

ANNA UNIVERSITY, CHENNAI
UNIVERSITY DEPARTMENTS
B.E. COMPUTER SCIENCE AND ENGINEERING
RUSA
REGULATIONS – 2018
OPEN ELECTIVES

SI. No	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	EL	CREDITS
THEORY									
1.	OE6391	Basic Presentation Skills	OE	3	2	0	0	3	3
2.	OE6392	Critical Thinking Skills	OE	3	2	0	0	3	3
3.	OE6393	Interview Skills	OE	3	2	0	0	3	3
4.	OE6394	Environmental Science And Engineering	OE	3	3	0	0	-	3

OE6391	BASIC PRESENTATION SKILLS	L	T	P	EL	TOTAL	CREDITS
		2	0	0	3		3
MODULE I	PRESENTATION	L	T	P	EL		
		6					3
Presentation skills – Characteristics of an effective Oral Presentation – Audience - Context, Content, Speaker Status - Purpose – Modus Operandi – Extempore							
SUGGESTED ACTIVITIES :							
<ul style="list-style-type: none"> ➤ Discussion on the formal aspects of a speech <ul style="list-style-type: none"> ○ Reading texts on the formality aspect of presentation. ○ Speaking activities – Mini Presentation (Connection) and Talks on given topics. 							
SUGGESTED EVALUATION METHODS:							
<ul style="list-style-type: none"> ➤ Collecting information from the text on speaking skills practice. • Quizzes • Extempore – Articulation of sounds (Duration 10 – 15 minutes.) Organization of content 							
MODULE II	PRONUNCIATION	L	T	P	EL		
		6	-	-			3
Emphasis on syllable stress, pronunciation, intonation, pauses, pace - Preparation for a presentation – Avoiding plagiarism –Ample use of Referencing skills – Efficient ways of Collecting and Collating data (due emphasis on important information)							
SUGGESTED ACTIVITIES :							
<ul style="list-style-type: none"> • General Reading – Identifying significant trends/patterns in the data • Cohesion – Knitting information 							
SUGGESTED EVALUATION METHODS:							
<ul style="list-style-type: none"> • Information gap activities • Reading comprehension – Questions based on coherence and cohesion • Assignment – Making a presentation (Oral 12 – 15 minutes) 							
MODULE III :		L	T	P	EL		
		6	-	-			3
Use of audio-visual tools – Preparation of Power Point slides (Dos & Don'ts) – Styles & Conventions of writing – Rehearsal – Tailoring content (sense of audience and purpose)							
SUGGESTED ACTIVITIES :							
<ul style="list-style-type: none"> • Power Point slide preparation • Note Making – Practice with selected texts/lectures • Error Correction with positive feedback and insightful suggestions. 							
SUGGESTED EVALUATION METHODS:							
<ul style="list-style-type: none"> • Power point slide presentation (Individual & Group Presentation) 10 – 15 minutes 							
MODULE IV	TAKING/MAKING NOTES	L	T	P	EL		
		6	-	-			3
Impressive introduction – Body language – Use of icebreakers – “Start Proper” for the presentation – Relevant Anecdotes & Jokes - Responding constructively to questions – Time Management – Information sharing							

SUGGESTED ACTIVITIES :				
<ul style="list-style-type: none"> • Group Presentation (Culture sensitive & Gender specific, body language) • Watching videos on sample presentations, on selected topics 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Short Presentations (10-15 minutes) • Preparation of feedback questionnaire-(Performance Appraisal) 				
MODULE V :	L	T	P	EL
	6	-	-	3
Presentation skills – Guidelines – Group Presentation - Creative approaches to presenting – Technical presentation - Speaking under time constraint – variations in pitch, tone & intonation - Credibility in presentation (Use of authentic data/information) Podium panache – Effective Delivery				
SUGGESTED ACTIVITIES :				
<ul style="list-style-type: none"> • Intonation activities – Read Aloud practices • Timed speaking activity (10-15 minutes) • Quizzes 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Group presentations • Peer Feedback 				

REFERENCE BOOKS:

1. Michael Osborn, Susan Osborn, Randall Osborn & Kathleen J Turner, “Public Speaking: Finding Your Voice”, 10th Edition, Pearson, 2012.
2. John Hughes & Andrew Mallett, “Successful Presentations DVD & Student’s Pack”, OUP, Oxford, 2012.
3. Nancy Duarte, “Resonate: Present Visual Stories That Transform Audiences”, John Wiley & Sons, New Jersey, 2010.
4. Scott Berkun, “Confessions of a Public Speaker”, O’Reilly Media, Inc, Canada, 2010.
5. Barbara Pease & Allan Pease, “The Definitive Book of Body Language”, Bantum Books, New York, 2006.
6. Naomi Karten, “Presentation Skills for Technical Professionals: Achieving Excellence (Soft Skills for IT Professionals), IT Governance Publishing, UK, 2010.

