

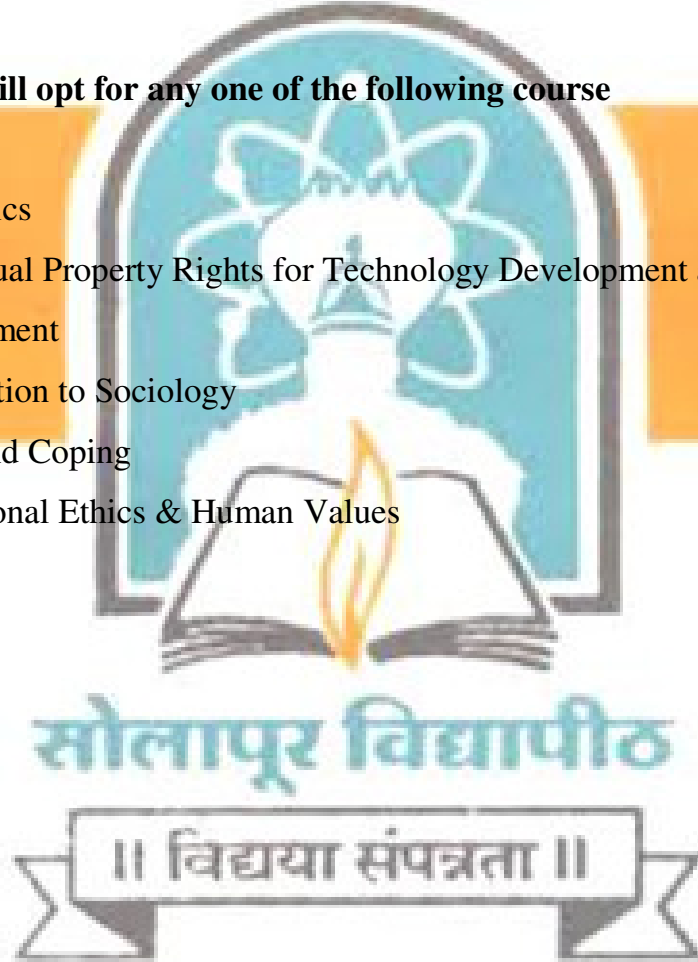


Solapur University Solapur

List of Self Learning- H.S.S. courses, common for all the branches of Engineering and Technology at Third Year Engineering (Semester-V)

The student will opt for any one of the following course

- 1) Economics
- 2) Intellectual Property Rights for Technology Development and Management
- 3) Introduction to Sociology
- 4) Stress and Coping
- 5) Professional Ethics & Human Values





Third Year Engineering (Semester V)

ECONOMICS

(Self Learning- H.S.S. course, common for all the branches of Engineering and Technology)

Examination Scheme:

Theory paper: 50 marks

(Duration 2 Hours)

SECTION I

Unit 1: Introduction.

History of Economic thought, Basic Economic problems, Resource Constraints and Welfare maximization,

Nature of Economics: Positive and Normative Economics, Micro and Macro Economics, Basic concepts in Economics, The role of State in economic activity, Market and Government failures, New economic Policy in India.

Unit 2: Theories of Economics

Theory of utility and consumer's choice, Theories of Demand, supply and market equilibrium, Theories of firm, production and costs, Market structures, Perfect and imperfect competitions, oligopoly, monopoly.

Unit 3: Macroeconomics

An overview of Macroeconomics, measurement and determination of national income, Consumption, saving and investment.

Unit 4: Banking & Inflation.

Commercial and Central Banking, Relationship between money, output and prices. Inflation

causes, consequences and remedies.

Unit 5: International Influences on Economics

International Trade, foreign exchange and balance payments, stabilization policies, Monetary, Fiscal and exchange rate policies.

ASSIGNMENTS

The term work will consist of total five assignments, based on syllabus.

(One assignment for every unit of the syllabus)

In addition to the above, the institute may prescribe additional modes of assessment such as Unit test, Quiz, Presentation, Course seminar etc. for ensuring continuous assessment of the students.

Note: Term will be granted only on satisfactory completion of assignments during stipulated period. The student will be detained in case of non-completion/non-submission of the term work.

