<table>
<thead>
<tr>
<th>Subject name</th>
<th>Protection of Soils and Geological Heritage</th>
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<tbody>
<tr>
<td>Subject code</td>
<td>R.9sX.PSG.SM.ROSAY</td>
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<td>Department</td>
<td>Soil Science and Soil Protection</td>
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<tr>
<td>Faculty</td>
<td>Agriculture and Economics</td>
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<tr>
<td>Subject supervisor/Lecturer</td>
<td>Profesor Krystyna Ciarkowska</td>
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<tr>
<th>General information</th>
<th>semester</th>
<th>summer</th>
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<tbody>
<tr>
<td>ECTS credits</td>
<td>3</td>
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<tr>
<td>Lectures total</td>
<td>10 hrs</td>
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<tr>
<td>Laboratories/classes</td>
<td>10/5 hrs</td>
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Objective and general description

The main objective of the course is to promote students awareness of the importance of geological heritage conservation and soil protection, based on assessment of landscape conditions, susceptibility of soils to degradation and restoration of degraded soils as well as familiarize them with legislation on soil protection.

**Lectures**
2. The Geosites net and proposals of the European Geoparks on the area of Poland.
4. Threats of soils in Poland, types and causes.
5. Soil erosion.
6. Physical deterioration of soils, geotechnical deformations.
7. Chemical degradation – soil acidification and pollution with organic and inorganic materials.

**Laboratories**
1-5. Properties of soils with different resistance against degradation processes: determinations of organic carbon, pH values and grain size distribution.
6-7. Buffer capacities determination.
10. Analysis of results and summary.

**Field classes**
Visit to Ojców National Park to examine geological monuments and values of landscape.

**Assessment method**
Evaluation of student presentations, written exam, written report from field classes.

**References**
3. Mirsal I.A. Soil Pollution: Origin, Monitoring & Remediation,