



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, KALYANI

An Institute of National Importance

(Autonomous Institution under MOE, Govt. of India &
Department of Information Technology & Electronics, Govt. of West Bengal)
WEBEL IT Park, 14, Adivasi Para, Opposite of Kalyani Water Treatment Plant
Near Buddha Park, Dist. Nadia, P.O. Kalyani - 741235, West Bengal.
Email :office@iiitkalyani.ac.in www.iiitkalyani.ac.in

Advt. No. IIITK/Rectt/21-22/F/13

Date: Nov 02, 2021

ADVERTISEMENT FOR RECRUITMENT OF GUEST FACULTY

Indian Institute of Information Technology, Kalyani invites applications from Indian nationals for recruitment as guest faculty for online classes for the following papers in the semester commencing from Jan, 2022. Honorarium per hour for the courses will be as per the norms of IIIT Kalyani.

1st Year 1st Semester (CSE & ECE)	Credit	L-T-P
HU 101 English for Communication	3	3-0-0
HU 102 Humanities – I (Values & Ethics in Profession)	3	3-0-0

1st Year 2nd Semester (CSE & ECE)	Credit	L-T-P
HU 201 Humanities – II (Economics)	3	3-0-0

3rd Year 6th Semester (CSE)	Credit	L-T-P
CS 604 Cognitive Science and Technology	3	3-0-0
HU 611 Soft Skill Development (Sessional Paper)	2	0-0-3

Syllabus

Course Title	: ENGLISH FOR COMMUNICATION
Course Code	: HUC101
Weekly contact	: 3 – 0 – 0 (L – T – P)
Credit	: 3

Writing Skill:

Paragraph Writing, Commercial Correspondence, Précis, Preparing Instruction Manuals, Preparing Proposals, Report Writing, Writing of Dissertation/Thesis, Elements of Grammas and Vocabulary.

Oral communication:

Group Discussion; Extempore Speaking; Presentation Strategies; Interview Preparation.
This course seeks to develop a sense of language through texts drawn from contemporary writings in newspapers, news magazines, reports, etc.

Course Title	: HUMANITIES - I (VALUES & ETHICS IN PROFESSION)
Course Code	: HUC102
Weekly contact	: 3 – 0 – 0 (L – T – P)
Credit	: 3

Introduction

Definition of Science, Technology, Engineering and Ethics. Relationship between the science, technology and Ethics, Different types of Ethics, Dimensions of Ethics, Essence of Ethics, Approaches to Ethical study as Indian Perspective and western perspective, basic concepts of ethics, morality and value, Virtue Ethics, Ethics in public life, ethics in engineering, Ethics in work place. Definition and characteristic of profession.

Effects of Technological growth and various Engineering Activities

Resource Depletion: Club of Rome, Objectives of Club of Rome, Sustainable Development.

Energy Crisis: History, cause and effect, National and international Case studies.

E.f. Schumacher's Appropriate Technology Movement (ATM): Influential factors, advantages and disadvantages of ATM, Case studies National and International.

Environmental Ethics: Pollution, contributions of engineers in eradicating/ reducing pollution, Government's measures

Man-Machine Interaction: Emotional Intelligence and ethics, AI and Ethics, Robotics and Brain Computer interface.

Ethical and Social Responsibilities of an Engineer:

Engineering as Experimentation – Engineers as responsible Experimenters –Safety Engineering- Codes of Ethics – A Balanced Outlook on Law.

Human values and Good Life:

Lessons from the lives and teachings of great leaders, reformers and administrators; role of family, society and educational institutions in inculcating value, , Freedom and discipline, Duties and rights, Contribution of Family in Value education, Contribution of society in inculcating values, Role of educational institutions in inculcating values.

Value crisis in modern day world and a way out- Components of a Good Life- Psychological values, Aesthetic values, Moral and Ethical Values , Material values, Spiritual Values, Social values- Values of Indian Constitution, Democracy, Secularism, Fundamental Rights.

