1. Course title: MINERAL DEPOSIT GEOLOGY

2. Course code SII-GGP/12


4. Level of studies: MSc programme

5. Mode of studies: intramural studies

6. Field of study: MINING AND GEOLOGY (RG)

7. Profile of studies: academic

8. Programme: Mining and Exploring Geology

9. Semester: II (IX)

10. Faculty teaching the course: Faculty of Mining and Geology, Institute of Applied Geology

11. Course instructor: Rafał Morga PhD, D.Sc.

12. Course classification: programme course

13. Course status: compulsory

14. Language of instruction: English (lecture), Polish

15. Pre-requisite qualifications: completion of Mineral Deposit Geology course on semester I (VIII)

16. Course objectives: Studying the geological structure of the most important world coal deposits, obtaining skill of its analysing and calculation of the resources. Obtaining the skill of microscopic identification of ferro-alloy and precious metal, and semi-metal ores.

17. Description of learning outcomes:

<table>
<thead>
<tr>
<th>Nr</th>
<th>Learning outcomes description</th>
<th>Method of assessment</th>
<th>Teaching methods</th>
<th>Learning outcomes reference code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Student knows geological structure of the most important coal deposits in the world</td>
<td>examination</td>
<td>lecture</td>
<td>K_W10 +++</td>
</tr>
<tr>
<td>2</td>
<td>Student knows origin of coal deposits</td>
<td>examination</td>
<td>lecture</td>
<td>K_W11 ++</td>
</tr>
<tr>
<td>3</td>
<td>Student knows relationships between geological setting and occurrence of coal deposits</td>
<td>examination</td>
<td>lecture</td>
<td>K_W12 +</td>
</tr>
<tr>
<td>4</td>
<td>Student manages to prepare and elaborate documentation connected with resolution of engineering problem within the area of mining and geology</td>
<td>written elaboration</td>
<td>project</td>
<td>K_U03 +</td>
</tr>
<tr>
<td>5</td>
<td>Student can speak foreign language at level B2+ of the Common European Framework of Reference for Languages</td>
<td>examination</td>
<td>lecture</td>
<td>K_U06 ++</td>
</tr>
<tr>
<td>6</td>
<td>Student manages to identify ferro-alloy and precious metal, and semi-metal ores with the use of microscopic methods</td>
<td>written test</td>
<td>laboratory</td>
<td>K_U15 ++</td>
</tr>
<tr>
<td>7</td>
<td>Student manages to prepare coal quality maps, classify coal and calculate coal resources in a deposit</td>
<td>written elaboration</td>
<td>project</td>
<td>K_U17 ++</td>
</tr>
<tr>
<td>8</td>
<td>Student is conscious of and understands non-technical aspects and effects of deposit exploitation, environmental impact including</td>
<td>examination</td>
<td>lecture</td>
<td>K_K02 ++</td>
</tr>
</tbody>
</table>

18. Teaching modes and hours

Lecture: 15
Laboratory: 15
Project: 15
19. Syllabus description:

Lecture
Characteristics of occurrence conditions and geological structure of the world sub-bituminous and bituminous coal, and anthracite deposits: geotectonic position, origin, stratigraphy and lithology, tectonics, petrographic properties of coal, resources and output in geographical distribution (Europe, Asia, North and South America, Africa, Australia).

Laboratory
Microscopic identification of Fe ores. Microscopic identification of Cr, Ni, Ti, Mo, Mn and W ores. Microscopic identification of As, Sb and Bi as well as Ag and Au ores. Ore comparison classes.

Project
Introduction to the DraftSight software. Description of the drawing setting options. Presentation of the main drawing to tools. Work in different coordinate systems. Presentation of the essentials of drawing and modification of the 2D objects. Work with the text objects. Elaboration of the drilling profile based on the given data. Elaboration of a geological cross-section through drill holes based on the given data.

20. Examination: YES

21. Primary sources:

22. Secondary sources:

23. Total workload required to achieve learning outcomes

<table>
<thead>
<tr>
<th>Lp.</th>
<th>Teaching mode</th>
<th>Contact hours / Student workload hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lecture</td>
<td>15/20</td>
</tr>
<tr>
<td>2</td>
<td>Classes</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>Laboratory</td>
<td>15/10</td>
</tr>
<tr>
<td>4</td>
<td>Project</td>
<td>15/15</td>
</tr>
<tr>
<td>5</td>
<td>BA/ MA Seminar</td>
<td>/</td>
</tr>
<tr>
<td>6</td>
<td>Other</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td>Total number of hours</td>
<td>45/45</td>
</tr>
</tbody>
</table>

24. Total hours: 90

25. Number of ECTS credits: 3

26. Number of ECTS credits allocated for contact hours: 2

27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects): 2

26. Comments:

Approved:

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(date, Instructor’s signature)