to introduce the students to the various methods and processes used in the treatment of potable water before human use and treatment of wastewater before disposing into natural water bodies	Physical, chemical and biological parameters of water – Water quality requirement-Portable water standards- Wastewater Effluent standards- Water quality indices.	PPT/Lectures/Video	Explain fundamental water chemistry, Identify the parameters that characterize the constituents found in potable water and wastewater, Analyze the common physical, chemical and biological unit operations encountered in treatment processes, Mark the fundamentals of water and wastewater treatment, Compile water quality data	Water analyst, Envoronment Engineer	6
54	UIE	UG	B.E. Chemical	Process Engineering Economics	CHT-353	Dr. Srinu	To learn methods of capital investment, product cost determination, Profitability evaluation and Optimum Design.	Heta Transfer, Mass Transfer	To explain the economic aspects of equipment selection,. To make use of the concept of capital investment and capital returns for chemical industry.	Cost Estimation: Factors affecting investment and production costs, Capital investments — fixed investments and working capital. Cost indices. Estimating equipment costs by scaling 6/10 factor rule. Methods for estimation of capital investment. Estimation of total product cost. Different costs involved in the total product cost for a typical chemical process plant. Interest and investment costs: Simple and compound interest. Nominal and effective rates of interest. Continuous interest. Perpetuities and capitalized costs. Taxes and Insurance: Types of taxes and tax returns, types of insurance and legal responsibility Depreciation: Types of depreciation, service life, salvage value, present value and methods of determining depreciation.	PPT/Lectures/Video	1. Explain the economic aspects of equipment selection 2 Make use of the concept of capital investment and capital returns for chemical industry. 3Examine the concepts to design a manufacturing plant 4 Evaluate the profitability of process industry projects using different measures and analyse market potential for process industry products 5Create entrepreneurs with		8

55	AIT-CSE	UG	B.E. CSE ( Industry Collabrated Programs )	/ Environmental Science, Waste and Disaster Management	21UCT-344	University Core	Ability Enhancement	12th with PCM	To familiarize students with basics of environmental sciences, waste, and disaster management.	Introduction to environment and associated problems, Disaster Management, Waste Management	PPT/Lectures/Video	Understand different dimensions of environmental studies; problems related to the environmental degradation & the remedial steps taken to address them. Understand different type of disaster that occur in nature consequently learning to develop the preparedness and remedial techniques. Understand the diverse problems associated with	Environmental Scientists,Environmental Engineers,Environmental Managers for the Industrial Sector,Environmental Auditors	3,6,7,13,14
56	AIT-CSE	UG	B.E. CSE ( Industry Collabrated Programs )	Ethics and Gender Equality	21UCT-202	University Core	Ability Enhancement	12th with PCM	1. Sensitize students to ethics, values and moral dilemmas, professional ideals and Virtues. 2. Aims at preparing the students to face gender related diversity including sensitization to gender relationships, equality, gender identities etc. 3. An understanding of the gender issues will enable the students to develop good inter-personal skills in the society as well as at the workplace.	Professional Ethics, Gender Equality-Contemporary Perspectives and Cross-Cutting Issues	PPT/Lectures/Video	Understand perceptions on ethics, values, and moral dilemmas as a significant aspect of life. Apply the code of ethics and appreciate gender diversity in their social and professional environment. Analyse gender as a socio-cultural, ideological construct essential for sustainable development of society.	Ethics and Complinace Managers, Ethics Officers	4,5
57	AIT-CSE	UG	B.E. CSE ( Industry Collabra6ted Programs )	, Project	21CSR-395	Mr. Rajdavinder S	Basic Concept of Programming Languages, OOOPS, Data Structures, Design Anaysis of Algorithms	12th with PCM	1. To make them understand the concepts of Project Management for planning to execution of projects. 2. To make them understand the feasibility analysis in Project Management and network analysis tools for cost and time estimation. 3. To enable them to comprehend the fundamentals of Contract Administration, Costing and Budgeting	student need to submit a project with in the semester	· Lab work	CO1. To apply fundamental and disciplinary concepts and methods in ways appropriate to their principal areas of study. CO2: To demonstrate skill and knowledge of current information and technological tools and techniques specific to the professional field of study. CO3: To use effectively oral, written and visual communication.	Software Engineer	9

58	UIE	PG	ME(Construction Technology & Management)	Project Risk and Mitigation Techniques	21CET-709	Shalika Mehta	Construction Project	UG Civil Engineering	to identify potential problems before they occur so that risk- handling activities may be planned and invoked as needed across the life of the product or project to mitigate adverse impacts on achieving objectives	RISK MITIGATION:by elimination, reducing, transferring, avoiding, and absorbing or pooling. Residual risk, mitigation of unquantified risk. Coverage of risk through CIDC's MOU with the Actuarial Society of India through risk, premium such as (BIP) – Bidding Indemnity Policy (DIMO	Lecture,ppts,videos,	Students will understand process to determine risk sources and categories. process to define the parameters used to analyze and categorize risks, and the parameters used to control the risk management effort	Project management	8
59	UIAHS	UG	Bachelor of Optometry	Indian Medicine and Tele Medicine	20OMY324	Dipanwita Ghosh	This course insight into existing healthcare system in India	12th with PCB	At the end of the course student will be aware of the traditional and the latest healthcare system.	I.Introduction to healthcare delivery system,     2.National Health Programme-Background     objectives, action plan, targets, operations,     achievements and constraints in various National     Heath Programme. 3. Introduction to AYUSH     system of medicine. 4. Health scenario of Indiapast, present and future, 5. Demography & Vital     Statistics, 6. Epidemiology	Lecture,ppts,videos,	The student will get basic knowledge about the telemedicine practices in India especially in eye care.	Skill enhancement	3
60	UIAHS	PG	MSc Forensic Science	Forensic Biotechnology	21FST-765	Komaljeet Kaur	PPts,lecture notes,videos	UG science	To familiarize students to identify & examine the biological evidences recovered at the crime scene and make them presentable in court of law.	Antigen, Immunoglobulin, antigen – antibody reactions, Application of various polymorphic enzymes and proteins in criminal investigation, hybridoma technology, Autoimmunity and hypersensitivity, vaccines, DNA typing, Electrophoretic and blotting techniques:-Southern blotting, Northern blotting, Western blotting, Inherited disorders, mutations and mutagens	Lecture,ppts,videos,	To apply, critically evaluate and understand problems concerning various types of markers and methods for DNA analysis, to identify and understand problems concerning various types of evidence materials for identification and to state different types of genetic markers that are used for forensic genetic analysis.	Skill enhancement	3,4
61	UIAHS	UG	Bachelor of Optometry	uction to Quality and Patient	20OMY325	Dipanwita Ghosh	This course deals with various aspects of quality and safety issues in health care services.	12th with PCB	At the end of the course, students have gained introductory knowledge about quality and patient safety aspects from Indian perspectives	Quality assurance and management     Basics of emergency care and life support skills     Biomedical waste management and environment safety     Infection and prevention control     Antibiotic resistance     Disaster preparedness and management	Lecture,ppts,videos,	Student will learn to serve the quality health care and patient safety	Skill enhancement	3,4

62	UIAHS	UG	Bachelor of Optometry	င Health & Community Opto	200MT352	Alpana Kumari	The course is designed to make the student learn about community health and eye care	12th with PCB	The course aims toin ensuring access to quality vision care for all members of the community and recognizes this profession's role as primary eye care providers and helps to promote optometry's inclusion within the larger health care delivery system	Concept of public health. Principles of primary, secondary and tertiary care, Planning of health services., Health economics, Health manpower development-a)Basic O.T Practices Familiarity with use of Operating Microscope  NPCB and refractive blindness – optometrist's role as primary health care provides. Health care's insurance including role of TPA  Ocular emergencies Foreign body, Eye  Pain, Watering, Injuries-perforating, non-perforating & chemical	Lecture,ppts,videos,	Students will come to know about provide medical care for adult ophthalmology patients with compassion and professionalism  1. Students will come to know about optometrist's role as primary health care provider  2. Students will come to know about Ocular emergencies  3. Students	nity Optometrist	3,4
									To gain     knowledge about     different			will learn the epidemiological prevalence's of various ocular To get introduced to the structure and composition of		
63	UIE	PG	h Safety and Enviro	ronmental Issues and Manag	21CET-752	Harpreet Singh	PPts,lecture notes,videos	Knowledge of basic sciences	different environmental issues, their causes, effects and control technologies globally 2. To develop an interdisciplinary approach towards sustainable development, keeping in mind about environmental management. 3. To critically analyse the extent of effects due to dilapidating environment and chalk out strategies to mitigate that. 4. Be aware	Climate change: Global warming, Drivers of climate change; Greenhouse gases and their sources; Implications on climate, oceans, agriculture, natural vegetation, wildlife and human, control strategies and methods, Stratospheric ozone layer depletion: causes and consequences; efforts to combat ozone depletion, El Nino, Droughts, water scarcity and conflicts; Biodiversity loss	Lecture,ppts,videos,	different spheres of environment and eccosystem and their functioning. To acquire knowledge about the major environmental challenges faced by Environmental pollution.  To analyse and evaluate the pollution control	nent Engineer	3,4,6,7,11,13
64	UIE	PG	vironmental Enginee	ENVIRONMENTAL TOXICOLOGY AND RISK ASSESSMENT	21CET-727	Dr. Ashita Sharma	PPts,lecture notes,videos	Knowledge of Basic Environmental Sciences	Understand and critically analyze the process of risk assessment.     Identify changes in human activities and regulations that would reduce human and ecological health damage.     Understand xenobiotic-induced toxicities of the skin, lung, liver, kidney, heart and brain and thus suggest solutions	Importance of environmental toxicology, dose- response relationship, hazard and risk; Routes of exposure, toxico-kinetics. Oral route, dermal route, inhalation route, distribution, elimination, absorption and; Toxic substances, xenobiotics. Acceptable Daily Intake (ADI), Procedure for estimating ADI, Potential Daily Intake (PDI), Relationship between ADI and PDI, Models for estimating risk.  Mechanism of action, endocrine disruption, cytotoxic, enzyme inhibition, reproductive toxicology, teratology, biotransformation and secondary effect. Data sources for exposure risk characterization; Toxicology/epidemiology—Biomarkers; Acute toxicity studies, Short term and Long term toxicity studies. Importance of conventional toxicity studies, Examples for acute, short term and long term	Lecture,ppts,videos,	CO1 Identify and describe various toxins present in environment CO2 Assess the basic toxic responses from lethal to various sub-lethal effects CO3 Environ	nent Engineer , gy expert	2, 3, 6, 11, 14, 15

