**SYLLABUS**

**(APPENDIX-II, Audit-2 Courses)**

**FOR**

**TWO-YEAR M. TECH. PROGRAMMES**

**(All Specializations)**



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| **NAAC – A Grade** |

**COLLEGE OF ENGINEERING & TECHNOLOGY**

**(An Autonomous and Constituent College of BPUT, Odisha)**

**Techno Campus, Mahalaxmi Vihar, Ghatikia,**

**Bhubaneswar-751029, Odisha, INDIA**

[**www.cet.edu.in**](http://www.cet.edu.in)

**Ph. No.: 0674-2386075 (Off.), Fax: 0674-2386182**

**English for Research Paper Writing (PACMH201)**

**Course Objectives:**

To enable students:

1. acquire the skill to write research papers with clarity, in a persuasive style and in an ethical manner.
2. identify a research problem and research questions, adopting appropriate methodology
3. learn nitty-gritty of paragraph development, sentence structure, abstract, referencing etc.

**Module 1:**

Planning and preparation, identifying research problem, research questions, structuring paragraph, developing a persuasive style in writing, objectivity, avoiding ambiguity etc.

**Module 2:**

Methodology, literature review/survey, writing introduction, result discussion, analyzing findings, conclusion and various sections.

Abstract, title, key-words, referencing/bibliography, foot/end note, library and information management, indexing/impact factor, identifying conferences, submitting abstract/papers

**Module 3:**

Research ethics, pitfalls of research, plagiarism (self-plagiarism), acknowledging sources, avoiding summary of others’ work as one’s own, tools to detect unethical practices(Turn-it-in), case studies etc.

**Text Books:**

1. Goldbort R *Writing for Science*, Yale University Press (available on Google books): 2006
2. Day R: *How to write and Publish a Scientific Paper*, Cambridge University Press :2006
3. Adrian Wallwork, *English for Writing Research Papers*, Springer New York, 2011

**Reference books:**

1. S.C. Parja & Vikram Kate. *Writing and Publishing a Scientific Research Paper*. Springer: 2017.
2. Highman N, *Handbook of Writing for the Mathematical Sciences*, Highman’s Book: 1998.
3. Chicago Manual of Style- 17th edition

https://umanitoba.ca/student/academiclearning/media/CMS17-2018.pdf

**Personality Development Through Life Enlightenment Skills (PACMH202)**

**COURSE OBJECTIVES: -**

1. To develop inter personal skills and be an effective goal-oriented team player.
2. To develop professionals with idealistic, practical and moral values.
3. To develop communication and problem-solving skills.
4. To re-engineer attitude and understand its influence on behavior

**Module-I**

Neetisatakam-Holistic development of personality:

Verses- 19,20,21,22 (wisdom),Verses- 29,31,32 (pride & heroism),Verses- 26,28,63,65 (virtue), Verses- 52,53,59 (dont’s),Verses- 71,73,75,78 (do’s)

**Module-II**

Approach to day to day work and duties.

ShrimadBhagwadGeeta: Chapter 2-Verses 41, 47,48, Chapter 3-Verses 13, 21, 27, 35, Chapter 6-Verses 5,13,17, 23, 35, Chapter 18-Verses 45, 46, 48.

**Module-III**

Statements of basic knowledge.

ShrimadBhagwadGeeta: Chapter2-Verses 56, 62, 68, Chapter 12 -Verses 13, 14, 15, 16,17, 18 Personality of Role model. Shrimad BhagwadGeeta:Chapter2-Verses 17, Chapter 3-Verses 36,37,42, Chapter 4-Verses 18, 38,39, Chapter18 – Verses 37,38,63.

**Text/Reference Books:**

1. “Srimad Bhagavad Gita” by Swami SwarupanandaAdvaita Ashram (Publication Department), Kolkata
2. Bhartrihari’s Three Satakam (Niti-sringar-vairagya) by P.Gopinath, Rashtriya Sanskrit Sansthanam, New Delhi.

**COURSE OUTCOME:**

After the completion of the course the students will be able to

1. Study of Shrimad-Bhagwad-Geeta will help the student in developing his personality and achieve the highest goal in life.
2. The person who has studied Geeta will lead the nation and mankind to peace and prosperity.
3. Study of Neetishatakam will help in developing versatile personality.

**Value Education (PACMH203)**

**COURSE OBJECTIVES: -**

1. Understand the need of values and its classification in contemporary society.
2. Appreciate the values needed for peaceful society like democratic, secular, and socialist etc.
3. Become aware of role of education in building value as dynamic social reality.
4. Know the importance of value education towards personal, national and global development.

