



# ANDHRA KESARI UNIVERSITY :: ONGOLE

Multidisciplinary Course

w.e.f. AY 2025-26

SEMESTER-II

Introduction to Social Work

Credits: 2

2 hrs/week

## Learning Outcomes:

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

1. *Understand the basic concepts relating to social work practice, values, principles of social work and social problems in India*
2. *List out different approaches of providing help to the people in need.*
3. *Acquaint the process of primary methods of social work*
4. *Get to know the skills of working with individuals, groups and communities.*

## Syllabus

### Unit-I:(07Hrs)- Introduction to social work and concepts related to social work

Introduction to Social Work- Definition- Scope- objectives - Functions- social service, social welfare services, social reform, major social problems in India; Social work philosophy, values, objectives, principles, methods and fields of social work.

### Unit-II:(09Hrs) Methods of Working with Individuals and Groups

Social case work –Definition-scope and importance of social case work, principles and process of social case work -Tools and techniques in social case work- Counselling skills. Social Group Work-Definition-scope- the need for social group work –Group work process - Principles of Group Work -Stages of Group Work-Facilitation skills and techniques.

### Unit-III: (09Hrs) Working with Communities and Field Work in social work

Community – definition - characteristics- types- community organisation as a method of social work-definition-objectives-principles- phases of community organization - concepts of community development, community participation and community empowerment.

Field work in social work – Nature, objectives and types of field work - Importance of field work supervision.

**Suggested Co-curricular Activities:(05 hours)**

1. Divide the students into groups, each group containing not exceeding 10 students depending upon the total number of students in a class or section. Each group can search in internet about any one of the institutions which work for the welfare of children or women or elderly or scheduled caste and scheduled tribe children or differently abled persons or Juvenile homes or Correctional homes or hospitals or Mahila Pragathi Pranganam or Swadhar project or any social welfare project or non governmental organizations (NGOs) to have an idea about welfare agencies working for the needy.
2. Ask each group to exchange and discuss the information with other groups in the classroom with the information they collected on Internet.
3. Group Discussion with the students- what type of community problems they observe in their villages/towns/cities? Ask them to tell what are the line departments which will help to solve the problems of their communities and suggest them what type strategies help the communities to empower.
4. Invited lectures/Training by local experts
5. Visit to a community
6. Assignments, Quiz etc.

**References:**

1. Chowdhary, Paul. D. (1992). Introduction to Social Work. New Delhi: Atma Ram and Sons.
2. Friedlander W.A. (1955). Introduction to social welfare, New York, Prentice Hall.
3. Government of India, (1987). Encyclopedia of Social Work in India (Set of 4 Volumes). New Delhi, Publications Division, Ministry of Information and Broadcasting.
4. Lal Das, D.K. (2017). Practice of Social Research – Social Work Perspective, Jaipur, Rawat Publications.
5. Madan, G.R. (2009). Indian Social Problems (Volume 1 & 2). New Delhi: Allied publishers Private Limited.
7. Siddiqui, H.Y.(2007). Social Group Work. Jaipur: Rawat Publications
8. Pasty McCarthy & Carolin Hatcher, (2002). Presentation skills. The Essential Guide for Students. New Delhi, Sage Publications.
9. Websites on Social work methods.

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1. W. B. B. B.
2. P. A. B. B.
3. C. B. B. B.

Approved and  
Forwarded  
J. R. B.  
(Bos- chairman)



# ANDHRA KESARI UNIVERSITY ::ONGOLE

Multidisciplinary Course

w.e.f. AY 2025-26

SEMESTER-II

INDIAN HISTORY

Credits: 2

2 hrs/week

## Learning Outcomes:

After successful completion of this course, the student will be able to:

- Students will have an overall understanding of Indian history and culture from ancient to modern India.
- Learn about the changes in society, economy, politics, and culture under various dynasties.
- Know mediaeval Indian history and culture.
- Understand the greatness of the Mughals and their administration.
- Visualise how the Europeans are settled and how the colonials introduce various economic policies and their impacts.
- Know the stages of the Indian Freedom Struggle and the roles of Gandhi and Subash Chandra Bose.