OE6392	CRITICAL THINKING SKILLS	L	T	P	EL	TOTAL	CREDITS
		2	0	0	3		3

MODULE I :	L	T	P	EL
	6	-	-	3
What is critical thinking – 21 st century skills – collaboration and teamwork discussions – focus on - creativity and Imagination – problem solving (oral and written communication activities)- importance of thinking critically- multiple intelligences				
SUGGESTED ACTIVITIES:				
<ul style="list-style-type: none"> • Interpretation of texts from different perspectives (samples to be provided) • Small Group Work (analysis of the inherent messages in the text) • Short essays (e.g. Expressing views on the current educational system) 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Essay Writing (e.g. benefits of collaboration and team work) • Quizzes 				
MODULE II :	L	T	P	EL
	6	-	-	3
Fostering critical thinking- statement of facts and opinions – inference of assumptions & evidences - logical reasoning – deductive & inductive reasoning – changing perspectives – (choice of appropriate words& expressions, perceived logical linkages, avoidance of irrelevance)				
SUGGESTED ACTIVITIES :				
<ul style="list-style-type: none"> • Think – pair – share activities (with sample reading texts) • Relevant talks (listening comprehension exercises) 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Writing short factual essays • Reading comprehension (focus on diction) 				
MODULE III :	L	T	P	EL
	6	-	-	3
Claims, issues & arguments – (Content analysis)– Ambiguities in argument – jargon, emotional barriers and their influence on reasoning - Semantic disagreements (Vocabulary specific to the linguistic acts of disagreeing & disputing) – Inconsistencies in an argument - Discourse rules in group discussion				
SUGGESTED ACTIVITIES:				
<ul style="list-style-type: none"> • Group Discussion Activities (selected topics) • Debates (uncontroversial topics) • (Taboos, hostile audience, physical & technical disabilities, differences in perspective & view point) 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Group Discussion • Debate • Case Study Presentation 				
MODULE IV :	L	T	P	EL
	6	-	-	3
Detecting Fallacies (Hasty Generalizations, Circular argument, Red herring) – Types of Fallacies – Making inferences – Drawing conclusions – Conceptualization of ideas - Analysis & synthesis of ideas - Evaluating information - Scientific reasoning (thinking about many dimensions at the same time)				
SUGGESTED ACTIVITIES:				
<ul style="list-style-type: none"> • Fallacy check exercises (with suitable reading texts) • Jigsaw reading 				
SUGGESTED EVALUATION METHODS:				

- Mini presentation on given topics
- Assignment (Analytical Essay writing)
- Quizzes

MODULE V :	L	T	P	EL
	6	-	-	3
Internet & critical thinking (using the internet as a resource) – Collaborative problem solving – Creative critical thinking (analyzing, synthesizing, reflecting, evaluating) - Media & critical thinking				
SUGGESTED ACTIVITIES:				
<ul style="list-style-type: none"> • Flipped Class room (Performance Appraisal) • Discussion threads (on an online forum) • Critical review writing (Stress on the positive side) 				
SUGGESTED EVALUATION METHODS:				
<ul style="list-style-type: none"> • Quizzes • Mini projects (SGW) 				

REFERENCE BOOKS:

1. Bradley H Dowden, "Logical Reasoning", California State University, Sacramento, 2017.
2. Howard Gardner, "Multiple Intelligences: New Horizons in Theory and Practice", Ingram Publisher Services US, United States, 2006.
3. K.S.Walters, K. S. (Ed.), "Re-thinking Reason: New Perspectives on Critical Thinking", Albany: State University of New York Press, Albany, 1994.
4. A.L.Costa, "Developing minds: A Resource Book for Teaching Thinking", 3rd Edition, Association for Supervision and Curriculum Development Alexandria, 2001.
5. R.Paul, "Critical Thinking: What every student needs to survive in a rapidly changing world", Foundation for Critical Thinking, Dillon Beach, CA, 1992.
6. Diane F Halpern, "Thinking Critically about Critical Thinking", Lawrence Erlbaum Associates, Mahwah,NJ, 1996.