**Module-I**

Values and self-development –Social values and individual attitudes. Work ethics, Indian vision of Importance of cultivation of values. Sense of duty. Devotion, Self-reliance. Confidence, Concentration. Truthfulness, Cleanliness. Honesty, Humanity. Power of faith, National Unity. Patriotism. Love for nature, Disciplineumanism. Moral and non- moral valuation. Standards and principles. Value judgements

**Module-II**

Personality and Behavior Development - Soul and Scientific attitude. Positive Thinking. Integrity and discipline. Punctuality, Love and Kindness. Avoid fault Thinking. Free from anger, Dignity of labour. Universal brotherhood and religious tolerance. True friendship. Happiness Vssuffering, love for truth. Aware of self-destructive habits. Association and Cooperation. Doing best for saving nature

**Module-III**

Character and Competence –Holy books vs Blind faith. Self-management and Good health. Science of reincarnation. Equality, Nonviolence, Humility, Role of Women. All religions and same message. Mind your Mind, Self-control. Honesty, studying effectively

**Text/Reference Books:**

1. Chakroborty, S.K. “Values and Ethics for organizations Theory and practice”, Oxford University Press, New Delhi

**COURSE OUTCOME:**

After the completion of the course the students will be able to

1. Identify important learning requirements (the ‘content’ of learning – the rangeand type of knowledge, skills and values required)
2. Use clear language, understandable by students and other potential clients.
3. Link to the generic and/or course graduate attributes.
4. Relate to explicit statements of achievement (e.g. level of understanding required).

**Disaster Management (PACCE201)**

**Module –I**

Introduction: Concepts and definitions: Disaster, hazard, vulnerability, resilience, risks, frequency and details, capacity, impact, prevention, mitigation.

Disasters: Disasters classification; natural disasters (floods, draught, cyclones, volcanoes, earthquakes, tsunami, landslides, coastal erosion, soil erosion, forest fires etc.); man-made disasters (industrial pollution, artificial flooding in urban areas, nuclear radiation, transportation accidents, terrorist strikes, etc.); hazard and vulnerability profile of India, mountain and coastal areas, ecological fragility. Disaster Impacts: Classification, Causes, Impacts including social, economic, political, environmental, health, psychosocial, etc.- Differential impacts- in terms of caste, class, gender, age, location, disability, etc. Dos and Don’ts during various types of Disasters.

**Module –II**

Disaster Risk Reduction (DRR): Disaster management cycle – its phases; prevention, mitigation, preparedness, relief and recovery; structural and non-structural measures; risk analysis, vulnerability and capacity assessment. Emerging approaches in Disaster Management - Three stages: Pre-disaster stage (preparedness), Emergency stage and Post Disaster stage – Rehabilitation. Roles and responsibilities of government, community local institutions, NGOs and other stakeholders; Policies and legislation for disaster risk reduction, DRR programmes in India and the activities of National Disaster Management Authority.

**Module –III**

Disasters, Environment and Development: Factors affecting vulnerability such as impact of developmental projects and environmental modifications (including of dams, land use changes, urbanization etc.), sustainable and environmental friendly recovery; reconstruction and development methods. Disaster management: Applications and case studies - Landslide Hazard Zonation: Case Studies, Earthquake Vulnerability Assessment of Buildings and Infrastructure: Case Studies, Drought Assessment: Case Studies, Coastal Flooding: Storm Surge Assessment, Floods: Case Studies; Forest Fire: Case Studies, Man Made disasters: Case Studies, Space Based Inputs for Disaster Mitigation and Management and field works related to disaster management.

**Text/Reference Books:**

1. Tushar Bhattacharya, “Disaster Science and Management”, McGraw Hill India Education Pvt. Ltd., 2012.

2. Pradeep Sahni, “Disaster Mitigation: Experiences and Reflections”, Prentice Hall,2004.

3. Singhal J.P. “Disaster Management”, Laxmi Publications, 2010.

4. Donald Hyndman &amp; David Hyndman, “Natural Hazards &amp; Disasters”, Cengage Learning, 2010.

5. Singh B.K., Handbook of Disaster Management: Techniques &amp; Guidelines, Rajat Publication, 2008.

6. Govt. of India: Disaster Management Act, Government of India, New Delhi, 2005.

**Stress Management by Yoga (PACCE202)**

**COURSE OBJECTIVE:**

1. To know eight parts of yoga.
2. To understand the basic concepts of Yam and Niyam and DO’s and Don’ts in life.
3. To understand the basic concepts of Asan and Pranayam

**Module-I**

Definitions of Eight parts of yoga.( Ashtanga )

**Module-II**

Yam and Niyam. Do`s and Don’t’s in life.

1. Ahinsa, satya, astheya, bramhacharya and aparigraha
2. Shaucha, santosh, tapa, swadhyay, ishwarpranidhan

**Module-III**

Asan and Pranayam

1. Various yog poses and their benefits for mind & body
2. Regularization of breathing techniques and its effects-Types of pranayam

**Reference/Text Books**

1. ‘YogicAsanas for Group Tarining-Part-I”:Janardan Swami YogabhyasiMandal, Nagpur
2. “Rajayoga or conquering the Internal Nature” by Swami Vivekananda, AdvaitaAshrama (Publication Department), Kolkata

**COURSE OUTCOME:**

After the completion of the course the students will be able to

1: Know definitions of eight parts of yoga.

2: Understand the basic concepts of Yam and Niyam.

3: Know about various yoga poses and benefits of practicing yoga.