**SYLLABUS**

**(APPENDIX-I, Audit-1 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 (PACMH101)**

**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

**Constitution of India (PACCE101)**

**COURSE OBJECTIVE:**

1. To know the basic information about history of making of Indian constitution.
2. To understand the importance of fundamental rights and fundamental duties and the Directive Principles of the State Policy.
3. To Describe the Indian political system, the powers and the functions of the Union Executives and State Executives.
4. To understand the function of Local Administrations and the role of Election Commission.

**Module-I**

History of Making of the Indian Constitution: History Drafting Committee, (Composition & Working), Philosophy of the Indian Constitution: Preamble Salient Features

Contours of Constitutional Rights & Duties: Fundamental Rights, Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Constitutional Remedies, Directive Principles of State Policy, Fundamental Duties

**Module-II**

Organs of Governance: Parliament, Composition, Qualifications and Disqualifications, Powers and Functions, Executive, President, Governor, Council of Ministers, Judiciary, Appointment and Transfer of Judges, Qualifications, Powers and Functions

**Module-III**

Local Administration: District’s Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation. Pachayati raj: Introduction, PRI: ZilaPachayat. Elected officials and their roles, CEO ZilaPachayat: Position and role. Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy

Election Commission: Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women.

**Reference/Text Books**

1. The Constitution of India, 1950 (Bare Act), Government Publication.
2. Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.
3. M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.
4. D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015. Ackers J, Hardman F (2001) Classroom interaction in Kenyan primary schools, Compare, 31 (2): 245-261.

**COURSE OUTCOME:**

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

1. Have general political knowledge and legal literacy.
2. Understand state and central policies and fundamental duties
3. Understand Electoral Process
4. Understand powers and functions of Municipalities, Panchayats and Co-operative Societies
5. Have awareness about basic human rights in India.

**Stress Management by Yoga (PACCE102)**

**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.

**Disaster Management (PACCE103)**

**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 & David Hyndman, “Natural Hazards &amp; Disasters”, Cengage Learning, 2010.
  5. Singh B.K., Handbook of Disaster Management: Techniques & Guidelines, Rajat Publication, 2008.
  6. Govt. of India: Disaster Management Act, Government of India, New Delhi, 2005.