

OUAT SYLLABUS

The OUAT (Odisha University of Agriculture and Technology) Entrance Exam syllabus for undergraduate programs typically covers subjects from the Class 12 (10+2) curriculum in the following areas:

1. Physics

- Units and Measurements
- Kinematics
- Laws of Motion
- Work, Energy, and Power
- Gravitation
- Properties of Bulk Matter
- Thermodynamics
- Behavior of Perfect Gas and Kinetic Theory
- Oscillations and Waves
- Electrostatics
- Current Electricity
- Magnetic Effects of Current and Magnetism
- Electromagnetic Induction and Alternating Currents
- Electromagnetic Waves
- Optics
- Dual Nature of Matter and Radiation
- Atoms and Nuclei
- Electronic Devices

2. Chemistry

- Some Basic Concepts of Chemistry
- Structure of Atom
- Classification of Elements and Periodicity in Properties
- Chemical Bonding and Molecular Structure
- States of Matter: Gases and Liquids
- Thermodynamics
- Equilibrium
- Redox Reactions
- Hydrogen
- s-Block Elements (Alkali and Alkaline Earth Metals)
- Some p-Block Elements
- Organic Chemistry – Some Basic Principles and Techniques
- Hydrocarbons
- Environmental Chemistry
- Chemical Kinetics
- Surface Chemistry
- General Principles and Processes of Isolation of Elements
- p-Block Elements
- d- and f-Block Elements

- **Coordination Compounds**
- **Haloalkanes and Haloarenes**
- **Alcohols, Phenols, and Ethers**
- **Aldehydes, Ketones, and Carboxylic Acids**
- **Organic Compounds Containing Nitrogen**
- **Biomolecules**
- **Polymers**
- **Chemistry in Everyday Life**

3. Mathematics

- **Sets, Relations, and Functions**
- **Complex Numbers and Quadratic Equations**
- **Matrices and Determinants**
- **Permutations and Combinations**
- **Binomial Theorem and its Applications**
- **Sequences and Series**
- **Limit, Continuity, and Differentiability**
- **Integral Calculus**
- **Differential Equations**
- **Co-ordinate Geometry**
- **Three-Dimensional Geometry**
- **Vector Algebra**
- **Linear Programming**
- **Probability**
- **Trigonometry**
- **Statistics**

4. Biology

- **Diversity in Living World**
- **Structural Organisation in Animals and Plants**
- **Cell Structure and Function**
- **Plant Physiology**
- **Human Physiology**
- **Reproduction**
- **Genetics and Evolution**
- **Biology and Human Welfare**
- **Biotechnology and Its Applications**
- **Ecology and Environment**