PLANNING FORM FOR AN EDUCATIONAL MODULE ©
(to be completed by the teacher)

Programme of Studies: Earth Sciences Honours Degree, 3rd year of a 4 year B.Sc.
Name of the module / course unit: Field mapping of solid geology and surficial deposits
Type of course (e.g. major, minor, elective): major
Level of the module / course unit (e.g. BA, MA, PhD): Bachelors
Prerequisites: GE200 (2nd year Geology)
Number of ECTS credits: 10

Generic Competences to be developed¹:
1. Capacity for analyses and synthesis
2. Capacity for organisation and planning
3. Information management skills (ability to retrieve and analyse information from different sources)
4. Problem solving
5. Decision-making
6. Teamwork
7. Interpersonal skills
8. Capacity for applying knowledge in practice
9. Research skills
10. Capacity to learn
11. Capacity to adapt to new situations
12. Capacity for generating new ideas (creativity)
13. Capacity to deliver results when working in a different environment

Specific Competences to be developed:
1. The ability to accurately record field data using a variety of techniques
2. Preparation and maintenance of field notebooks, field slips
3. The use of IT aids in the field
4. The preparation of reports and interpretive maps using appropriate IT and manual techniques
5. A concern for field safety
6. A respect for the rights of land owners and users
7. The techniques for collection and subsequent laboratory analysis of field samples
8. The ability to link outcrop data into a four dimensional model describing the geological evolution of the region
9. The preparation of maps, sections and diagrams to illustrate this 4D analysis
10. An appreciation of the environmental and commercial aspects of the material mapped

¹ A considerable number of competences, both specific and generic, are developed during intensive field work classes where the students are working on their own or in small groups. This is because they are holistic and encourage the student to integrate much of the theoretical and practical material absorbed in the class and through reading to solve a real world problem. The example used here is for a basic geological mapping course. A geophysical survey, environmental or hydro-geological mapping or a short oceanographic cruise would develop a similar variety of competences.
<table>
<thead>
<tr>
<th>Learning outcomes</th>
<th>Educational activities</th>
<th>Estimated student work time in hours</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| **Introduction to field safety:**  
The ability to plan and execute a safe day’s work in the field. | 2 hours Lecture and 2 day field exercise with optional CPR and 1st Aid courses | 22-40 | Continuous: by qualified safety instructors. No formal mark, but certificates awarded to all who pass. |
| **Field course:**  
The ability to collect earth science data in the field, to analyse and archive this data. | 7 days supervised field work. First two days working in groups closely supervised by lecturers who define the task to be completed. Four days working semi-independently in small groups (2-4 persons) and one day site visit to a slate quarry. | 100 hours  
8-10 hours each day in the field and up to 3 hours each evening ‘mapping in’ (analysing, consolidating and plotting data collected that day). Travel time: home to/from locality – 2 days | Continuous assessment: = 50% of total |
| **Preparation of short report on data collected in the field.**  
The ability to concisely integrate and summarise earth science data collected in the field.  
The ability to prepare and understand geological maps. | Working in a small group (2-4 persons) back in laboratory: describing material collected; preparing neat copy maps, plans, diagrams and cross sections; preparing a concise report on stratigraphy; structure; surficial deposits; economic potential and environmental aspects of area studied. | 80 hours | Submission of project by a deadline, which is then marked. = 50% of total. |
| **Revision Field Trip** | 2 day revision field trip to rehearse skills necessary before undertaking independent field project | 20 hours | |

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Generic Competences to be developed:
14. Capacity for analyses and synthesis
15. Capacity for organisation and planning
16. Information management skills (ability to retrieve and analyse information from different sources)
17. Problem solving
18. Decision-making
19. Teamwork
20. Interpersonal skills
21. Capacity for applying knowledge in practice
22. Research skills
23. Capacity to learn
24. Capacity to adapt to new situations
25. Capacity for generating new ideas (creativity)
26. Capacity to deliver results when working in a different environment

Specific Competences to be developed:
11. The ability to accurately record field data using a variety of techniques
12. Preparation and maintenance of field notebooks, field slips
13. The use of IT aids in the field
14. The preparation of reports and interpretive maps using appropriate IT and manual techniques
15. A concern for field safety
16. A respect for the rights of land owners and users
17. Collection and subsequent laboratory analysis of field samples
18. The ability to link outcrop data into a four dimensional model describing the geological evolution of the region
19. The preparation of maps, sections and diagrams to illustrate this 4D analysis
20. An appreciation of the environmental and commercial aspects of the material mapped
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<tr>
<td>Introduction to field safety: The ability to plan and execute a safe day’s work</td>
<td>2 hours Lecture and 2 day field exercise with optional CPR and 1st Aid courses</td>
<td>Include time spent in class, under instruction, time rehearsing skills before assessment, time</td>
<td>Continuous: by qualified safety instructors. No formal mark, but certificates awarded to all</td>
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<td>in the field.</td>
<td></td>
<td>spent in assessment and debriefing.</td>
<td>who pass.</td>
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<td>Field course: The ability to collect earth science data in the field, to analyse</td>
<td>7 days supervised field work. First two days working in groups closely supervised by</td>
<td>Include time spent in field, travel time to and from locality each day, time spent each evening</td>
<td>Continuous assessment: = 50% of total</td>
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<td>and archive this data.</td>
<td>lecturers who define the task to be completed. Four days working semi-independently in</td>
<td>‘mapping in’, and travel time between University and field course locality.</td>
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<td>small groups (2-4 persons) and one day site visit to a slate quarry.</td>
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<td>Preparation of short report on data collected in the field. The ability to</td>
<td>Working in a small group (2-4 persons) back in laboratory: describing material collected;</td>
<td>Include all time spent working on samples, preparing maps, figures and report. Plus time</td>
<td>Submission of project by a deadline, which is then marked. = 50% of total.</td>
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<td>concisely integrate and summarise earth science data collected in the field. The</td>
<td>preparing neat copy maps, plans, diagrams and cross sections; preparing a concise report</td>
<td>discussing report with supervisor and preparing various revisions.</td>
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<td>ability to prepare and understand geological maps.</td>
<td>on stratigraphy; structure; surficial deposits; economic potential and environmental aspects of area studied.</td>
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