Course Title	: HUMANITIES - II (ECONOMICS)
Course Code	: HUC201
Weekly contact	: 3 – 0 – 0 (L – T – P)
Credit	: 3

Point of Initiation – Central Concepts of Economics

Scarcity and efficiency – Goods: Use & Exchange Value – The three fundamental questions of economic organization – Micro & Macroeconomics – Positive v/s Normative economics – Circular flow of income – Market, command and mixed economies – Society's technological possibilities

Introducing Demand & Supply

Demand Function and demand Curve, determinants of demand – Individual & Market Demand – changes in demand – Marshallian Law of Demand & its exceptions – Demand Elasticities – Techniques of Demand Forecasting.

The Supply Function & Supply Curve – general principle and exception – changes in supply – Supply elasticity – Concept of Market equilibrium & impacts of changes in demand and supply – Revenue

Theory of Consumer Behaviour

Concept of Utility – Cardinal v/s ordinal utility – Law of Diminishing Marginal Utility – Tools of analysis: Axiomatic Approach of Consumer Behaviour – Indifference Curves & Budget Space/Line – Consumer Equilibrium – Income & Substitution effects – derivation of Demand Curve from Indifference curve analysis – Price Consumption Curve and Income Consumption Curve – Engel Curve – Giffens & Inferior Goods - Taxes & Subsidies

Production & Cost

Production Function – the technological relationship between inputs & output – Short Run & Long Run Production analyses – Production with single variable input (short run) – stages of production & concept of economic zone of production; Long run production and tools of analysis: Isoquants and Isocost line, Producer's Equilibrium with two variable inputs, Ridge Lines and economic region – Expansion Paths

Different concepts of Cost of production, Fixed & variable Costs, Short run & Long run costs – concept of Opportunity Cost – The short run and long run total, average and marginal cost curves and their relations – economies of scale and concept of Optimum Plant-size

Market Morphology

Market Equilibrium and the Rule of Profit-maximization – Concept of Profit – Financial Profit v/s Economic Profit – concepts of break-even & shut-down points; Types of markets & their characteristics – Perfect Competition and its short run & long run equilibrium – concepts of increasing, decreasing & constant cost industry; Monopoly – causes of monopoly – Natural Monopoly – measure of monopolistic power (Lerner's Index) – Short run and Long run equilibrium of Monopoly – Concepts of different types of monopoly pricing – Monopoly has no supply curve – Multi-plant Monopolist, Price-discriminating Monopolist – welfare costs of monopoly

Rudiments of Macroeconomics

Measurement of economic activity – National Income; Closed & Open economy - foreign trade and balance of payments; Inflation & Unemployment – Economic policies

Course Code	: CS 604
Course Title	: Cognitive Science and Technology
Weekly contact	: 3 – 0 – 0 (L – T – P)
Credit	: 3

Introduction

Defining Cognition, Cognition cycle, Cognitive process, Representation and computation (tri level hypothesis), History of cognitive science, Disciplines of cognitive sciences, The interdisciplinary perspective: Philosophical, Psychological and Cognitive approaches, Neuro-science approach, Network approach, Evolutionary approach, Linguistic approach, Artificial intelligence approach, Robotics approach, issues in cognitive science.

Brain-Scanning Instruments

Structural techniques: CAT scan (Computer Axial Tomography), MRI(Magnetic Resonance Imaging), Functional techniques: PET scans (Positron Emission Tomography); fMRI(Functional MRI), Temporary lesions: TMS (Transcranial Magnetic Stimulation) Electrophysiological Techniques: EEGs(Electroencephalograms), ERPs(Event Related Potentials)

Cognitive Psychology

Mind and Brain, Reasoning Model, Decision making, Emotion and Cognition, Problem solving and reasoning, distributed reasoning by Petri Nets.

Cognitive Engineering

Cognitive Modeling, Computational Models of human cognition and various Cognitive Systems.

Models of Perception Engineering

Cognitive failures in visual perception motor planning and execution, Olfactory perceptual-ability of human subjects, Tactile perceptual-ability of Schizophrenic patients, Audio visual perception, Color perception (Cognitive experiments).

Modeling of memory and learning

Short term memory and long term memory, short-long term memory, Representation and knowledge in Long term memory, Encoding and retrieval from long term memory, memory experiments.

Motor Cognition and Control

Biology of neural and cognitive process, Human Computer Interaction Affective Computing, Brain computer interface, Motor control strategy, Application in Artificial limbs and robotics.