65	UIE	PG	Health Safety and Environment	Global Disaster Scenario and Types of Disaster	21CET760	Dr. Sushindra Kumar Gupta	This course aims to give an overview of the various global disaster scenario and disaster management in respective area.	UG Civil Engineering/UG Level	1. To provide a general concept in the dimensions of disasters caused by nature beyond the human control as well as the disasters and environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery. 2. To make students aware with the basic concepts and principles of disaster management. 3. To provide basic conceptual understanding of disasters and understand understand understand in the disasters and understand in the disaster	Introduction to Geological Disasters and associated problems, Disaster Management, Hydro-Meteorological Disasters, Biological Disasters, Technological Disasters, Global Disaster Trends, Climate Change and Urban Disasters, Disaster Management Cycle, Disaster Preparedness and Prevention, Geo-informatics in Disasters Management	Lecture,ppts,videos	apply concepts and analytical models/formulas to subject oriented engineering problems. 3. To gain understanding of approaches for Disaster Risk Reduction (DRR) and the relationship	Civil Engineer/UG Level	3,4,6,7,8,11,1
66	UIS	UG	3.Sc. Hons. Chemistr	Chemistry of Biomolecules	20SHT253	Dr. Mona	The course begins with the introductions to biologically important compounds including amino acids, proteins and nucleic acid, lipids, enzymes etc. and their classification, structures, properties and importance in biological cells. Another focus of the course is introduction to cellular metabolism and energy exchances.	Bachelor of Science	1. The course attempts to address the specific topics relevant to chemistry, wherein the students can apply this learning in their respective areas of expertise. 2. The focus is more on the application of the basic concepts with introduction of some advanced concepts in the area of chemistry	Nucleic acid, Proteins, Enzymes, Lipids, Concept of energy in Biosystem, Pharmaceutical compounds	PPT, Lectures, Video:	methods of synthesis. 2. apply and analyze the concept of enzymes and mechanism of enzyme action, evaluate the effect of various factors controlling rate of	Biochemistry Lab	4,8,9
67	UIS	PG	Sc. Industrial Chemi	Chemistry of Industrially Important Materials	21SHT682	Dr. Kashif	The course begin	Bachelor of Science	The course has been developed to enable the students to learn basic chemistry of industrially important polymeric materials.	Introduction to industrial materials, Thin Films and Langmuir-Blodgett Films, Liquid crystals, Ionic conductors, High Tc Materials, Materials for Solid State Devices, Organic Solids, Fullerenes, and Molecular Devices.	PPT, Lectures, Video:	enzyme catalvzed -Understand the basic concept of inorganic materials like glasses, ceramics, thin films and liquid crystals and acquire knowledge about their mechanical propertiesApply the concept so finorganic materials like glasses, ceramics, thin films and liquid crystalsUnderstand the chemistry of polymeric materials and high Tc materialsAcquire the knowledge about	In industrial production and quality analysis.	9, 12

68	UIS	UG	3.Sc. Hons. Chemistr	Basics of Marketing	20SHY258	Dr. Neeraj Aswal	The course begin	B.Sc (H)	Create an understanding of the unique challenges of marketing and to enable students to apply the concepts and methods of marketing management to consumer sales.	Marketing Mix, Positioning, Branding, Packaging, Targeting, Sales Management	PPTs/Lectures/Videos	1. Understand the basic concepts of Marketing, its functions and its relevance for sales. 2. Analyse the strategic marketing problems faced by managers in creating the marketing mix. 3. Evaluate insight in the marketing mix issues, specifically product and price related issues.		8,9.
69	UIS	UG	Open Elective	Fuels and Combustion	22SHO443	Dr. Kushal	The course begin	Higher secondary educaion	To give an idea about different solid, liquid, gaseous fuels, their origin, composition, classification, combustion and conversion processes.	Introduction to fuels, solid, liquuid and gaseous fues, and their combstion	PPT/Lectures/Video	An understaing of different solid, liquid, gaseous fuels, their origin, composition, classification, combustion and conversion processes.	Fuel handing industries	11,9,8
70	UIAHS	PG	1.Sc. Forensic Scienc	Forensic Ballistics	21FSH-653	Navjot Kaur	Forensic analysis of crime involving firearms to investigate the type of crime.	Bachelor of science	To give an exposure to the students about various types of firearms, their working and identification. To familiarize students with firearm injuries, wound characteristics and reconstruction of crime.	History of firearms and Ammunition. Firearms identification from scene of crime, analysis of Gun shot residue, Investigation and analysis of firearm injuries related to homicidal, suicidal and accidental wounds.	Lectures/PPT/Video/c ase study	The possible outcomes are to ge knowledge about type of firearm used for shooting and criminal activities. To Study Comparison of the test bullet & cartridges with the suspected bullets and To understand firearm injuries, wound and their forensic significance.	Law enforcement	16
71	UIAHS	PG	M.Sc. Forensic Science	Advanced Forensic Anthropology	20FSC-754	Chandana Deka	The course begin	Masters Of Science	Aims to provide a brief overview of the working procedures employed in the Forensic Anthropological Investigations. To familiarize students with technique like superimposition and facial reconstruction for solving crime.	Anatomy of human skeleton and identification of human bones, Difference between human & domestic animal bones,	Lectures/PPT/Video/c ase study	Able to understand the importance of various human bones for forensic analysis to determine the age, sex, height, race form human bones Various scientific methods involve in reconstruction of facial features and reconstruction, To prepared to undertake superimposition of human skull for identification of victim., To compete in various recruitments by UPSC, PPSC, UPPSC, HPSC,	Offices, Anthropology labs, medical Examiner	16

72	UIAHS	PG	<u>1.Sc</u> . Forensic Scien	d Bloodstain Pattern Analysis	20FSB-756	Chandana Deka	This course provi	Masters Of Science	Pattern Analysis Course aims to provide a detailed overview of the working procedures used in the fingerprin Division of Forensic Science Lab, To build exceptional Practical skills by making students perform the various visualization methods to develop latent blood spatter patterns as well as evaluate the same with standard comparison techniques performed by Bioserology and crime scene investigation units.	Blood Spatter Pattern Analysis: Definition, scope and significance, historical perspective, Crime scene reconstruction, conceptual model of analysis	Lectures/PPT/Video/c ase study	blood stain interpretation and drawing relevant conclusions from comparative analysis of latent and standard pattern evidence, Students will be able to develop and evaluate Blood spatter pattern	Forensic labs, Medical LABS, Forensic Expert	16
73	UIN	UG	B.Sc Nursing	Community Health Nursing I including Environmental Science & Epidemiology	21NBT303	Ms Mandeep Kaur	This course is designed to help students develop board perspectives of health, its determinants, about community health nursing and understanding about the health care delivery services, health care policies and regulations in India. It helps the students to develop knowledge and understanding of environmental	10+2 with PCB 45%	To introduce the students professional aspects of nursing in community including historical developments and nursing practice, legal and ethical issues, strategies and tools for promoting health.	This course is designed to help students develop board perspectives of health, its determinants, about community health nursing and understanding about the health care delivery services, health care policies and regulations in India. It helps the students to develop knowledge and understanding of environmental science. It further helps them to apply the principles and concepts of BCC and health education for health promotion and maintenance of health within the community in wellness and illness continuum. It helps students to practice community health nursing for the individuals, family and groups at rural, urban and tribal settings by applying principles of community health nursing and epidemiological approach. It also helps the students to develop knowledge and competencies required to screen, assess, diagnose, manage and refer clients appropriately in various health care settings. It prepares the students to provide primary health care to clients of all ages in the community, DH, PHC, CHC, SC/HWC and develop beginning skills in participating in all the National Health Programs.	Lecture/PPT/videos/ Workshop	Identify the levels of prevention and health problems of India. Develop basic understanding about the health care planning and the present health care delivery system in India at various levels. Locate the significance of primary health care and comprehensive primary health care as part of current health care delivery system focus. Demonstrate understanding about an overview		3
74	UITTR	UG	B.A.B.Ed and B.Sc.B.Ed	Environmental Sciences and Disaster Management	22EDT-180	Dr Guneet	The course begins with the basic scientific knowledge and understanding of world from an environmental perspective. Following that, this introduces to different types of disaster and measures involved in strengthening the capacity to reduce the impact of disaster. The course further provides an overview on the complexities		To familiarize students with basics of environmental sciences, waste, and disaster management.	Environment & Surroundings -Definition, components, segments, basic need for Public Awareness. Biodiversity-introduction & its conservation. Introduction to Environmental Impact Assessment.  Air and its composition-structure and composition of Atmosphere, Hydrosphere, Lithosphere and Biosphere.  Environmental education and awareness. Body pats & its function and use of First Aid. Learning principles-Scope relation to science and social science  Natural Resources and its care —Renewable &Non Renewable resources Forest resources, Water Resources, Mineral resources, Land resources, Energy resources  Ecology as an inter-disciplinary science. Origin of life and speciation. Human Ecology and Settlement. Ecosystem Structure and functions: Structures - Biotic and Abiotic components.  Ecosystems-Energy flow models, Shelter, Food chains and Food webs. Food &food crops	Lecture/PPT/videos/ Workshop	Understand different dimensions of environmental studies; problems related to the environmental degradation &the remedial steps taken to address them. Understand different type of disaster that occur in nature consequently learning to develop the preparedness and remedial	TGT/PGT School /College teacher	3,7.11,13

