NAVOI STATE UNIVERSITY

GA2306 GEOMORPHOLOGY AND BASICS OF GEOLOGY — COURSE SYLLABUS

Department of Geography | 60530200 Geography Programme

COURSE PASSPORT & ACADEMIC METADATA

Course Title:	Course Code:
Geomorphology and Basics of Geology	GA2306
Course Type:	**Field of Study:**
Compulsory Course	500000 Natural Sciences, Mathematics & Statistics / 530000 Physics & Natural Sciences
Programme:	**Academic Year:**
60530200 Geography	2025–2026
Semester:	**Form of Education:**
2 (Semester 2)	Full-time / Uzbek & Russian
ECTS Credits:	**Total Workload:**
6 ECTS Credits	180 Hours (90 Contact Hours [Lectures & Practicals], 90 Independent Study Hours)
Weekly Contact Hours:	**Assessment:**
6 Hours	Current, Interim, and Final Examinations
Curriculum Code:	**Aligned UN SDGs:**
60530200-2.06	SDG 11 (Sustainable Cities and Communities); SDG 13 (Climate Action); SDG 15 (Life on Land); SDG 9 (Industry, Innovation & Infrastructure)



1. Course Description & Scope

The course 'Geomorphology and Basics of Geology' (GA2306) explores Earth's internal structure, geochronology, mineral composition, rock types, endogenic geological processes (tectonics, magmatism, metamorphism, earthquakes), exogenic processes (weathering, fluvial, karst, glacial, eolian activity), and relief formation mechanisms essential for engineering, melioration, and geographical exploration [cite: 127, 129, 130].

2. Course Aims & Professional Competencies

Course Aim: To form a modern scientific worldview in geomorphology and geology, equipping students with technical methods for geological surveying, relief analysis, and engineering-geographical applications [cite: 129].

Professional Competencies:

• Geological & Geomorphological Knowledge: Understanding Earth's structure, geochronological eras, lithospheric plate dynamics, minerals, and rock genesis [cite: 129, 130].
• Analytical & Technical Skills: Identifying relief forms, analyzing geological and geomorphological maps, constructing relief profiles, and evaluating seismic and exogenic hazards [cite: 133, 134, 135].
• Applied Engineering Competence: Applying geomorphological data in hydrotechnical planning, melioration, and construction site evaluation [cite: 129].

3. Prerequisites

• General Physics and Chemistry [cite: 129]
• Physical Geography [cite: 129]

4. Course Learning Outcomes (CLO)

Code	Learning Outcome Description
CLO 1	Describe Earth's internal structure, geochronological table, mineral classification, and lithospheric tectonic units [cite: 129, 130, 134].
CLO 2	Analyze endogenic and exogenic geological processes and their specific landform products [cite: 129, 130, 131].
CLO 3	Interpret geological and geomorphological maps, construct profiles, and evaluate seismic zonation [cite: 132, 133, 134].
CLO 4	Apply geomorphological and geological findings to civil engineering, hazard mitigation, and regional environmental planning [cite: 129].

5. Teaching Technologies & Methods

• Interactive lectures and multimedia geological simulations;
• Practical mapping exercises, profile construction, and mineral/rock identification [cite: 132, 133];
• Problem-based learning (PBL), interactive case studies, and field museum visits [cite: 133, 134];
• Independent team projects and presentations.

6. Requirements for Earning Credit

Students must master theoretical geological and geomorphological concepts, complete all practical mapping and analytical tasks, submit individual and group independent projects, and pass written evaluation examinations [cite: 133, 135].

7. Assessment Criteria

Evaluation is conducted via a 100-point rating system covering current, interim, and final examinations, testing theoretical mastery, cartographic analysis proficiency, and independent geological reasoning.

8. Recommended Literature & Information Sources

Core Literature:

1. Nizomov, A., et al. (2019). Geology [Study Guide]. Info Capital Group [cite: 135].
2. Raxmatov, Yu. B. (2024). Basics of Geomorphology [Textbook]. Durdona, Bukhara [cite: 135].
3. Mamatqulov, M., & Egamov, B. Yu. (2019). Geology and Geomorphology [Textbook]. VneshInvestProm [cite: 135].
4. Toshmuhamedov, B. T. (2011). General Geology [Textbook]. Noshir, Tashkent [cite: 135].

Additional Literature:

5. Rychagov, G. I. (2006). General Geomorphology [Textbook]. Moscow State University / Nauka [cite: 136].
6. Richard, J. H. (2011). Fundamentals of Geomorphology (2nd ed.). Routledge [cite: 135].

Digital Sources:

7. National Electronic Library of Uzbekistan: www.unilibrary.uz [cite: 136]
8. Geographic Portal: www.geografiya.uz [cite: 136]

9. UN Sustainable Development Goals (SDG) Alignment

• SDG 11 — Sustainable Cities and Communities: Aligns by assessing seismic hazards, geological stability, and safe urban planning conditions.
• SDG 13 — Climate Action: Evaluates paleogeographic shifts, long-term environmental evolution, and natural disaster mitigation.
• SDG 15 — Life on Land: Focuses on soil-forming rock stability, exogenic erosion control, and landscape preservation.
• SDG 9 — Industry, Innovation and Infrastructure: Supports safe geological surveying and resilient hydrotechnical and industrial infrastructure construction.