Bypassing Brain Lobes

Structure and function of the brain, Mapping brain lobe features to other lobe features, experiments.

Applications

Cognitive driving and failure detection, BCI gaming (Brain Computer Interface): Teaching the game to a robot, How does the robot teach the game to the children, experiments, Emotion recognition using brain signals and control/regulation.

Course Code	: HU 611
Course Title	: Soft Skill Development
Weekly contact	: 0 – 0 – 3 (L – T – P)
Credit	: 2

Introduction to Soft Skill

Definition and Significance of Soft Skills; Importance, Process, and Measurement of Soft Skill Development.

Discovering/Relocating the Self

Strengths and Limitations; Habits; Goals Setting, Proactive Attitude Development, Faiths Beliefs, Values, Virtue.

Developing Positive Thinking and Driving out Negativity

Developing Self-Esteem and Building Self Confidence, Significance of Self-Discipline.

Motivation

Meaning and Theories of Motivation; Enhancing Motivation Levels.

Interpersonal relations

Communicating Clearly: Understanding and Overcoming barriers communication models, team communication; developing interpersonal relationships through effective communication

Active Listening

Listening is a skill.

Essential formal writing skills; corporate communication styles – Conducting Meetings, Writing Minutes, Sending Memos and Notices; Netiquette: Effective E-mail Communication; Telephone Etiquette; assertion, persuasion, negotiation.

Public Speaking

Skills, Methods, Strategies for effective public speaking.

Practice Tips

Practical in Language Lab

Group Discussion: Importance, Strategies for group discussion: Planning, Elements, Skills assessed; Effectively disagreeing, Initiating, Summarizing and Attaining the Objective.

Practical in Language Lab

Body Language

Introduction, Effective body language building during communication

Practical in Language Lab

Teamwork and Leadership Skills

Concept of Teams; Building effective teams; Concept of Leadership and honing Leadership skills.

Presentation Skills: Introduction, Types, Content, Audience Analysis,

Strategy: Before, During and After

Effect of Adrenalin

Practical at Language Lab

Interview Skills

Introduction, Strategies behind successful Interview

Interviewer and Interviewee – in-depth perspectives. Before, During and After the Interview, Introduction to Emotional Intelligence Skill.

Practical in Language Lab

Time Management

Introduction, Importance and Strategy behind effective time management.

Adverse Effects

Etiquettes and Manners

Introduction to Life Skills

CV Preparation

Introduction Importance and discussions on model CVs according to need of the employers.

Decision Management

Introduction and importance

Software behind Decision Management.

Conflict Management

Introduction and importance

Stress Management

Introduction and importance

Essential Qualification: PhD with first class in the preceding degree

Guidelines:

1. Application form, essential qualification, and other details can be downloaded from the institute website **www.iitkalyani.ac.in**.
2. Soft copy of the application complete in all respect should be sent to recruitment@iitkalyani.ac.in by 22.11.2021.
3. Subject of email should be "Guest Faculty for (subject)".
4. For each of the qualifications, professional experiences, achievements, etc., documentary proof in the form of self-attested scanned-copies to be attached with the application. The originals must be produced when asked for.
5. Incomplete applications / applications without necessary enclosures may not be accepted.
6. Any misleading wrong information provided by the candidates may lead to summarily rejection of the application, if found subsequently, also the appointment will be cancelled.
7. Mere fulfilment of minimum qualification and experience requirements for the post does not entitle a candidate to be called for interview. The Institute reserves the right to restrict the number of candidates for interview to reasonable limit, on the basis of qualification and experience higher than those prescribed in this advertisement.
8. Persons employed in Government and Semi-Government organizations must submit no-objection from current organization.
9. No interim queries regarding interview / selection process will be entertained.
10. Canvassing in any form will lead to rejection of application form.
11. Decision of the Selection Committee and the Director of IIIT Kalyani with respect to the selection process is final.

12. Legal disputes, if any with IIIT Kalyani are restricted to the jurisdiction of Kalyani Court only.

13. Interviews will be held online. Shortlisted candidates will be notified about the date, time and meeting link separately.