75	UITTR	UG	UITTR	Planning & Policies of Contemporary Education	22EDT-160	Dr Meghna	The course begins with the detailed description of Ancient education system in India and give students a comprehensive understanding about the Indian education system prevalent in the contemporary times. It includes a description of various educational commissions, committees and advisory bodies	Graduation	The students will understand the concept and aims of contemporary education  The students will acquire knowledge about contemporary education in India  The students will be acquainted with various regulatory & advisory bodies established for the improvement of Indian Education System.	Education in Vedic Period: Meaning and Objectives Curriculum Method of Teaching, Role of Teacher in Vedic Education Perio Education in Buddhist Period: Meaning and Objectives Comparison of Early and Later Vedic Period of Education Curriculum Method of Teaching, Role of Teacher in Buddhist Education Period Meaning of Charter; First Charter Act Introduced (1793)  The Charter Act of 1813: Recommendations, Importance and Limitations The Charter Act of 1833: Recommendations, Importance and Limitations, Wood's Dispatch of 1854: Recommendations, Importance and Limitations Indian Education Commission or Hunter Commission (1882); Macaulay Minutes on Indian Education Central Advisory Board of Education University Education Commission (1948)		Students will be able to understand the importance of contemporary education Students will be able to explain the evolution of Indian Education system Students will be able to describe the roles and responsibilities of various regulatory/advisory bodies (UGC, CABE, NCERT, DIET, SCERT, CIET, NCTE)	TGT/PGT School teacher	4
76	UILAH	UG	UILAH	Economics	21HET-102	MS. Diksha	This course is designed to expose the students to the basic principles of microeconomic theory including production and consumption concepts in real life situations.	Must have passed Senior Secondary Exam or its Equivalent		Definition, Meaning, Nature and Scope of Economics, Utility Analysis and Indifference Curve Analysis, consumer equilibrium, Demand function, Law of Demand and its Exceptions, Elasticity of Demand (degrees, measurement and importance),Concepts of supply, production and costs, Concept of revenue and market forms.	Lecture/PPT/videos/ Workshop	I. Understand the basic principles of microeconomic theory in business. 2. Develop the necessary critical competence and acumen to understand how microeconomic concepts can be applied to analyze real-life situations. 3. Analyze the basic concepts of demand and supply and their applicability in different markets. 4. Analyse the concepts of production function in real life.		8
77	UITTR	UG	B.A.B.Ed and B.Sc.B.Ed	Principles and Procedures of Guidance and Counselling	-22EDT-241	Ms.Simarjeet Kaur	The course begins with the theoretical study of Guidance and Counselling which is widely utilized in all education domains. The students are ther introduced with the process of helping individuals discover and develop their educational, and psychological potentialities and thereby to achieve an optimal level of	Graduation	1.The students will develop an understanding of the concepts of guidance and counseling. 2.The students will acquire knowledge about the guidance services 3.The students will be acquainted with the importance of Guidance and Counselling	Meaning, Nature, Need of Guidance, Functions of Guidance. Types of Guidance – Educational, Vocational and Personal Guidance Meaning, need and importance of different types of Guidance Guidance Services - Job Analysis -concept, need Job Satisfaction-concept, factors affecting job satisfaction Occupational Information - concept, need. Needs and Problems of Learners in Schools - Academic: difficulties in learning, attention, underachievement, stress, indiscipline, drop-outs, school violence Socio-personal: behavioural, psychological, attitudinal problems Counselling - meaning, purpose, scope Types of Counselling - Directive, Non-directive, Eclectic Process of Counselling (introduction, in - depth, communication, suggestion) Skills in Counselling (listening, questioning,	Lecture/PPT/videos/ Workshop	Students will be able to understand types of guidance and be aware about various problems faced by the students in schools understand the different types of statistics and statistical data graphically Students will be able to grasp with different testing devices and techniques of guidance Students will be able to understand the role of teacher as counselor and to create an	TGT/PGT Teacher/Counseller	4,10

78	UILAH	UG	UILAH	Ethics and Gender Equality	21UCT-202	Dr. Navdeep Kaur	The course also sensitizes the graduates to important gender issues and gender equality as a goal in itself as it is a precondition for reducing poverty, promoting sustainable development and building good governance.	Must have passed Senior Secondary Exam or its Equivalent	1. Sensitize students to ethics, values and moral dilemmas, professional ideals and Virtues. 2.  2. Aims at preparing the students to face gender related diversity including sensitization to gender relationships, equality, gender identities etc. 3.  3. An understanding of the gender issues will enable the students to develop good inter-personal skills in the society as well as at the workplace.	Ethics, Gender equality, Cross cutting issues.	Lecture/PPT/videos/ Workshop	1. Understand perceptions on ethics, values, and moral dilemmas as a significant aspect of life. 2. Apply the code of ethics and appreciate gender diversity in their social and professional environment. 3. Analyse gender as a socio-cultural, ideological construct essential for sustainable development of society.	Research Analyst, NGO, International Organizations as a Social worker and counselor	5
79	UILAH	UG	UILAH	Economic Growth and Development	21HET-303	Dr. Harpreet Kaur	This course is designed to make the students aware of the theories of growth and development in developed and developing countries.	Must have passed Senior Secondary Exam or its Equivalent	I. This course is designed to understand the concept of alternative conceptions of development and their justification. 2. It also helps in understanding the concept of aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. 3. 3. The subject provides the basic knowledge of axiomatic basis for inequality measurement is used to develop measures.	Understanding Development, Diverse Structure and Common characteristics of Developing Nations, Theories of Development, Population Growth, Economic Development and Environment	lecture/PPT/videos/W orkshop	Students will analysis the role of globalization and increased international dependence on the process of development. 2. Students will evaluate the difference between growth and development. 3. Students will able to understand the structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. 4.		8
80	USB	UG	B.Com (H)	Micro Economics	21CMT103	Ms. Aparna	The course introduces microeconomic concepts and analysis, supply and demand analysis, theories of the firm and individual behavior, competition and monopoly, and welfare economics.	12th	1. The goal is to guide supply and demand analysis to analyze the impact of economic event on markets. 2. To analyse and understand the behaviour of consumers in the markets. 3. To evaluate, analyze and interpret factor affecting the behaviour of producers.	Introduction to Micro Economics Utility Analysis Law of Demand Demand Elasticity Demand Forecasting Theory of Production Theory of Cost Theory of Revenue Determination of Price under different Markets	Lecture/PPT/videos/ Workshop	The students would be able to link between household behaviour and the economic models of demand.  The students would be able to develop the link between production costs and economic models.  Students will be able to demonstrate how different degrees of competition in a market affect pricing and output	Teaching, Strategy Planning, Analytics	1, 8