## Syllabus:

### Unit-I

Ancient Indian History and Culture: What is History-Evolution of Man-Science and Technology in Harappan Civilisation-Vedic Literature- Difference between Jainism and Buddhism Philosophy-Ashoka Dhamma Policy-Science and Technology in Gupta Period- Chronology of Various Dynasties that ruled India (6<sup>th</sup> Century BC to 1206 CE)

### Unit-II

History and Culture of Medieval India: Delhi Sultanate: Rulers (Brief), Alla-Ud-Din-Khilji and Muhammad-Bin-Tuglaq Reforms-Greater Mughals (Brief)-Mughal Administration-Akbar Religious Policy-Mughal Art and Architecture-Bhakti Saints

### **Unit-III**

History of Modern India: European Settlements-British Revenue Policies-Economic Impact of British Rule-Socio-Religious Reform Movements-Causes for 1857 Revolt-Indian Freedom Struggle: Vande Mataram, Home Rule Movement-Gandhi's Role: Non-Cooperation Movements, Salt Satyagraha and Quit India Movement-Subash Chandra Bose-Partition of India.

#### **Curricular Activities:**

- Map-pointing/Collection of Historical news paper cuttings.
- Prepare a chart on Ancient, Medieval Dynasties and their rulers.
- Collect the various National Leaders photographs
- Prepare a list of Historical events in chronological order
- Unit Tests/Quiz/Debates/Workshops/Book Reviews/Seminars/Assignments.
- Collection of Articles and Books/Preparation of Videos/Charts
- Photos Exhibitions on Historical Importance/Visit to the Museums

#### **References:**

1. E.H. Carr., What is History, Penguin, 1961
2. R.S.Sharma., Ancient India, New Delhi, 1996
3. D.N.Jha, Ancient India: In Historical Outline, Manohar Publishers, 1999.
4. R.C.Majumdar, K.K.Dutta &H.C.Roy Chowdhuri (ed.), An Advanced History of India, Macmillan, 1948.
5. Romila Thapar., Early India: From the origins to 1300, University of California Press, 2004.
6. Ranabir Chakravarti., Exploring Early India, upto 1300 A.D, Primus Books, 2016.
7. Satish Chandra., History of Medieval India, 800-1700, Oriental Blackswan, 2007.
8. Satish Chandra., Medieval India: From Sultanate to the Mughals, Part-I & II, Har Anand Publications, 2005.
9. I.H.Qureshi., The Administration of the Sultanate of Delhi, Oriental Books, 1977.
10. Harbans Mukhia., The Mughals of India, Wiley Publishers, 2008.
11. JhanF.Richards., The Mughal Empire, All Volumes, Cambridge University Press, 2012.
12. Sumit Sarkar., Modern India, Pearson India, 2014.
13. Śekhara Bandyopādhyāya.,From Plessey to Partition: A History of Modern India, Oriental Blackswan, 2004
14. V.D.Mahajan., Modern Indian History, S.Chand and Company Limited, 2020.
15. Bipan Chandra, A.Tripathi, Barunde., Freedom Struggle, National Book Trust, 1987.

16. R.C.Dutt., The Economic History of India Under Early British Rule, K.Paul, Trench, Trubner & Company Limited, 2008.
17. Tirthankar Roy., How British Rule Changed India's Economy: The Paradox of the Raj, Springer International Publishing, 2020.
18. S.N.Sen., An Advanced History of Modern India, Macmillan India, 2010.
19. Ishita Banerjee-Dube., A History of Modern India, Cambridge University Press, 2015

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(BOS-Chairman)



# ANDHRA KESARI UNIVERSITY :: ONGOLE

Multidisciplinary Course

w.e.f. AY 2025-26

SEMESTER-II

## PRINCIPLES OF CHEMICAL SCIENCES

Credits: 2

2 hrs/week

I. **Course Outcomes:** At the end of the course the student will be able to-

1. Understand the structure of atom.
2. Identify the isotopes and isobars.
3. Define acids and bases and predict the nature of salts.
4. Explain ionic and covalent bonding.
5. Describe the importance of Chemistry in daily life.

