

Lesson Plans: Academic Session 2025-26

UG Physical Sciences & Life Sciences (Geology) — Semesters I to VI

Semester I (Odd Semester: Jul–Nov 2025)

Week	Introduction to Geology (Theory)	Practical (Intro to Geology)
Week 1	Unit I: Introduction & branches; Earth & Solar System	Practical: Geomorphological models
Week 2	Unit I: Earth's origin; size, shape, mass, density; atmosphere	Practical: Topo maps (Sol features)
Week 3	Unit I: Theories of Earth's origin; internal structure	Practical: Bearings exercises
Week 4	Unit I: Law of uniformitarianism	Practical: Brunton compass & clinometer
Week 5	Unit II: Types of rocks; rock cycle	Practical: Rock specimens
Week 6	Unit II: Weathering & erosion; types & factors	Practical: Weathering features
Week 7	Unit II: Continental drift & Plate tectonics	Practical: Dip & strike exercises
Week 8	Unit II: Outcrop, outlier, inlier, overlap	Practical: Cross-sections
Week 9	Unit III: Soil formation & soil profile	Practical: Soil profile features
Week 10	Unit III: Geological work of rivers – erosional features	Practical: Fluvial landforms
Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)
Week 11	Unit III: River depositional features; Aeolian landforms	Practical: Aeolian landforms
Week 12	Unit IV: Glacial erosional & depositional landforms	Practical: Glacial features
Week 13	Unit IV: Lacustrine deposits; Indian lakes	Practical: Groundwater features
Week 14	Revision, Group Discussion, Class Test	Practical Revision & Viva prep

Semester III (Odd Semester: Jul–Nov 2025)

Week	Petrology (Theory)	Petrology Practical	Basics of Hydrology (Theory)
Week 1	Unit I: Rock cycle; Magma basics	Practical: Igneous textures	Unit I: Hydrologic Cycle
Week 2	Unit I: Crystallization processes	Practical: Mineral composition	Unit I: Groundwater classification
Week 3	Unit I: Magmatic differentiation	Practical: Igneous features	Unit II: Porosity & permeability
Week 4	Unit II: Igneous formation & classification	Practical: Igneous specimens	Unit II: Groundwater flow
Week 5	Unit II: IUGS classification	Practical: Igneous forms	Unit III: Aquifers
Week 6	Unit III: Sedimentary processes	Practical: Sedimentary textures	Unit III: Darcy's Law
Week 7	Unit III: Sedimentary classification	Practical: Sedimentary structures	Unit IV: Water properties
Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)
Week 8	Unit IV: Metamorphism types	Practical: Metamorphic textures	Unit IV: Water quality
Week 9	Unit IV: Metamorphic classification	Practical: Metamorphic specimens	Revision
Week 10	Revision	Practical Revision	Group Discussion
Week 11	Class Test	Record Check & Viva	Class Test
Week 12	Final Revision	Final Prep	Final Revision

Semester V (Odd Semester: Jul–Nov 2025)

Week	Paper 501 (Igneous Petrology)	Paper 502 (Sedimentary Petrology)	Paper 503 (Practical)
Week 1	Unit I: Magma genesis & crystallization	Unit I: Sedimentation processes	Practical: Igneous specimens
Week 2	Unit I: Bowen's reaction series	Unit I: Grain size analysis	Practical: Sedimentary specimens
Week 3	Unit II: Igneous textures	Unit II: Sedimentary structures	Practical: Thin sections
Week 4	Unit II: Igneous classification	Unit II: Diagenesis	Practical: Map exercises
Week 5	Unit III: Igneous provinces	Unit III: Basin types	Practical: Classification exercises
Week 6	Unit III: Petrographic interpretation	Unit III: Indian basins	Practical: Microscopy
Week 7	Unit IV: Applied petrology	Unit IV: Reservoir characterization	Practical: Field visit
Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)	Diwali Break (14–22 Oct 2025)
Week 8	Revision	Revision	Field report
Week 9	Group Discussion	Group Discussion	Practical Revision
Week 10	Class Test	Class Test	Record Submission
Week 11	Pre-Exam Revision	Pre-Exam Revision	Final Prep

Semester II (Even Semester: Jan–May 2026)

Week	Mineralogy & Crystallography (Theory)	Practical (Mineralogy & Crystallography)
Week 1	Unit I: Minerals & silicate structures	Practical: Physical properties
Week 2	Unit I: Polymorphism, isomorphism	Practical: Crystal forms
Week 3	Unit II: Crystal structures	Practical: Miller Indices
Week 4	Unit II: Interfacial angles	Practical: Crystal drawings
Week 5	Unit III: Silica & Pyroxenes	Practical: Silicate specimens
Week 6	Unit III: Micas	Practical: Optical tests
Week 7	Unit IV: Feldspars	Practical: Feldspar & twinning
Week 8	Unit IV: Amphiboles & Garnets	Practical: Garnet & Amphibole
Holi Break (March 2026)	Holi Break (March 2026)	Holi Break (March 2026)
Week 9	Revision & Discussion	Practical Revision
Week 10	Class Test	Practical Test
Week 11	Final Revision	Record Submission

Semester IV (Even Semester: Jan–May 2026)

Week	Structural Geology (Theory)	Structural Geology Practical
Week 1	Unit I: Stress & strain	Practical: Compass-clinometer
Week 2	Unit I: Dip & strike	Practical: Strike & dip
Week 3	Unit I: Unconformities	Practical: Mapping
Week 4	Unit II: Folds	Practical: Fold sketches
Week 5	Unit II: Fold mechanisms	Practical: Cross-sections
Week 6	Unit III: Faults	Practical: Faults on maps
Week 7	Unit III: Joints	Practical: Joints plotting
Holi Break (March 2026)	Holi Break (March 2026)	Holi Break (March 2026)
Week 8	Unit IV: Foliation & cleavage	Practical: Cleavage studies
Week 9	Unit IV: Lineations	Practical: Structural synthesis
Week 10	Revision	Practical Revision
Week 11	Class Test	Practical Test
Week 12	Final Revision	Record Submission

Semester VI (Even Semester: Jan–May 2026)

Week	Paper 601 (Metamorphic Petrology)	Paper 602 (Economic Geology)	Paper 603 (Practical)
Week 1	Unit I: Metamorphic processes	Unit I: Ore genesis	Practical: Metamorphic specimens
Week 2	Unit I: Protoliths & grades	Unit I: Ore classification	Practical: Thin sections
Week 3	Unit II: Types of metamorphism	Unit II: Coal & Petroleum	Practical: Ore specimens
Week 4	Unit II: Facies & isograds	Unit II: Major ore deposits	Practical: Microscopy
Week 5	Unit III: Textures & foliations	Unit III: Non-metallic minerals	Practical: Field visit
Week 6	Unit III: Reactions & index minerals	Unit III: Environmental aspects	Practical: Field report
Week 7	Unit IV: Mapping & case studies	Unit IV: Ore models	Practical: Microscopy
Holi Break (March 2026)	Holi Break (March 2026)	Holi Break (March 2026)	Holi Break (March 2026)
Week 8	Revision & Discussion	Revision & Discussion	Practical Revision
Week 9	Group Discussion	Group Discussion	Record Submission
Week 10	Class Test	Class Test	Practical Test
Week 11	Pre-Exam Revision	Pre-Exam Revision	Final Viva