81	USB	UG	B.Com (H)	Macro Economics	21CMT110	Ms. Ravneet	It studies the aggregate behaviour of the economy. This course provides an introduction to the economic analysis of key macroeconomic variables such as output, employment, inflation, interest rates and exchange rates.	12th	Understanding of the aggregates of various market forces at a larger scale and application of the economic concepts. Develop the ability to explain core economic terms, concepts, and theories.  Demonstrate the ability to employ the "economic way of thinking."	Introduction to Macro Economics Concepts of Macro Economics National Income Income and Employment Investment Capital Inflation Money Commercial bank and Central Bank	Lecture/PPT/videos/ Workshop	The student will be able to comprehend the dynamics of economy and its application in modern day business.  The student will develop understanding of investment & multiplier function.  The student will develop understanding of stabilization policies of Indian Economy.	Teaching, Strategy Planning, Analytics	1, 8
82	USB	UG	B.Com (H)	Organisation Behaviour	21CMT106	Dr. Aarti	It helps inexamining individual and group behaviour, communication, conflict and various management styles, motivational techniques and coordination in the work environment and apply these concepts to the development of an organization's human resources	12th	To impart the basic knowledge of behaviour of diverse organisations in the students	Concepts of Organisational Behavior OB Model Diversity in Organisation Organisational Culture Attitude and Values Behavior Dynamics Group Dynamics Group Decision Making Change Management	Lecture/PPT/videos/ Workshop	The student will be able to understand various models of OB The student will be able to understand the effect of culture and value on organisational behavior The student will understand various group dynamics of the organisation.	Corportae Jobs, Trainers	9,10
83	USB	UG	B.Com (H)	Introduction to Ecommerce	21CMT212	Ms. Atul	The course introduces students to a wide range of electronic commerce issues for marketers, as a foundation for continual learning in the dynamic e-commerce environment.	12th	I To equip students with knowledge of the fundamentals of e 2 To nurture analytical and practical skills in the applications of e 3 To appraise E Commerce strategies and applications, including online marketing.	Introduction to Electronic Commerce: What is E-Commerce (Introduction and Definition), Main activities Ecommerce, Goals of E-Commerce, Technical Components of Ecommerce Functions of E-commerce Functions of E-commerce, Adv / Disadvantages of Ecommerce, Scope of E-commerce Electronic commerce Applications Electronic commerce and Electronic Business Internet Marketing: PROS and CONS of online shopping, An Internet business, Internet marketing techniques The E-cycle of Internet marketing, Personalization e-commerce Planning, implementing and Controlling of e-Business: Creating the Marketing Mix, Organizational and Managerial issues, Financial Planning and Working with Investors, Implementation and Control of the e-Business Plan Security Issues in e-business Securing E-commerce Networks: Security Protocols such as HTTPS, SSL	Lecture/PPT/videos/ Workshop	Students will be able to comprehend the basic concepts of e-commerce and apply in the modern world. The students would be able tounderstand of marketing in E-commerce by: analyzing branding and pricing strategies, using and effectiveness of market researchassessing the effects of disintermediation. The students will be couinped with	Entrepreneur, Trading, Marketing	4,11,17

84	UIS	UG	B.Sc. NM/ B.Sc. CSM, B.Sc. (Hons.) Mathematics	Ethics and Gender Equality	21UCT-202		The course also sensitizes the graduates to important gender issues and gender equality as a goal in itself as it is a precondition for reducing poverty, promoting sustainable development and building good governance.	Must have passed Senior Secondary Exam or its Equivalent	1. Sensitize students to ethics, values and moral dilemmas, professional ideals and Virtues. 2.  2. Aims at preparing the students to face gender related diversity including sensitization to gender relationships, equality, gender identities etc. 3.  3. An understanding of the gender issues will enable the students to develop good inter-personal skills in the society as well as at the workplace.	Ethics, Gender equality, Cross cutting issues.	Lecture/PPT/videos/ Workshop	Understand perceptions on ethics, values, and moral dilemmas as a significant aspect of life. 2. Apply the code of ethics and appreciate gender diversity in their social and professional environment. 3. Analyse gender as a socio-cultural, ideological construct essential for sustainable development of society.	Research Analyst, NGO, International Organizations as a Social worker and counselor	5
85	UIE	PG	ME EEÆV	Electrical and Hybrid Vehicles	21ELT-716	Dr Ranjit Bindal	Basics of Hybrid and Electric Vehicle, Hybridization, Autonomous Electric Vehicles, Batteries and Charging Systems.	Electric Machines	To understand the concepts of different types of conventional electric and hybrid vehicles. To realize the concepts of working and control of electric vehicles. To study the issues related energy management strategies in hybrid and electric vehicles.	Introduction Conventional and to Hybrid Electric Vehicles . Electric Trains and Energy Storage. Energy Management Strategies	PPT/Lectures/Video	The student will able to understand working of different types motors used in electric vehicles. 2.     The students will be able to differentiate types of conventional and electric Vehicles.     3. The student will be able to compare the different types of Vehicles on their performance using transmission characteristics. 4.     The students will able to design and implement the hybrid vehicle considering safety.	Certified for work in	7,9,12
86	UIE	UG	BE EE	Energy Efficient Buildings	ELC-352	Dr Ranjit Bindal	Energy efficient buildings are a cornerstone of a prosperous, sustainable and healthy society.	Electric Drives and Utilization	This course should provide good knowledge regarding building technology and building services engineering (HVAC) that contribute to a low demand for purchased energy to buildings. The course will also provide additional knowledge regarding building physics, ventilation technology and indoor climate, etc. that provide a better understanding of building-related problems of various kinds, in order to apply technologies that will contribute to	I. Introductution to energy efficient building 2.      District the second of the	PPT/Lectures/Video	Perform energy audits in any type of building and suggest the conservation measures. 2. Integrate the renewable energy systems in the buildings and passive cooling in	Certification of building (Resi/commercial/industri al), energy efficiency building will be a driving factor in the construction industry. HVAC in (Resi/commercial/industry)	11,12,13

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87	UIE	PG	МЕ-ЕЕ	Distributed Generation System	21ELT-610	Dr.Surbhi Gupta	The necessity for smart electrical systems having minimum technical loss and environmental impact is providing impetus to go for Distributed Generations (DGs) which offers several other advantages such as reduced transmission and distribution system resources, increased reliability, better power	Power System	This course understand the concept of distributed generation their implication on power system protection and understand the applications and principles of inverter modeling and filter requirements for grid integration	Introduction to distribution systems Sequence analysis and fault calculations Power quality requirements Intentional and unintentional islanding Power converter topologies for grid interconnection Inverter modeling, filtering requirements	PPT/Lectures/Video	engineering problems. Analyze electrical engineering problems by utilizing modern tools Design the microgrid architectures and its control	Certified for work in commercial microgrid like Carlyle Group and Schneider Electric, Siemens	7,12
88	UIE	UG	BE EE	Energy Management and Auditing	ELO-352	Dr.Surbhi Gupta	The Energy Audit gives a positive orientation to the energy cost reduction, preventive maintenance and quality control programmes which are vital for production and utility activities.	Renewable energy resources	The objective of Energy Management is to achieve and maintain optimum energy procurement and utilisation, throughout the organization and:  * To minimise energy costs / waste without affecting production & quality  * To minimise environmental effect	Introduction to energy management, need of energy mnagement, classification of energy conservation measures	PPT/Lectures/Video	1. Obtain the knowledge about energy conservation act, policy, regulations and business practices. 2: Analyse different energy systems from a supply and demand perspective. 3: Recognize opportunities for rational use of energy in industrial application. 4: Apply knowledge of Energy Conservation Opportunities in a range of contexts.	NTPC, NHPC, Power Grid, Energy Sector	6,7,9,11
89	UIE	UG	BE EE	Deregulation of Power Systems	ELA-351	Dr.Surbhi Gupta	The term electric deregulation is the process of changing the rules and regulations governing the electricity sector, which gives consumers the choice of electricity suppliers. In deregulation Removal of control and improving an economic efficiency of electricity are achieved.	Power System	The main objectives of power system deregulation are to attract various investments to power industry in order to meet the fast growth of electric demand caused by blooming economy and in the meantime to reduce government commitment and functions in power industry.	Introduction to restructuring of power industry,Fundamentals of Economics ,Market models and Congestion Management	PPT/Lectures/Video	1. Perform energy audits in any type of building and suggest the conservation measures. 2. Integrate the renewable energy systems in the buildings and passive cooling in buildings. 3. students will able to analyse different buildings on their performance. 4. students will be able to understand energy efficient building Codes & standards. 5. Students will be able to apply	NTPC, NHPC, Power Grid, Energy Sector	11,12,6,7