II. **Syllabus:**

### Unit I: Matter, Atoms, Molecules & Nuclear Chemistry

Classification of matter, Dalton atomic theory, Thomson Model, Rutherford Model, Bohr's model of atom, quantum numbers, electronic configuration, Aufbau Principle, Pauli's exclusion principle, Hund's rule. Isotopes-Isobars, Nuclear decay, Band of Stability, Nuclear Reaction types, Nuclear Applications.

### Unit II: Elements, Classification and Chemical Bonding

Classification of elements, Periodic Classification of elements based on electronic configuration, classification into types, classification into metals, non-metals and metalloids, periodic properties-atomic radii, ionisation enthalpy, electronegativity, Octet rule, ionic bond properties of Ionic compounds-covalent bond, properties of covalent molecule.

### Unit III: Acids, Bases, Salts, Chemistry in Daily life

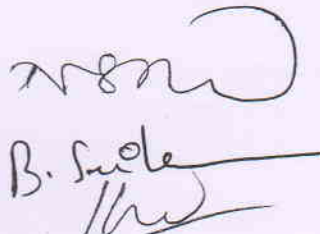
Definition, types and properties of Acids, Bases, Salts, strength of acids and bases, pH, Importance of Chemistry in daily life. (food, drugs, textiles, preservatives, soaps and detergents.)

III. **List of Reference Books:**

1. Inorganic Chemistry by Puri and Sharma
2. Basic concepts of Inorganic Chemistry by D.N.Singh

IV. **Co-curricular activities:**

Projects on Importance of Chemistry in food, drugs, textiles, preservatives, soaps and detergents.

  
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# ANDHRA KESARI UNIVERSITY ::ONGOLE

## Multidisciplinary Course

w.e.f. AY 2025-26

## SEMESTER-II

## PRINCIPLES OF PHYSICAL SCIENCES

**Credits: 2**

**2 hrs/week**

### Course Objective:

The course "Principles of Physical Sciences " is designed to introduce arts students to fundamental concepts and principles of physical sciences, fostering a deeper understanding of the physical world and its interconnections with various disciplines.

### Learning outcomes:

Upon completion of the course "Principles of Physical Sciences for Arts Students," students from arts backgrounds will be able to:

1. Understand the foundational principles of physical sciences: Students will develop a comprehensive understanding of the core principles and concepts in physical sciences.
2. Analyse and interpret scientific information: Students will acquire the ability to critically analyse scientific information and data related to physical sciences.
3. Apply physical science principles to real-world scenarios: Students will develop the skills to apply physical science principles to solve real-world problems and scenarios.

### Syllabus:

#### Unit 1: Introduction to Physics

Nature of Physics: Overview of physics as a discipline, its scope, and its relationship to other sciences. Scientific Method in Physics: Introduction to the scientific method and its application in the study of physics. Measurement and Units: Understanding the principles of measurement, SI units, and the importance of accurate and precise measurements. Scalars and Vectors: Differentiating between scalars and vectors, understanding vector addition and subtraction.

#### Unit 2: Mechanics for Arts Students

Motion and Forces: Introduction to the principles of motion, including velocity, acceleration, and the laws of motion. Energy and Work: Understanding the concept of energy, different forms of energy, and the relationship between work and energy. Circular Motion: Exploring the principles of circular motion, centripetal force, and applications in real-world scenarios. Gravity: Introduction to the concept of gravity, Newton's law of universal gravitation, and its implications.