OE6393	INTERVIEW SKILLS	L	T	P	EL	TOTAL CREDITS
		2	0	0	3	3
MODULE I:		L	T	P	EL	
		6				3
<p>What is an interview? Types of Interviews- (Group, Individual, Stress, Telephonic, Skype, Behavioral) Different phases of an interview– (Structured & unstructured interviews) - Panel interviews- Preparing for an Interview – Research on Company Profile & Job details (Data collection relevant to company, job and the related fields.) – Developing speaking skills (conversational, brief and succinct styles)</p>						
SUGGESTED ACTIVITIES:						
<ul style="list-style-type: none"> Information gap activities based on relevant texts. (Preparing for probable questions on technical content). Analytical reading (sample interviews). 						
SUGGESTED EVALUATION METHODS:						
<ul style="list-style-type: none"> Quizzes on varied purposes of interviews Assignments – Essay writing on types of interviews and the necessary preparation for different interviews. 						
MODULE II :		L	T	P	EL	
		6				3
<p>Importance of Active Listening - Analytical thinking – Interpersonal communication – Intercultural competence – Logical thinking – Stress management – Negotiating skills – Team work (Being assertive) – making short presentations.</p>						
SUGGESTED ACTIVITIES :						
<ul style="list-style-type: none"> Listening Practice- Note taking tasks Discussion activities (Team Work & Group discussion) Role play exercises (Testing Active Listening based on Responses) 						
SUGGESTED EVALUATION METHODS:						
<ul style="list-style-type: none"> Case study interview analysis Group discussion (Performance Evaluation & Feedback) 						
MODULE III :		L	T	P	EL	
		6				3
<p>Body language – Facial expressions (gestural and postural systems) – Effective speaking skills – self - introduction – Telephone etiquette – Telephone interviews – Skype interview- Behavioral interviews (Highlighting one’s strengths in the interview.)</p>						
SUGGESTED ACTIVITIES:						
<ul style="list-style-type: none"> Preparing Power Point slides (Stress on the Accuracy of both Linguistic & Visual components of Body Language) Short essay writing on appropriacy and importance of body language Error correction exercises 						
SUGGESTED EVALUATION METHODS:						
<ul style="list-style-type: none"> Essay writing- sample, effective, telephonic conversations Short speeches 						
MODULE IV :		L	T	P	EL	
		6				3
<p>Writing a resume – Customized Job application – Use of appropriate and error-free language in job applications – Opening and closing of an interview –Optimal strategies to be adopted while responding to problem questions – FAQs</p>						
SUGGESTED ACTIVITIES :						
<ul style="list-style-type: none"> CV writing (Models to be provided) 						

<ul style="list-style-type: none"> • Role play (focus on demeanor and conversational style) • Mock interviews 				
SUGGESTED EVALUATION METHODS: <ul style="list-style-type: none"> • Quizzes • Writing a Job application with an appropriate Resume 				
MODULE V :	L	T	P	EL
	6			3
Stress interview – Negotiating salary package – Use of politeness strategies				
SUGGESTED ACTIVITIES: <ul style="list-style-type: none"> • Role-play with a focus on negotiating skills. • Team activities (attending and winning at stress interviews) 				
SUGGESTED EVALUATION METHODS: <ul style="list-style-type: none"> • Mock interviews • Peer Evaluation & Feed back 				

REFERENCE BOOKS:

1. Priyadarshi Patnaik, “Group Discussion and Interview Skills”, Cambridge University Press, Delhi, 2011.
2. Raymond Gorden, “Basic Interviewing Skills”, F.E.Peacock, Illinois, 1992.
3. Linda Matias, “201 Knockout Answers to Tough Interview Questions: The Ultimate Guide to Handling the New Competency-based Interview Style”, Gilden Media Corp, New York, 2009.
4. Jack Gray, “Interviewing”, Great Reads Publishing Limited LLC, US, 2015.
5. Victor Cheng, “Case Interview Secrets”, Innovation Press, Seattle, 2012.

OBJECTIVES:

- To the study of nature and the facts about environment.
- To find and implement scientific, technological, economic and political solutions to environmental problems.
- To study the interrelationship between living organism and environment.
- To appreciate the importance of environment by assessing its impact on the human world; envision the surrounding environment, its functions and its value.
- To study the dynamic processes and understand the features of the earth's interior and surface.
- To study the integrated themes and biodiversity, natural resources, pollution control and waste management.

UNIT I ENVIRONMENT, ECOSYSTEMS AND BIODIVERSITY 14

Definition, Scope and Importance of Environment – Need for Public Awareness - Concept of an Ecosystem – Structure and Function of an Ecosystem – Producers, Consumers and Decomposers – Energy Flow in the Ecosystem – Ecological Succession – Food Chains, Food Webs and Ecological Pyramids – Introduction, Types, Characteristic Features, Structure and Function of the (A) Forest Ecosystem (B) Grassland Ecosystem (C) Desert Ecosystem (D) Aquatic Ecosystems (Ponds, Streams, Lakes, Rivers, Oceans, Estuaries) – Introduction to Biodiversity Definition: Genetic, Species and Ecosystem Diversity – Bio geographical Classification of India – Value of Biodiversity: Consumptive Use, Productive Use, Social, Ethical, Aesthetic and Option Values – Biodiversity at Global, National and Local Levels – India as a Mega-Diversity Nation – Hot-Spots of Biodiversity – Threats to Biodiversity: Habitat Loss, Poaching of Wildlife, Man-Wildlife Conflicts – Endangered and Endemic Species of India – Conservation of Biodiversity: In-Situ and Ex-Situ Conservation of Biodiversity.