												1.The student able		
90	UIE	UG	ве ее	Smart and Micro Grid	ELC-451	Harvinder Singh	A smart grid entails technology applications that will allow an easier integration and higher penetration of renewable energy. It will be essential for accelerating the development and widespread usage of plug-in hybrid electric vehicles (PHEVs) and their potential use as storage for the grid.	power system	To understand the issues related to renewable energy resources and concept of micro grid.  • To integrate and optimize distributed energy resources to achieve efficient and reliable grid  • To familiar about measurement and monitoring technology of smart grid.	INTRODUCTION TO SMART GRID, SMART GRID TECHNOLOGIES, DISTRIBUTED ENERGY RESOURCES AND MICRO GRIDS, STORAGE, Communication, Measurement And Monitoring Technologies For Smart Grid	PPT/Lectures/Video	to understand the various automation techniques for reliable grid management.  2 The student able to apply Smart grid technologies provide the basis for standards development that will facilitate widespread deployment and integration of distributed energy resources  3 The student will be able to know about various	NTPC, NHPC, Power Grid, Energy Sector	11,12,9,6,7
91	UIE	UG	BE EE	Energy Resources, Economics Environment	ELC-351	Sachin Kumar	The course begins with the theoretical study of the current scenario of different renewable energy resources worldwide. The students are then introduced to energy economics like the cost of saved energy, net energy analysis. The course further emphasizes on the concept of Environmental Impacts of energy use.	Renewable energy resources	To understand the key concept of energy economics and factors affecting energy markets. To apply the concept of differential equations and to impart the knowledge of their applications for the calculation of the payback period. To analyze specific energy issues globally and the environmental impact of using different forms of energy.	Energy Resources, Energy Economics, Environmental Impacts of energy use, Climate Policy	PPT/Lectures/Video	To understand the key concept of energy economics and factors affecting energy markets.  To apply the concept of differential equations and to impart the knowledge of their applications for the calculation of payback period.  To analyze specific energy issues globally and environmental impact of using different forms of energy.  To Analyze the	NTPC, NHPC, Power Grid, Energy Sector	6,7,9,13
92	UIE	UG	BE EE	Wind and Solar energy systems	21ELT-612	Sachin Kumar	The combination of renewable energy sources, wind & solar are used for generating power called as wind solar hybrid system. This system is designed using the solar panels and small wind turbines generators for generating electricity.		To enable the student to understand the issues related to the grid integration of sol a r and wind energy systems.	Physics of Wind Power,Wind Generator Topologies,The Solar Resource,Solar Photovoltaic,Network Integration Issues,Solar thermal power generation.	PPT/Lectures/Video	Understand with the energy scenario and the consequent growth of the power generation from renewable energy sources. Ability to analyze the basic concepts of wind and solar power generation. Capability to Integrate the power electronic of wind and Solar thermal power generation. Analyze the issues related with network integration. Design the Solar Photovoltaic & Solar thermal	NTPC, NHPC, Power Grid, Energy Sector	6,7,9

93	UIE	UG	ME-EE	Smart Grid Technology	21ELT-611	Harpreet Kaur	Basics of power system and control system	Power system	To integrate and optimize distributed energy resources to achieve a more efficient and reliable grid, Expose the students with integration of distributed energy resources and storage devices particularly Plug-in-hybrid electric vehicles with the utility grid poses significant challenges. Smart grid technologies provide the basis for standards development that will facilitate widespread deployment and	introduction to smart critica smart critical Technologies. Distributed Energy Resources And Micro Grids. Storage Communication, Measurement & Monitoring	PPT/Lectures/Video	monitoring technology of smart grid. 4 Understand about electric transportation 5 Understand various technologies related to distributed energy	Certified for work in commercial microgrid/Power grid like Carlyle Group and Schneider Electric, Siemens	11,12,7
94	UIE	UG	ве-ее	Distributed Engineering	ELA-454	Rehana Perveen	Distributed Engineering	Power electronics	This course understand the concept of distributed generation their implication on power system protection and understand the applications and principles of inverter modeling and filter requirements for grid integration	Introduction to distribution systems Sequence analysis and fault calculations Power quality requirements Intentional and unintentional islanding Power converter topologies for grid interconnection Inverter modeling, filtering requirements	PPT/Lectures/Video	Understand various distributed generation systems and their applications Design modern systems for the upkeep of pollution free environment Develop solutions for real-life electrical engineering problems. Analyze electrical engineering problems by utilizing modern tools Design the microgrid architectures and its control	Certified for work in commercial microgrid like Carlyle Group and Schneider Electric, Siemens	12,9,7
95	UIE	PG	ME EV	EV Battery Charging system	21ELT714	Dr. Manjeet Singh	Basics of Batteries and Charging Systems, Basics of Hybrid and Electric Vehicle, Autonomous Electric Vehicles, Batteries and Charging Systems.	Electrical Machines, Electrical Energy Storage	To understand the concepts of different types of storage systems. To realize the concepts of working and control battery charging station. To study the issues related to battery energy management strategies.	Introduction to cells and Electric Vehicle batteries . Electric Energy Storage. Battery for domestic and public charging stations	PPT/Lectures/Video	The student will able to understand working of different types batteries used in domestic and commercial sectors. 2. The students will be able to differentiate types of batteries.	Certified for work in commercial vehicle and microgird companies like, TATA, MARUTI, Carlyle Group and Schneider Electric, Siemens	11,12,7,9

96	UIE	PG	ME EE	Electrical and Hybrid Vehicles	21ELT-613 Dr A	Amandeep Gill	Basics of Hybrid and Electric Vehicle, Hybridization, Autonomous Electric Vehicles, Batteries and Charging Systems.	Electric Machines	To understand the concepts of different types of conventional, electric and hybrid vehicles. To realize the concepts of working and control of electric vehicles. To study the issues related energy management strategies in hybrid and electric vehicles.	Introduction Conventional and to Hybrid Electric Vehicles . Electric Trains and Energy Storage. Energy Management Strategies	PPT/Lectures/Video	be able to compare the different types of Vehicles on their performance using transmission characteristics. 4. The students will able to design and implement the hybrid vehicle considering safety.	Certified for work in commercial microgrid like Carlyle Group and Schneider Electric, Siemens	11,12,7,9
97	UIE	PG	ME EV	Energy storage system and control	21ELT710 Dr A	Amandeep Gill	Basics of Batteries and Charging Systems, Basics of Hybrid and Electric Vehicle, Hybridization, Autonomous Electric Vehicles, Batteries and Charging Systems.	Electrical Machines, Electrical Energy Storage	To understand the concepts of different types of storage systems. To realize the concepts of working and control battery charging station. To study the issues related to battery energy management strategies.	Introduction to cells and Electric Vehicle batteries . Electric Energy Storage. Battery for domestic and public charging stations	PPT/Lectures/Video	1. The student will able to understand working of different types batteries used in domestic and commercial sectors. 2. The students will be able to differentiate types of batteries . 3. The student will be able to compare the different types of batteries on their performance using characteristic analysis. 4. The students will able to design and implement the battery storage systems	Certified for work in commercial vehicle and microgird companies like, TATA, MARUTI, Carlyle Group and Schneider Electric, Siemens	11,12,7,9
98	UIE	UG	BE Food Technology	Nutraceutical and Functional Foods	FTT 360 Dr B:	Bazilla Gayas	The student must have basic knowledge food science, reactions involved in food chemistry and nutritional value of foods.	Must Have diploma in Food technology	To understand the role of nutraccutical and functional foods in health and disease.	Definition, status and scope of health and functional foods in India, Definition of nutraceuticals and their importance. Types of health benefits and functional foods and their properties. Various food constituents responsible for functional effects: Anti-carcinogenic, hypo-cholesterolemic and hypoglycemic foods. Dietetic foods, anti-ageing foods, - Fortified foods, diabetic foods, - Biofedic, prebiotics and probiotic foods. Dietetic foods, anti-ageing foods, - Fortified foods, diabetic foods, Biofedic, prebiotics and probiotic foods. Storage, packaging and labeling of health and functional food. Marketing aspects of health and functional foods. Safety / Legal aspects of health and functional foods. Organic foods and Genetically Modified (GM) foods in relation to health.	Lecture/PPT/ Workshop	Understand the processing of health and functional foods. Acquire knowledge about health and functional foods organic foods and GM foods. Analyze the knowledge about the legal aspects of functional foods. Understand the smart food initiatives. Understand marketing status of functional foods.	Food Technologist, Dietician, Food Nutritionist	Mapped with Goal 3