### Unit 3: Waves and Optics for Arts Students

Waves: Understanding the properties and characteristics of waves, including wave types, wave motion, and wave interference. Sound Waves: Exploring the nature of sound waves, including properties of sound, sound propagation, and the Doppler effect. Light and Optics: Introduction to the behavior of light, reflection, refraction, and the formation of images by mirrors and lenses. Wave Optics: Understanding the principles of interference, diffraction, and polarization of light waves.

#### Reference Books:

1. "Principles of Physics" by David Halliday, Robert Resnick, and Jearl Walker: This textbook covers the fundamental principles of physics, including mechanics, electromagnetism, thermodynamics, and modern physics. It provides a comprehensive introduction to the subject and includes numerous examples and exercises for practice.
2. "University Physics" by Hugh D. Young and Roger A. Freedman: This textbook is widely used in university-level physics courses. It covers a wide range of topics in classical physics, modern physics, and thermodynamics. It is known for its clear explanations and problem-solving approach.
3. "Concepts of Modern Physics" by Arthur Beiser: This book provides an introduction to the principles and concepts of modern physics, including quantum mechanics, atomic and nuclear physics, and relativity. It is suitable for students with a basic background in physics and mathematics.
4. "The Feynman Lectures on Physics" by Richard P. Feynman, Robert B. Leighton, and Matthew Sands: This three-volume set is based on the famous lectures given by physicist Richard Feynman. It covers a wide range of topics in physics, including mechanics, electromagnetism, quantum mechanics, and statistical mechanics. The lectures are known for their engaging style and intuitive explanations.
5. "Physical Science" by Bill Tillery: This textbook provides a comprehensive introduction to the principles of physical science, covering topics such as motion, forces, energy, waves, electricity, and magnetism. It is designed for introductory-level courses and includes numerous examples, illustrations, and practice problems.
6. "Fundamentals of Physics" by Jearl Walker, David Halliday, and Robert Resnick: This textbook is widely used in physics courses and covers the fundamental principles of classical physics. It includes a strong emphasis on problem-solving and conceptual understanding.

#### Student activities:

1. Conduct research on a famous physicist or a significant discovery in the field of physics. Write a short report highlighting the physicist's contributions or explaining the importance of the discovery. Include information about how the discovery impacted other scientific fields or technological advancements.
2. Watch videos or animations demonstrating circular motion, such as the motion of objects on a Ferris wheel or a car turning on a curved track. Identify the forces involved, including the centripetal force, and explain how they contribute to the object's circular motion. Discuss real-world examples where circular motion is significant, such as satellites orbiting the Earth.
3. Set up a wave demonstration using a rope or a slinky to visualize the properties of waves, such as wavelength, frequency, amplitude, and wave speed. Observe how these properties change when altering the parameters of the wave, such as tension or length.

  
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Multidisciplinary Course

w.e.f. AY 2025-26

SEMESTER-II

PRINCIPLES OF PSYCHOLOGY

Credits: 2

2 hrs/week

## Unit I

**Introduction:** Definition, Origin of psychology, Psychology as a scientific study of behavior, applied fields of psychology Biological bases of behaviour

**Sensory and perceptual processes:** Structure and function of visual and auditory senses; Attention: selective, sustained and divided attention. Perception: Nature and determinants; Perceptual constancies

## Unit II

**Emotion and Motivation:** Nature of emotion; components of emotions. Theories of emotion: James-Lange, Cannon-Bard and Schachter-Singer. Motivation: Nature and types; Maslow's hierarchy model

## Unit III

**Individual differences:** Learning and memory: Learning – Definition, Classical and instrumental conditioning: principles of classical conditioning, schedules of reinforcement, Memory - Sensory, short-term and long-term memory; forgetting and its causes

Personality - Trait and type approaches; assessment of personality. Intelligence: Concept of IQ and measurement

***Books recommended:***

Baron, R. A. (2006). *Psychology* (5th Ed.). New Delhi: Pearson Education.