TEXT BOOKS

1. Economics : P.A. samuelson & W.D Nordhaus (Mc. Graw Hill, New York, 1995.)
2. Modern Microeconomics : A. Koutsoyiannis (Macmillan,1975)

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REFERENCE BOOKS

1. Microeconomics : R Pindyck and D.L. Rubinfeld. (Macmillan New York, 1989
2. Microeconomics : Gordon, 4th edition, Little Brown & Co., Boston,1987.
3. The Organization of Industry: William F. Shughart II, Richard D. Irwin, Illinois, 1990.



Third Year Engineering (Semester V)
INTELLECTUAL PROPERTY RIGHTS FOR TECHNOLOGY
DEVELOPMENT AND MANAGEMENT

**(Self Learning- H.S.S. course, common for all the branches of
Engineering and Technology)**

Examination Scheme:

Theory paper: 50 marks

(Duration 2 Hours)

Unit 1.

Dynamics of Knowledge evolution, creation of ownership domains in the knowledge space using various instruments of IPR,

Unit 2.

Outlines concepts of confidentiality and information security, explores their role in technology development and transfer integrating Intellectual Property in project planning, execution & commercialization,

Unit 3.

Discussion on the shifting paradigms of R&D and their linkage to IPR, Introduction to concepts of Valuation of IP & Value Realization,

Unit 4.

Comparison the Indian IPR system with international IPR frameworks especially in the context of WTO, followed by a few sessions on IPR litigations both for the enforcement of rights and business strategy.

Unit 5.

Discussion on contentious issues of current interest such as Biotechnology and Intellectual Property, Protection of Traditional Knowledge, IPR and Electronic Commerce, TRIPS and Access to Medicines, Copyright issues in creative works, etc.

ASSIGNMENTS

The term work will consist of total five assignments, based on syllabus.

(One assignment for every unit of the syllabus)

In addition to the above, the institute may prescribe additional modes of assessment such as Unit test, Quiz, Presentation, Course seminar etc. for ensuring continuous assessment of the students.

Note: Term will be granted only on satisfactory completion of assignments during stipulated period. The student will be detained in case of non-completion/non-submission of the term work.

TEXT BOOKS

1. Prabuddha Ganguli: Intellectual Property Rights Unleashing the Knowledge Economy. Tata McGraw Hill, New Delhi, 2001.
2. Prabuddha Ganguli: Gearing Up for Patents The Indian Scenario. Universities Press India Ltd., Hyderabad, 1998.
3. P. Narayan: Patent Law. Eastern Law Co., Calcutta.

REFERENCE BOOKS

1. Global Dimensions of Intellectual Property Rights in Science and Technology, Author: National Research Council , National Academies Press,1993.
2. Technology Transfer: Intellectual Property Rights, C Sri Krishna, ICFAI University press (2008)



Third Year Engineering (Semester V) INTRODUCTION TO SOCIOLOGY

(Self Learning- H.S.S. course, common for all the branches of
Engineering and Technology)

Examination Scheme:

Theory paper: 50 marks

(Duration 2 Hours)

Unit 1.

What is sociology, some sociological concepts: social structure, status, role, norms, values etc. Socialization, and culture and change.

Social stratification - various approaches and concept of social mobility.

Unit 2.

Population and society - Trends of demographic change in India and the world, Human Ecology, Trends of Urbanization in the developing countries and the world.

Unit 3.

Major social institutions - Family and marriage, caste and tribe and organizations:

- i. Formal organization (bureaucracy)
- ii. Informal organization.

Unit 4.

Processes of social change- Modernization (including Sanskritization), industrialization, environmental/ecological changes and development.

Unit 5.

Social movements - protest movements, reformist movement and radical movements in India.

ASSIGNMENTS

The term work will consist of total five assignments, based on syllabus.

(One assignment for every unit of the syllabus)

In addition to the above, the institute may prescribe additional modes of assessment such as Unit test, Quiz, Presentation, Course seminar etc. for ensuring continuous assessment of the students.

Note: Term will be granted only on satisfactory completion of assignments during stipulated period. The student will be detained in case of non-completion/non-submission of the term work.

TEXT BOOKS

1. Sociology, L. Broom, P. Selznick and D. Dorrock, , 11th Edn. 1990 (Harper International).
2. Sociology: Themes and Perspectives , M. Haralambos, Oxford University Press, 1980.
3. General Introduction to Sociology, Guy Rocher, A. , MacMillan, 1982.

REFERENCE BOOKS

1. Social movements in India, vols. 1-2, 1984, M.S.A. Rao, Manohar Publications.
2. Society in India, David Mandelbaum, , 1990, Popular Publications.
3. Social change in modern India, M.N. Srinivas, 1991, Orient Longman Publications.