Field Study of Common Plants, Insects, Birds

Field Study of Simple Ecosystems – Pond, River, Hill Slopes, etc.

UNIT II ENVIRONMENTAL POLLUTION 8

Definition – Causes, Effects and Control Measures of: (A) Air Pollution (B) Water Pollution (C) Soil Pollution (D) Marine Pollution (E) Noise Pollution (F) Thermal Pollution (G) Nuclear Hazards – Soil Waste Management: Causes, Effects and Control Measures of Municipal Solid Wastes – Role of an Individual in Prevention of Pollution – Pollution Case Studies – Disaster Management: Floods, Earthquake, Cyclone and Landslides.

Field Study of Local Polluted Site – Urban / Rural / Industrial / Agricultural.

UNIT III NATURAL RESOURCES 10

Forest Resources: Use and Over-Exploitation, Deforestation, Case Studies - Timber Extraction, Mining, Dams and Their Effects on Forests and Tribal People – Water Resources: Use and Over-Utilization of Surface and Ground Water, Floods, Drought, Conflicts Over Water, Dams-Benefits and Problems – Mineral Resources: Use and Exploitation, Environmental Effects of Extracting and Using Mineral Resources, Case Studies – Food Resources: World Food Problems, Changes Caused by Agriculture and Overgrazing, Effects of Modern Agriculture, Fertilizer-Pesticide Problems, Water Logging, Salinity, Case Studies – Energy Resources: Growing Energy Needs, Renewable and Non Renewable Energy Sources, Use of Alternate Energy Sources. Case Studies – Land Resources: Land as a Resource, Land Degradation, Man Induced Landslides, Soil Erosion and Desertification – Role of an Individual in Conservation of Natural Resources – Equitable Use of Resources for Sustainable Lifestyles.

Field Study of Local Area to Document Environmental Assets – River / Forest / Grassland / Hill / Mountain.

UNIT IV SOCIAL ISSUES AND THE ENVIRONMENT

7

From Unsustainable to Sustainable Development – Urban Problems Related to Energy – Water Conservation, Rain Water Harvesting, Watershed Management – Resettlement and Rehabilitation of People; its Problems and Concerns, Case Studies – Role of Non-Governmental Organization- Environmental Ethics: Issues and Possible Solutions – Climate Change, Global Warming, Acid Rain, Ozone Layer Depletion, Nuclear Accidents and Holocaust, Case Studies. – Wasteland Reclamation – Consumerism and Waste Products – Environment Protection Act– Air (Prevention And Control Of Pollution) Act – Water (Prevention And Control Of Pollution) Act – Wildlife Protection Act – Forest Conservation Act – Enforcement Machinery Involved in Environmental Legislation- Central and State Pollution Control Boards- Public Awareness.

UNIT V HUMAN POPULATION AND THE ENVIRONMENT

6

Population Growth, Variation Among Nations – Population Explosion – Family Welfare Programme – Environment and Human Health – Human Rights – Value Education – HIV / AIDS – Women and Child Welfare – Role of Information Technology in Environment and Human Health – Case Studies.

TOTAL: 45 PERIODS

OUTCOMES:

Upon successful completion of the course, students will be able to:

Environmental Pollution or problems cannot be solved by mere laws. Public participation is an important aspect which serves the environmental Protection. One will obtain knowledge on the following after completing the course.

- Public awareness of environment at infant stage.
- Ignorance and incomplete knowledge has lead to misconceptions.
- Development and improvement in standard of living has lead to serious environmental disasters.

TEXT BOOKS:

1. Gilbert M. Masters, "Introduction to Environmental Engineering and Science", Second Edition, Pearson Education 2004.
2. Benny Joseph, "Environmental Science and Engineering", Tata McGraw-Hill, 2006.

REFERENCES:

1. R.K. Trivedi, "Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards", Vol. I and II, Enviro Media.
2. Cunningham, W.P. Cooper, T.H. Gorhani, 'Environmental Encyclopedia', Jaico Publishing, 2001.
3. Dharmendra S. Sengar, "Environmental law", Prentice Hall, 2007.
4. Rajagopalan.R, "Environmental Studies-From Crisis to Cure", Oxford University Press 2005.