QUALITY ASSESSMENT BY EU PARTNERS (PARTNER P2: UNIVERSITY OF SALZBURG)

New course 2: "Remote Sensing, GIS for Emergency Management"

QUALITY ASSESSMENT
Quality criteria 1: Number of credit units for lectures, practical sessions and self-learning are appropriate to the contents
• *Evaluation* Considering the practical character of the contents taught, it is resolved that the share of credit units for lectures, practical sessions and self-learning is not appropriate. The descriptions in the syllabus suggest that most of the credit units are devoted to theoretical sessions, whereas units for both practical sessions and self-learning remain limited. This is striking in the field of GIS, in which most efforts should be put in the provision of practical skills, so that students are able to use the tool to solve real problems. The acquisition of theoretical knowledge on the functioning of GIS and remote sensing does not automatically equate to the acquisition of skills on its proper usage. This is the reason why this aspect becomes critical. The extent to which practical parts are included within the theoretical sessions remains, however, unclear. This latter point should be further clarified in the syllabus. In any case, it is apparent that theory and practice should be further integrated and interrelated in the course process. • *Strategies for improvement* The descriptions in the syllabus suggest that most of the sessions offered are theoretical sessions. Therefore, a conversion of at least (parts of) some of the theoretical sessions into practical sessions becomes very desirable. This is particularly desirable for those sessions addressing the compilation, processing and analysis of data. Practical work with the software (GIS) in the form of case studies will make it possible to train future professionals not only knowledgeable of the capabilities that GIS offers for disaster management, but, most importantly, able to use these capabilities for the resolution of cases in practice. The engagement of and work with local stakeholders during the sessions devoted to disaster management in India might be additionally considered (e.g. conjointly working on cases with the disaster management framework of India). This can substantially increase the practical experience acquired by students, as local professionals have sound knowledge on the available tools and strategies in the country and the main opportunities and hurdles found in practice. Further, the conception of some of the theoretical sessions as in-class discussions might be considered. In-class discussions constitute a more attractive way of presenting the theoretical materials and give the students a chance to express themselves and better integrate their already existent knowledge on the topic with the new contents taught. Another option is the usage of games and quizzes during the theoretical sessions, in order to further increase the dynamism of the course. Although it appears that quizzes are used in this course, the syllabus does not clearly state how, when and for which purpose these quizzes are used. Further explanations in this regard would be very helpful so as to pinpointing better targeted suggestions. All these amendments should involve the formulation of more practical assignments additional to the one suggested in the syllabus. We propose that the suggested practical assignment in the syllabus becomes a "final practical project" that builds on all previous practical assignments that should be added to the different practical sessions. Both individual assignments and group assignments should be offered to the students.
Quality criteria 2: Total number of credit units in the course is correct and appropriate
• *Evaluation* The total number of credits awarded is too high if a workload of 56 hours is estimated. • *Strategies for improvement* Since 1 ECTS is equal to circa 28 hours, it becomes indispensable either to reduce the number of ECTS awarded to 2 or increase the workload to approximately 120 hours. Of the two options suggested, an increase in the workload for students appears the most desirable. The reason for that is the need for workload increases in the form of practice-oriented activities that complement and enable to reduce the excessively high ratio of hours devoted to lectures.

Quality criteria 3: Positioning of the courses in Curricula is appropriate based on the progressive level of difficulty
• *Evaluation* The positioning of the course in the second semester of MA studies in Disaster Studies is considered appropriate. The course constitutes a further step in the learning of crucial concepts and methodologies for the management of disasters with respect to those contents (it is assumed) offered during the first semester. It goes deep into a promising method (remote sensing and GIS) for disaster management, which should only have been briefly introduced during the introductory courses in the first semester and the knowledge on which becomes a basis for further specialised courses in the following semesters. • *Strategies for improvement* None. Everything is deemed correct.
Quality criteria 4: Tests are suitable and appropriate to support transferable skills
• *Evaluation* The certain bias observed towards the provision of theoretical contents appears to be also reflected in the grading system, which makes it not appropriate to support transferable skills in practice. Eighty per cent of the grade is exclusively derived through the successful completion of a mind-term and a final written examination. The usage of mostly only exams is not a suitable way to evaluate the skills gained during the course. The capability of students to work on real cases in practice can be hardly evaluated. The syllabus should indicate, however, the type of questions that students will have to answer during the exams (e.g. theoretical questions, short exercises with the software, etc.). This would enable us to provide a more accurate assessment. • *Strategies for improvement* Strategies for improvement are pointed out under "quality criteria 1". They concern the provision of a wider range of practical assignments. Most part of the grade should be calculated through the evaluation of the quality of practical assignments. Practical assignments should include individual and group tasks involving the compilation and processing with GIS of remote sensing data, as well as work on the management framework, strategies, etc. in India. The final exam should also be practically oriented (i.e. it should primarily involve conducting several tasks with the software). The grade should be obtained through the evaluation of: 1) the maps, pieces of text and oral presentations produced/made in the frame of the proposed practical assignments; 2) the degree of participation in in-class discussions and quizzes; and 3) the quality of the answers to the final exam. Very relevant is also the location of the practical assignments and theoretical sessions in the timeline. Opposite to what it appears to be suggested in the syllabus, we would strongly recommend mixing theoretical sessions and practical assignments in the timeline: i.e. practical sessions on each of the subjects addressed should be located right after the corresponding theoretical session. This might potentially improve the skills transferability. One of the reasons for that is the possibility offered to students to better interrelate the theoretical knowledge gained with its practical implementation. The limited students' memory further supports using this approach.
Quality criteria 5: TLM and assessment strategy support students in undertaking the course i.e. prerequisites are helpful and relevant, assessments helps gauge students understanding etc.
• *Evaluation* Prerequisites should be defined for attending this course, which has not been done. This is especially relevant given the required previous knowledge on basic concepts in disaster management in order to be able to follow the course contents smoothly. Additionally, it is highly recommended that the lecture materials are not limited to a listing of recommended publications, some scientific papers and the lecture slides. • *Strategies for improvement* The introductory character of the course to the usage of GIS and remote sensing explains the establishment of no required previous knowledge in the field of GIS as a prerequisite for attending the course. Courses providing basic knowledge about disaster management should, however, be included in the list of prerequisites. This might encompass the course "Risk, Vulnerability and Resilience: Concepts and Understanding", which has been newly created under the frame of the project SUNRAISE. Regarding the e-learning materials, the absence of access to them (we do not have access to them) entails no knowledge from our side on the relevance of the suggestions that we make here. Some of our suggestions might have already been put in practice. Our first suggestion is to make videos of the theoretical sessions and upload them

on the e-learning platform, so that students can have access to these materials anytime and review any parts that they may not have clearly understood. Our second suggestion is the creation of an online chat and additional practical exercises (additional to those set as compulsory for successfully completing the course). The first (online chat) might allow a more fluent and easy interaction among students and between students and professors, in order to solve the doubts encountered, etc. The second (additional practical exercises) might enable all interested students to further learn on the topic and make the learning experience more attractive.
Quality criteria 6: Theory/Practice-oriented components are sufficient to cater the learning outcomes and skills development
• *Evaluation* Theory-oriented components are sufficient to cater the learning outcomes and knowledge development, but this is not the case with practice-oriented components. The practice-oriented components should be further developed in the course planning and evaluation process to value the student work. • *Strategies for improvement* The strategies suggested are pointed out under “quality criteria 1 and 4”.