

6<sup>th</sup> October 2015

## Introducing Geology for School of Environmental Design

**Key Words:** Geology, Kakuma Campus, Geological Strata, Sedimentary Rocks, Fossils, Folds, Faults, Rocks, Ground Deformation, Landscape, Sea of Japan

**Topics:** Kakuma Campus of Kanazawa University is located in a hilly area to the east of the city of Kanazawa. Fossiliferous sedimentary rocks are observable in the campus. Various types of rocks are used for building materials, paving stones and monuments of the campus. In order to understand geology as a real field science for students of civil engineering, this course provides a sound knowledge of rocks, geological strata, fossils, faults, folds and ground deformation using real teaching materials in the campus.

**Objectives:** The main aim of this course is to enable students to gain a basic knowledge of geological strata, fossils, rocks and topography using rich natural and artificial circumstances of Kakuma Campus of Kanazawa University.

**Prerequisites:** At the end of this course, students should have a basic knowledge of 1) topographical features, 2) composition and structure of geological strata and fossils, 3) composition and structures of various rocks, and 4) ground deformation.

### Outline and Schedule

Week 1: Guidance and Introduction

Week 2: Topography of Kakuma Campus

Week 3: Sedimentary Rocks 1 (Mudstone)

Week 4: Sedimentary Rocks 2 (Sandstone and Conglomerate)

Week 5: Sedimentary Rocks 3 (Fossils)

Week 6: Conformity and Unconformity, Folds and Faults

Week 7: Observation of Rocks in the Campus 1

Week 8: Observation of Rocks in the Campus 2

Week 9: Topographic Maps

Week 10: Aerial Photographs and Lineaments

Week 11: Ground Deformation 1

Week 12: Ground Deformation 2

Week 13: Geological Development of Hokuriku Region

Week 14: Geological Development of the Sea of Japan

Week 15: Conclusion

\*class cancellations: 1<sup>st</sup> and 8<sup>th</sup> of December due to attendance to International Coordinating Committee of Angkor World Heritage, Cambodia

**Grading:** Attendance and positive participation: 100 %

**Teaching Materials:** Handouts will be provided.

**Consultation Time:** Office hours are by appointment. Students are welcome to make an appointment. Room 679 at the General Education Hall 2, Email: shinji@se.kanazawa-u.ac.jp

Shinji Tsukawaki, D. Sc.  
Institute of Nature and Environmental Technology  
Kanazawa University, Japan  
Email: shinji@se.kanazawa-u.ac.jp  
Phone: 076-264-5814 or 5990