99	UID	UG	Industrial Design	Design Management	21BDP-401	Mr. Harsh Mohanty	Fundamentals of Design		To improve the skills in Team Building, Management, Finance and Marketing operations as well as other skills which are necessary to lead the Design Department. Specialists Design Managers are selected to lead the Design functions to guide Design decisions or to lead the Creative people, which is the importance or opportunity to structure a Course like Design Management.		Practical /Workshop	1. Knowledge about Skills in the discipline of Business Strategy and Design Management to strategically create Business Opportunities 2. To manage the skills, techniques in innovation, creativity as well as critical thinking. 3. To handle the Team, understand and respect different point of views and perceptions for decision making	Design studios, Original equipments manufacturers	9
100	UIE	UG	Biotechnology Engineering	Environmental Biotechnology	BET-354	Dr. MD Azizur Rahman	The course is an introduction to environmental biotechnology and focuses on the utilization of microbial processes in waste and water treatment, and bioremediation, biodegradation, environmental acts and regulations.	Environment, Waste and Disaster Management	To evaluate the potential for biodegradation of organic pollutants, taking microbial and physical/chemical environments, as well as the chemical structure of the compound itself, into consideration.	Components of environment; Environmental pollutions, its measurements and management; Air pollution and its control through biotechnology, Cleaner bioprocesses and sustainable development; classification and characterization of wastes, analytical techniques in environment monitoring. Water pollution and its control; Microbiology of waste water treatment – Aerobic and anaerobic processes, Treatment scheme for domestic and industrial waste water, wastewater biotreatment: characteristics of wastewater, aerobic and anaerobic wastewater treatment processes; activated sludge process, trickling filter, lagooning process, rotary disc biological contractor, photosynthetic wastewater treatment, biomethanation process.	PPT/Lectures/Video	Classify microbes according to energy source and carbon source and evaluate energy outcome of the energy metabolism Describe suitable methods for characterizing the activity, function, diversity, and composition of microbial communities. Understand the biological process for sewage and wastewater management Discuss role of biology in sustainable		6
101	UILS	UG	BALLB/B.COM.L LB/BBA.LLB	Jurisprudence	22LLT256	Ms Himanshi Gupta	This course is designed to understand the discipline and significance of jurisprudence in a rapidly globalizing world.	Must be having +2	This course is designed to understand the discipline and significance of jurisprudence in a rapidly globalizing world.	Definition, kinds and classification of Law, Analytical Positivism- Jeremy Bentham - John Austin - H L A Hart - Hans Kelsen Historical School - Karl Von Savigny - Henry Maine, Sociological School - Ihering - Ehrlich - Roscoe Pound - Duguit, Natural Law School - Early Greek Period - Dark Age - Reformist Phase - Thomas Acquinas - Social Contract - Grotius, Hobbes, Locke, Rousseau; Modern Natural Law - Fuller, Rawls, American Realism, Theories of Feminist Jurisprudence, Custom: Definition, Kinds, Custom and Prescription, Requisites of a valid custom, merits and demerits of custom as a source of Law Legislation: Definition, Classification, merits and demerits of legislation as a source of Law Precedent: Definition, Kinds, Classification, Ratio Decidendi, Stare Decisis, Obiter Dicta, When precedents become weak law, method of deriving judgments - inductive and deductive, merits and demerits of precednet as a source of Law. Theories of Punishment, Person: Definition and Nature of Personality, Legal Status of Unborn Children, Minor, Lunatic, Drunken, Dead Persons, Animals.	PPT/Lectures/Video/ Case study	To acquaint the students with the fundamentals of law as a subject, To demonstrate a critical knowledge and understanding of the central concerns of jurisprudence, To demonstrate a critical understanding of models and theories as to the internal structure of law	Advocates, Researcher,Judges	4

102	UILS	UG	BALLB/B.COM.L LB/BBA.LLB	Special Contracts including Specific Relief Act	21LCT152	Mr.Sumit Sharma	This course is designed to provide legal knowledge concerning specialised contracts, like indemnity, bailment, agency, sale of goods, etc	Must be having +2	To provide legal knowledge concerning specialised contracts, like indemnity, bailment, agency, sale of goods, etc. To equip the students with practical and theoretical knowledge of law relating to specialised contracts. To provide students with expertise and a foundation for special contracts	Contract of Indemnity- Definition of Indemnity, Rights of Indemnity holder, Indemnifier's liability. Contract of Guarantee- Definition of guarantee, Nature and Extent of Surety's liability, Discharge of surety's liability, Rights of Surety, Distinction between indemnity and guarantee, Bailment and Pledge, Contract of Agency, Specific Relief.	PPT/Lectures/Video/ Case study	The students will be able to understand theoretical and practical aspects of special contracts, Students will be able to distinguish between the special contracts and apply the respective legal provisions to each of them, Students will be able to apply critical thinking skills in reading and interpretation of special contracts, Students graduating with Law of Contract	Advocates, Researcher,Judges	4,8
103	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Law of Torts, Motor Vehicles Act and Consumer Protection Act	21SMT-121	Mr.Sachin Bharti	This course is designed to make students understand the nature of tort and conditions of liability with help of established case laws. Law of Torts is a diverse subject that includes a wide range of civil claims concerning conduct, which is happening around us every day. This course is further designed to study the impact to the study the impact of the students of	Must be having +2	This course is designed to understand the nature of tort and conditions of liability with help of established case laws. This course is designed to study the provisions and penal consequences in case of violation of the provisions of Motor Vehicles Act, 1988 (as amended till date). This course aims to study the finer aspects of Consumer Protection Act, 2019.	Definition of Tort, Strict Liability and Absolute Liability, Plaintiff's default, Specific Torts - Negligence, Nuisance. Trespass to Person, The Motor Vehicles Act, 1988.	PPT/Lectures/Video/ Case study	To make the students aware about the concept of torts, as it is an uncodified remedy in law, To equip the students with the knowledge of various provisions of Motor Vehicles Act, 1988, To equip the students with the knowledge of various provisions of Consumer Protection Act, 2019, The students should reflect on the alternative forms, and also the remedies provided under the	Advocates, Researcher,Judges	4
104	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Family Law	22LLT225	Dr.Navneet Kaur	The course focuses on the codified and uncodified law as applicable on the Hindus on various aspects, such as marriage, divorce, adoptions, maintenance, and guardianship. Hindu law is an integral part of personal laws in India and this course is designed keeping in view the understanding of	Must be having +2	To make the students aware about the Hindu personal law, To help students learn the application of Hindu personal law in India, To sensitise the students on various practical issues and challenges in family law.	Nature and Concepts Who is a Hindu, Maintenance Adoption and Guardianship, Joint Hindu Family.	PPT/Lectures/Video/ Case study	Students studying Hindu Law learn about basic concepts of Marriage, Divorce, Succession, Maintenance ,custody. Students of Family law examines historical and social contexts that have influenced the modern definition and regulation of families. Students will understand the significance of Hindu Law and its applicabilty in India Students will able to Identify	Advocates, Researcher,Judges	4

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105	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Indian Penal Code-II	22LLT359	kudrat bedi	This course is designed to make the students aware about various offences punishable under the Indian Penal Code. The course is designed in such a manner that the all the significant provisions of IPC are dealt with the help of case laws.	Must be having +2	To provide a basic understanding to students about crime/punishment and laws related to it, To understand the intricacies surrounding the offences under IPC, To make the students aware about various offences, their ingredients, exceptions and punishments.	Concept of Crime & General exceptions, Culpable Homicide (Sec. 299, 304), Outraging the Modesty of Women and Sexual Harassment (Sec. 354, 354- A354-D)	PPT/Lectures/Video	able to understand the various kinds of offences affecting property, person, women, documents etc. Students will be able to understand the various kinds of punishment relating	Researcher, Judges, Public Prosecutors	4,16
106	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Code of Criminal Procedure	22LLT326		This course is designed to enable students to understand the legal procedure adopted by court to punish the offender. Students will learn the meaning and application of principle of fair trial and role of functionaries in providing the justice to both the parties.	Must be having +2	To make students aware about the hierarchy of criminal courts in India, To make students aware about the procedure to be adopted during arrest and its associated legal provisions, To make the students understand the concepts of FIR and bail.	The Rationale of Criminal Procedure, Conceptual Contours of Arrest , Concept of FIR Procedure for recording of FIR.	PPT/Lectures/Video	Students will be imparted complete understanding and knowledge about the procedure for arrest, trial and execution of sentences in criminal case, Students will be imparted	Advocates, Researcher,Judges, Public Prosecutors	4,16
107	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Constitution Law	22LLT158	Dr. Inderpreet Kaur	The Constitution, a living document, is said to be always in the making. The judicial process of Constitutional interpretation involves a technique of adapting the law to meet changing social mores. The objective of this paper is to develop the basic understanding of constitutional law to the students	Must be having +2	This course is designed to understand the importance of Constitution of India. It helps in understanding the concept of welfare state. The subject provides the basic knowledge of the fundamental rights, fundamental duties and the understanding of the various doctrines related to the law-making bodies.	Introduction to Constitution, Fundamental Rights (Art-21 to 30), Power of Parliament to modify the Fundamental Rights in their application to Forces	PPT/Lectures/Video	Students should be able to study conceptual parameters of Comparative Constitutional law. Students should be able to analyse operational parameters of Comparative	Advocates, Researcher,Judges, Public Prosecutors	1,2,3,4,5,16