Third Year Engineering (Semester V)

STRESS AND COPING

(Self Learning- H.S.S. course, common for all the branches of
Engineering and Technology)

Examination Scheme:

Theory paper: 50 marks

(Duration 2 Hours)

Unit 1.

Concept of stress-current and historical status. The nature of the stress response.

Unit 2

Common sources of stress biological, personality and environmental.

Unit 3.

Coping styles defensive behaviors and problem-solving. Consequences of stress - medical, psychological and behavioral.

Unit 4.

The role of social support in mitigating stress.

Unit 5.

Stress management techniques-relaxation, meditation, cognitive restructuring, self-control, bio-feedback and time management.

The students will prepare their stress profile.

ASSIGNMENTS

The term work will consist of total five assignments, based on syllabus.

(One assignment for every unit of the syllabus)

In addition to the above, the institute may prescribe additional modes of assessment such as Unit test, Quiz, Presentation, Course seminar etc. for ensuring continuous assessment of the students.

Note: Term will be granted only on satisfactory completion of assignments during stipulated period. The student will be detained in case of non-completion/non-submission of the term work.

TEXT BOOKS

1. Walt, S. "Stress Management for Wellness". Harcourt Brace & Jovanovich, N.York, 1994.
2. D. Girdano and G. Everly., "Controlling Stress and Tension", Prentice-Hall, 1986.
3. Monat and R. Lazarus, "Stress and Coping: An Anthology", Columbia Univ. Press, 1985.

REFERENCE BOOKS

1. Weisman, "The Coping Capacity", Human Services Press, 1984.
2. Stress and Coping: The Indian Experience, D.M. Pestonjee, SAGE India; Second edition (1998)





Third Year Engineering (Semester V)
PROFESSIONAL ETHICS & HUMAN VALUES
(Self Learning- H.S.S. course, common for all the branches of
Engineering and Technology)

Examination Scheme:

Theory paper: 50 marks

(Duration 2 Hours)

Unit 1. Human Values

Morals, Values and Ethics - Integrity, - Work Ethics - Service Learning - Civic Virtue - Respect for others - Living Peacefully - Caring - sharing - Honesty - Courage - Valuing Time - Cooperation - Commitment - Empathy – Self-Confidence - Character - spirituality

Unit 2. Engineering Ethics

Senses of engineering ethics - Variety of Moral Issues - Types of inquiry - Moral Dilemmas Moral Autonomy - Kohlberg's Theory - Gilligan's Theory - Consensus and Controversy - Models of Professional Roles - Theories about Right Action - Self-Interest - Customs and Religion .

Unit 3. Safety, Responsibilities and Rights

Safety and Risk - Assessment of safety and Risk - Risk Benefit Analysis and Reducing Risk - The Three Mile Island. and Chernobyl Case Studies.

Collegiality and Loyalty - Respect for Authority - Collective Bargaining - Confidentiality - Conflicts of Interest - Occupational Crime - Whistle Blowing - Professional Rights – Employee Rights - Intellectual Property Rights (IPR) – Discrimination

Unit 4. Global Issues

Multinational Corporations - Environmental Ethics - Computer Ethics - Weapons Development - Engineers as Managers - Consulting Engineers - Engineers as Expert Witnesses and Advisors - Sample Code of Ethics of ASME, ASCE, IEEE, Institution of Engineers (India), etc.

ASSIGNMENTS

The term work will consist of total four assignments, based on syllabus.
(One assignment for every unit of the syllabus)

In addition to the above, the institute may prescribe additional modes of assessment such as Unit test, Quiz, Presentation, Course seminar etc. for ensuring continuous assessment of the students.

Note: Term will be granted only on satisfactory completion of assignments during stipulated period. The student will be detained in case of non-completion/non-submission of the term work.

TEXT BOOKS

1. Bayles, M.D.: Professional Ethics, California: Wadsworth Publishing Company, 1981.
2. Koehn, D.: The Ground of Professional Ethics, Routledge, 1995.
3. R.S. Naagarazan, A Text Book of Professional Ethics & Human Values, New Age International, 2006

REFERENCE BOOKS

1. Camenisch, P.F.: Grounding Professional Ethics in a Pluralistic Society, N.Y.: Haven Publications, 1983.
2. Wuest, D.E. : Professional Ethics and Social Responsibility, Rowman & Littlefield, 1994.