Ciccarelli, S. K., & Meyer, G. E. (2009). *Psychology*. Delhi: Pearson Education.

Coon, D., & Mitterer, J. O. (2007). *Introduction to Psychology: Gateway to mind and behaviour*. New Delhi: Cengage.

Gerrig, R. J., & Zimbardo, P. G. (2006). *Psychology and Life* (17th Ed.). New Delhi: Pearson Education.

Singh, A. K. (2009). *Uchachtar Samanya Manovigyan*. Varanasi: Motilal Banarasi Das.

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# ANDHRA KESARI UNIVERSITY :: ONGOLE

## Multidisciplinary Courses

w.e.f. AY 2025-26

### SEMESTER-II

## PRINCIPLES OF BIOLOGICAL SCIENCES

Credits: 2

2 hrs/week

**Learning Objectives:** By the end of this course the learner can:

1. Acquire logic to evaluate fundamental biological concepts at various levels of biological organisation including the molecular, cellular, organismal and systems levels.
2. Communicate fundamental biological knowledge between tiers of biological organisation.
3. Apply common biological principles across all levels of biological organization.

**Learning Outcomes:** On completion of this course students will be able to:

1. Understand the relationship between structure and function at all levels.
2. Recognise the mechanisms underlying biological evolution, its patterns, and its significance as biology's overarching unifying principle.
3. Understand the contributions of biology to the resolution of medical, ethical, social, and environmental concerns in human affairs.

### UNIT-I Diversity of Life

- 1.1 Introduction to Biology, Branches of Biology, Basic Principles of Biology
- 1.2 Biological Classification-Two kingdom and Five kingdom classification, Viruses, Viroid's and Lichens
- 1.3 Diversity in the living world, Taxonomic categories, Taxonomic aids
- 1.4 Plant organization-The form, structure and function of plant vegetative and reproductive organs, Classification of Plant Kingdom,
- 1.5 Basis of Animal Classification, Classification of Animal Kingdom

### UNIT-II Biomolecules and metabolism

- 2.1 Ultra structure of cell and Cell organelles (Structure and Functions), Plant cell vs Animal cell
- 2.2 Plant Physiology: Photosynthesis, Respiration, Transportation, Mechanisms of Nitrogen fixation.
- 2.3 Plant growth and development, physiology of flowering.
- 2.4 Human Physiology: Digestion, Respiration, Circulation
- 2.5 Male and female reproductive organs, gametogenesis, fertilization.

*A. V. Ramana*



### **UNIT-III Principles of Biology**

- 3.1 Genetics: Mendel's laws of inheritance, Genetic disorders- Colour blindness, Sickle cell anaemia
- 3.2 Evolution: Geological time scale for evolution of plants and vertebrates, Origin and evolution of plants and man
- 3.3 Common Human Diseases: causing organism, prevention and treatment- malaria, dengue, AIDS, cancer, corona.
- 3.4 Common Plant Diseases: causing organism, prevention and treatment- Black spot, Leaf spots, Powdery mildew, Blight, Canker.
- 3.5 Biotechnology: Tools and process of recombinant DNA technology, Applications of biotechnology in agriculture, food industry, medicine and transgenic animals.

#### **Text Books**

1. Pandey, B.P. (2013) College Botany, Volume-I, S. Chand Publishing, New Delhi.
2. Kotpal, R.L. 2022. Modern textbook of zoology, Vertebrates. (Rastogi Publ., Meerut).
3. Verma P.S., Agarwal V.K., 2006. Cell biology, genetics, Molecular Biology, Evolution and Ecology. S. Chand publishers, New Delhi, India.

#### **Reference Books**

1. Sreekrishna V. 2005. Biotechnology –I, Cell Biology and Genetics. New Age International Publ. New Delhi, India.
2. Rastogi, S.C., 2019. Essentials of animal physiology. 4<sup>th</sup> Edition. New Age International Publishers.

*AV Ramana*

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