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108	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Property Laws including Laws Relating to Easements	22LLT330	Dr. Priya Singhla	This course is designed to make the students aware of the course on property law and Indian Easement Act. It conventionally deals with the Transfer of Property Act, 1882, which mainly governs the transfer of property between two living persons. This course will involve textbook material and case studies.	Must be having +2	To make the students aware about all the aspects related to immovable properties and the provisions related to their transfer.	Distinction between movable and immovable property, Rule of Election, Specific Transfers.	PPT/Lectures/Video	The students will be able to demonstrate the understanding of various forms of alienation of immovable property and general principles relating to transfer of Immovable property. Students will evaluate the concepts & procedure of transfer of property with the help of case laws and illustrations. The students will be able to demonstrate the understanding of various	Advocates, Researcher,Judges, Public Prosecutors	4
109	UILS	UG	BALLB/B.COM.L LB/BBA.LLB/LLB	Public International Law	LLT-562	Dr Namah Dutta	This course is designed with a view to make the students understand the process of making laws at the international level through treaties, conventions, declarations, etc. Further, the course will give a deeper knowledge of human rights to the students in order to make them understand their significance in the modern-day context.	Must be having +2	To enable the students, understand the fundamental principles of public international law, To provide the students with the understanding of the significance of public international law in the present context. To enable the students understand the fundamental principles of human rights.	Nature of International Law, Recognition of States , Extradition, Asylum .	PPT/Lectures/Video	The students will be able to apply the knowledge of public international law to the modern day context. The students will be able to grasp the finer aspects of law making at the international level. The students will be able to demonstrate deeper understanding of human rights, which helps them in undertaking further research on the subject. Demonstrate knowledge and understanding of	Advocates, Researcher,Judges, Public Prosecutors	4,11,14,16
110	UILS	UG	BA LL.B (Hons.)	Law of Evidence	22LLT451	Ms. Shallu	This course is designed to make the students aware that for execution of any punishment, the accused must be given fair opportunity to explain his/her part. Hence, procedure is one of the important aspects of criminal justice system. The students need to be thorough in this subject.	Must be having +2	To make the student aware about certain peculiar features and characteristics of property.	Introductory (Sections 1-2) The main features of the Indian Evidence Act 1872 Central conceptions in Law of Evidence (Sections 3-4) Facts: relevancy (Sections 5-16) Admissions and Confessions (Sections 17-31) Dying Declarations The justification for relevance of dying declaration (Section 32 (1)) Other Statements by Persons who cannot be called as Witnesses (Sections 32-39) Facts which need not be proved (Sections 56-58) General Principles concerning oral evidence (Sections 59-60) General principles concerning Documentary Evidence (Sections 61-90A) General principles Regarding Exclusion of Oral by Documentary Evidence (Sections 91-100) Burden of Proof (Sections 101-114) Estoppel (Section 115-117) Witnesses (118-134)	PPT/Lectures/Video	The Students will be able to understand Substantive & Procedural provisions of the Evidence Law,To analyse &Critically evaluate the process of proving facts within the		4,16

111	UILS	UG	BA LL.B (Hons.)	Civil Procedural Code	22LDT-438	Ms.Imrose Tiwana	1 This course is de	Must be having +2	To provide the students with an understanding on the	Jurisdiction of Civil Courts, Suit-parties to suit, frame of suit Pleadings – plaint and written statements Appearance & Non-Appearance of Parties Discovery and Inspection Res – judicata and foreign judgements Admission, section 23,40 and other civil provisions in Indian evidence act, Interim Orders, Appeals and Inherent Powers of Courts, Temporary Injunctions Withdrawal & Compromise of Suits Suits by Pauper and minor Inherent Powers of the Court, First Appeals, Second		Students will have enhanced knowledge about the civil procedure code, Student will be acquainted with different concepts relating to civil law and other relevant provisions, Students	Advocates, Researcher, Judges	4,16
									easements associated with the property.	Appeals, Appeals from Orders, Appeals to Supreme Court Reference, review and revision Articles regarding appeals in Indian limitation act, Courts by which Decree may be executed Application, Mode & Stay of Execution Arrest, Detention & Attachment of Property Remedies available under the Indian Contract Act, 1972 Specific Performance of Contract		will have an in depth knowledge of the concept of civil law which help them in cracking judiciary and other like competitive exams.		
112	UILS	UG	BA LL.B (Hons.)	Administrative Law	22LLT329	Ms.Staffy Bolina	This course is designed to make the students aware of the importance of administrative law. Students will analysis the Concept of rule of law and doctrine of separation of power and the relationship with constitutional law. This course will involve textbook material and case studies.	Must be having +2	1.To make the students aware about the rules, regulation, and byelaws applicable in the administration of any entity.  2.To enable the students understand various principles applicable in administrative law.  3.To make the students aware about the importance of principles of natural justice in administrative law.	Meaning, Definition, Scope and Significance of Administrative Law Evolution and Development of Administrative Law India, UK, USA and France Rule of Law Doctrine of Separation of Powers and its relevance Relationship between Constitutional Law and Administrative Action—Meaning and Classification Meaning of Delegated Legislation and its Growth Delegated Legislation in USA, UK, and in India: Pre and Post Constitutional Period Rules and Principles of Administrative Rule making/ Delegated Legislation Control Mechanisms of Delegated Legislation: Parliamentary, Procedural and Judicial Sub-delegation Reasons for the growth of Administrative Adjudication and its need Problems of Administrative Adjudication Mechanism for Administrative Adjudication Mechanism for Administrative Adjudication—Statutory and Domestic Tribunals Administrative Tribunal — Definition—	PPT/Lectures/Video	Students will be acquainted with various administrative laws, rules and regulations, and various Quasijudicial Bodies. Students will be acquainted with various delegated legislation Students will be acquainted with the concept of judicial review process. Evaluate the controls over the Administrative Discretion, delegated legislation, Administrative	Advocates, Researcher,Judges	4,16
113	UILS	UG	BA LL.B (Hons.)	Company Law	22LLT-327	Sumit Sharma	This course is de	Must be having +2	To make the students understand the meaning and concept of Company and incorporation of various type of companies. To enable the students understand various kinds of securities in the company and their functioning. To make the students aware about the finer aspects concerning restructuring of the company.	Meaning of Corporation: Nature and kinds of company	PPT/Lectures/Video	The students will be able to define the word company and identify various kinds of companies. The students will be able to classify, compare and relate securities of the company like Shares, debentures etc.  The students will be able to sketch the documents required for registration of a company and its prospectus. The students will be able to connect and relate different doctrines of the	Advocates, Researcher,Judges	4,8

114	UILS	UG	BA LL.B (Hons.)	Principles of Taxation	22LLT366	Dr. Sugandha Passi	This course is designed to make the students aware of the importance of principles of taxation. Students will analyse the principles, fundamentals and basis of	Must be having +2	To provide basic knowledge of various kinds of taxes. To make the students aware about the constitutional provisions of taxation. To make the students aware about the	Taxation in Ancient World and India Meaning of Tax Importance of Tax in India Types of Tax Difference between Direct Tax and Indirect Tax Difference between Tax and Fee Characteristics of Tax and Fee Difference between Tax and Duty Concept of Cess and Surcharge Canons of Taxation and Characteristics of a Good Tax System Taxation under the Indian Constitution (Articles - 265, 246 & Specific Entries of Schedule-VII) Ability to Pay Principles and Concepts of Direct Taxation	PPT/Lectures/Video	Students will understand the concept, nature and method by which income tax is levied in India Students will learn all heads of income and train the students to calculate tax liability keeping in mind all rules and regulations of both taxation and	Advocates, Researcher,Judges,CA	4,8
							taxation and the related concepts. This course will involve textbook material and case studies.		foundations of direct and indirect taxation.	Hrs. Principles and Concepts of Direct Taxation Income Tax Previous Year Assessment Year Agricultural Income Assesses Capital Asset		exemptions. Students will learn that how income tax is so important in practical life and to understand the relevancy of taxation in India.		
115	UILS	UG	BA LL.B (Hons.)	Environmental Law	22LCT513	Ms. Amanat Kahlon	This course is de	Must be having +2		Environmental Protection and its Importance Constitutional Provision and Environmental Protection in India; Role of Judiciary in India for the protection of Environment Environment protection under IPC, Cr.P.C. and C.P.C International Concern for Environmental Protection: Stockholm Declaration, 1972;World Commission on Environment and Development, 1987; Rio Declaration, 1992: Earth Summit, 1997; Johannesburg Declaration on Sustainable Development 2002, UNEP; Global Warming and	PPT/Lectures/Video	To make the students understand the importance of environment protection and the laws in relation to it.  To sensitise the students about various forms of pollution, like air, water, noise, etc. and the laws in relation to it.  To make the students aware about the need to protect wildlife and the laws associated with it.	Advocates, Researcher,Judges,Activi st	6,7,13,14,15
116	UILS	UG	BA LL.B (Hons.)	Labour Law-I	22LLT368	Dr. Vinit Kumar Sharma	This course is designed to make the students aware of the Industrial Laws, which is the combined study of all labour welfare legislations in India, i.e., The Industrial dispute act 1947, The Factory Act 1948, Standing Act 1946 etc.	Must be having +2	To make the students understand the evolution of Industrial Jurisprudence. To make the students understand various statutes dealing with Industrial Law. To study in detail the Indian perspective of dealing with Industrial issues.	Industrial Disputes Act 1947 its objective and saitent features its important definitions, infidual disputes of workman and employer, Bi partite Forums( section 3), Dispute Voluantary Arbitration(section 42), Authority under the act work committee, conciliation officer, board of conciliation, court of inquiry, Mechanism for resolution of Industrial Disputes, Standing Act 1946 and there amendments. Case Law: steel authority of India Itd. & amp; ANR.v/Sjaggu & ors. Etc civil. App Eal. No(s). 8094 of 2011. Purpose of standing order to regulate Industrial relations, Concept to regulate the condition of employment, greviances, misconduct Concept of factory, manufacturing process and worker, Obligation of the employee for health, welfare of worker and including special provision for young and workers, Compensation and Dispute settlement, Industrial Dispute Act 1947. Industrial dispute, unfair labour practice, methods to settle industrial dispute, collective bargaining, authorities for settlement of disputes. Hours of work annual leave, manufacturing process, Settlement in	PPT/Lectures/Video	Students will have enhanced knowledge about evolution of Industrial Jurisprudence. Student will be acquainted with different concepts relating to Industrial disputes, like strikes, lockouts, reterench ment etc. Students will have an in depth knowledge of the concept of workman, and about various problems faced by workmen and legal solutions available	Advocates, Researcher,Judges,Activi st	8,16

117	UILS	UG	BA LL.B (Hons.)	Labour & Industrial Law-II	22LLT412	Dr. Vinit Kumar Sharma	This course is designed to make the students aware of the Labour Laws, which is the combined study of all labour welfare legislations in India, i.e., The Trade Unions Act, 1926, The Industrial Disputes Act, 1947, The Factories Act, 1948, The Code of Wages, 2019 etc.	Must be having +2	understand various statutes dealing with Industrial and Labour laws. To study in detail the	Maternity Act Maternity Benefit Act 1961 its definition, aim, objective and the purpose. Provisions related to the benefit of this maternity Act, like maternity leaves, paternal leave, who is eligible for the maternity benefits, maximum period of maternity benefit. Protection of domestic workers Act 2008 its definition, aims, objective, and the purpose. Employee Compensation Act 1923 its definition, aim, objective, and purpose. Course of Employment and out of employment, Doctrine of National Extension and Authorities.ESI(Employee State Insurance) 1948 its definition, aim objectives and its purpose, Payment of gratuity its definition, aim, objective, and its purpose, Calculation of gratuity, Provident Fund Act 1952 its definition, aim, objective, and its purpose, Labour Code 2019 and its relation to social securities. Concept of minimum wage, fair wage, living wage and need based minimum wage, Procedure for	PPT/Lectures/Video	Students will have a diligent knowledge of concept of workmen and respective compensation policies. Capability of understanding and getting equipped with handling of industrial disputes and resolve cases seeking implications on both employers of the organizations. Ability to comprehend the various compensation	Advocates, Researcher,Judges,Activi st	3,8,16
118	UILS	UG	BA LL.B (Hons.)	Drafting, Pleading and Conveyancing	22LLT511	Dr Sunil	This course is designed to make the students aware of the role of pleading in an ever-evolving world. The students will be taught the basic principal of drafting of a plaint, written statement; petition and affidavit etc. The pleadings are foundation of litigation. Well drafted pleading play a very important role to set justice for	Must be having +2	To make the students aware about the general principles of drafting civil plaints and relevant rules. To make the students understand the basic principles of acriminal complaint and complaint and relevant rules. The course aims at laying strong drafting foundations for the future advocates.	PLEADING AND DRAFTING (Civil) Introduction Fundamental Rules of Pleadings (Order 6, C.P.C) Plaint Structure (Order 7 C.P.C) Written statement (Order 8 C.P.C) Suit for recovery under Order XXXVII of the Code of Civil Procedure, 1908. Suit for permanent injunction Suit for specific performance Petition for dissolution of marriage under the Hindu Marriage Act, 1955  Petition for eviction under the Rent Control Act Application for temporary injunction under Order 39 Rules 1 and 2 of the Code of Civil Procedure, 1908. Application under Order 39 Rule 2A of the Code of Civil Procedure, 1908 Caveat under Section 148 of the Code of Civil Procedure, 1908 PLEADING AND DRAFTING (Criminal & Constitution) Application for maintenance under Section 125 of	PPT/Lectures/Video	To acquaint students with basics of drafting, pleading and advocacy techniques, with a focus of simplicity and brevity To develop adequate theoretical account of substantive law in the context of drafting, pleading and conveyancing. To provide practical orientation and develop necessary acumen in drafting legal documents. To develop the students in the art to the art of the practical orientation and develop necessary acumen in drafting legal documents. To develop the students in the art	Advocates, Researcher,Judges	4,16
119	UILS	UG	BA LL.B (Hons.)	Accountancy for Lawyers and	22LLT454	Ms.Disha Dogra	This course is de:	Must be having +2	To make the students aware about the professional ethics they are expected to abide by when they join the profession.  To make the students aware about the pena consequences if they don't abide by the professional ethics. To make the students aware about bar bench relations.	Introduction: Historical Perspective and Regulation of Legal Profession, Nature and Characteristics of Legal Profession Advocates Act, 1961, Code of Ethics for Lawyers and Professional Misconduct, Changing Profession and Changing Ethics:Right to Advertisement, Entry of Foreign Law Firms in India, Multi-disciplinary	PPT/Lectures/Video	Students will be equipped with the knowledge of professional ethics and their significance in advocacy as a profession. Students will be Identify situations of professional dilemmas and the historical background of legal profession and analyze the law and principles of legal ethics under the Advocates Act, 1961. The students will be able to appreciate the rationale behind the	Advocates, Researcher,Judges	4

120	UILS	UG	BA LL.B (Hons.)	Alternative Dispute Resolution	22LLT414	Ms. Mehak	Alternative dispute resolution (ADR), or external dispute resolution (EDR), typically denotes a wide range of dispute resolution processes and techniques that act as a means for disagreeing parties to come to an agreement short of litigation: a collective term for the ways that parties can settle disputes, with the help of a	Must be having +2	To make the students aware about the dispute resolution mechanism other than the judicial mode.  To help students learn the application of ADR mechanism in India.  To help students learn arbitration mechanism and application in legal field.	Concept of ADR: Meaning, Nature and Genesis of Alternative Dispute Resolution,Legal Services Authorities Act, 1987,Advantages and Limitations of Alternate Dispute Resolution,ADR Techniques and processes Negotiation:Meaning and Scope,Mediation: Meaning, Basic rules of Mediation, Selecting Mediator, Restrictions of Mediator,Conciliation: Meaning, Scope and Difference between Mediation and Conciliation,Concept of ADR:Arbitration: Meaning, Scope and Difference between Mediation and Conciliation,Concept of ADR:Arbitration Meaning, Scope and Difference between Mediation Meaning, Mediation, Scope and Difference between Mediation Meaning, Mediation, Scop	PPT/Lectures/Video	The students will be able to define the Meaning and Nature of Alternative Dispute Resolution for the settlement of disputes without litigation. It will be helpful for students to identify the historical background of ADR. With this, students will distinguish the advantages and disadvantages of ADR. The students will be able to interpret the provisions of	Advocates, Researcher,Judges,Arbitr ators	16
121	UILS	UG	BA LL.B (Hons.)	Moot Court Exercise and Internship	22LCP559	Ms. Sapna	This course is designed to make the students aware about how law is practised in courts by making them undergo internships with lawyers / law firms.	Must be having +2	To provide practical knowledge to the students. To ensure students have some exposure as to how the law is practised in courts. To equip the students with the knowledge to prepare case diaries and moot diaries.	Moot Court: Every student will be required to do two moot courts with 15 marks for each. The moot court work will be on assigned problem and it will be evaluated for 7 marks for written submissions and 8 marks for oral advocacy, Observance of Trial in at least two cases, one Civil and one Criminal: Students will be required to attend two trials. They will maintain a record and enter the various steps observed during their attendance on different days in the court assignment. This scheme will carry 30 marks, Interviewing techniques and Pre-trial preparations and Internship diary: Each student will observe two interviewing sessions of clients at the Lawyer's Office/Legal Aid Office and record the proceedings in a diary, which will carry 15 marks. Each student will further observe the preparation of documents and court papers by the Advocate and the procedure for the filing of the suit/petition. This will be recorded in the diary, which will carry 15 marks.	PPT/Lectures/Video	Students will be able to understand the finer intricacies involved in the legal practice. Students will be able to understand the step-by-step approach towards preparing a case for presentation in the court. Students will have basic level of confidence to appear in the courts. Developed an understanding of the ethical issues and responsibilities that arise in the practice of law.	Advocates, Researcher,Judges,Arbitr ators	4
122	UIE	UG	B.E. (ECE)	Entrepreneurship	21UCT201		The course attempts to create understanding about the various aspects of the Entrepreneurial challenges and start-up basic elements. Tasks will help students to build the practical approach towards the entrepreneurial world. This course will make students able to create the business ideas will also help to	12th Non Medica or Diploma in Engineering Course	1. Introduce the students to the defining characteristics of an entrepreneur. 2. Introduce the students to concepts related to Strategy, Finance and Planning essential for an entrepreneur to take into consideration for conceiving and launching an enterprise. 3. Impart knowledge about Institutional Support available for financing an enterprise.	Introduction and Planning Stage: Entrepreneurship, Role of Entrepreneurship, Scope and Importance of Entrepreneurship, Introduction to new Venture, Opportunities and challenges.  SWOT analysis, New and Existing Product and Services, Franchising and its benefits Sustainability and growth: Cross-Cultural Communication (Selling plan, Vendor Management, Branding and Advertising, Business Growth, Social effect of business and its eco-friendliness)	Lecture/PPT/videos/ Workshop	practice of law. To understand the basics of operation management and various best operations strategies of industry. To apply the knowledge of different strategies for improving the productivity of an organization. To Enable students for analyzing the different types of productivities in manufacturing and production management. To compare and support the different queuing models on various	Set up own Startups	8,9