I3 - Integrated Project

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Summer Semester 2025

Scheduled dates: Tuesday 08:00-12:00
Presence: TechnoZ Itzling, GI-Lecture (SC30OG1.107), Building 14
Organisation: Department of Geoinformatics (Z_GIS)
Lecture number: 856.165
Semester hours: 7
ECTS: 12 (300 hours)
Document version: 14.03.2025

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1 ORGANISATIONAL ASPECTS

1.1 PLUSONLINE INFORMATION

An enrolment of students takes place via PLUSonline and is required latest until the first date of the lecture in the summer semester 2025 (04.03.2025). This lecture is worth 12 ECTS (European Credit Transfer System), counting for 300 working hours (Table 1). Most of the working hours you will spend on your personal project. An exception are those times mentioned in chapter 2.4 and Table 2. Altogether, the IP offers places for 16 students, so early registration is recommended.

Table 1: Curriculum

856.165 25S 7SSt IP I3 Project

Hilfe

Stellung in Studienplänen

Auswahl

Studienstatus alle **laufend** auslaufend nicht studierbar

Studienjahr 2027/28 2026/27 2025/26 **2024/25** 2023/24 2022/23 2021/22 2020/21 2019/20 2018/19 2017/18 2016/17 2015/16 2014/15 2013/14 2012/13 2011/12 2010/11 2009/10 2008/09 2007/08 2006/07 2005/06 2004/05 2003/04 2002/03 2001/02 2000/01 1999/2000 1998/99 1997/98 1996/97 1995/96 1994/95 1993/94 1992/93 1991/92 1990/91 1989/90 1988/89 1987/88 1986/87 1985/86 1984/85 1983/84 1982/83 1981/82 1980/81 1979/80 1978/79 1977/78 1976/77 1975/76 1974/75 1973/74 1972/73 1971/72 1970/71 1969/70 1968/69 1967/68 1966/67 1965/66 1964/65 1963/64 1962/63

Studienart/ Studienplan	SPO-V	Zuordnung zu Modul	Teil des Curriculums	Art	Empf. Sem.	ECTS Credits	Prüfungsart (Berechnungsrelevanz)	Äquiv.	Vorauss.	Vorschriften
laufend 2024/25										
Masterstudium										
066, 856 Masterstudium, Angewandte Geoinformatik (UG2002)	2016W	... [VK] [856_M17] 856M17 – I3: Interdisciplinary/Int ... [VK] [856_M17.1] Project	Ja	PFLICHT	-	12				Voraussetzungen

1.2 ELEARNING PLATFORM INFORMATION

All materials and information of the course will be available on the eLearning platform Moodle (https://gwb.schule.at/course/view.php?id=1979) (Figure 1).

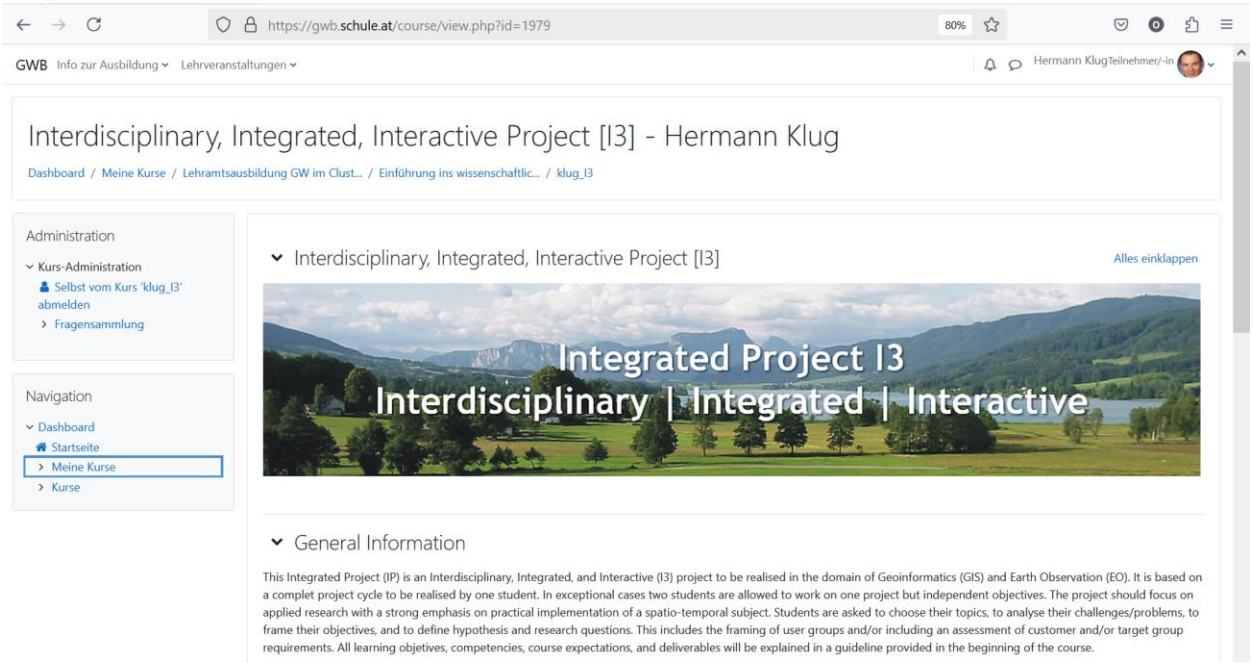

Figure 1: Study information in on the eLearning platform Moodle

On the eLearning platform, a discussion board has been setup (Figure 2) to enable participating students to discuss challenges and to benefit from other student's experiences and knowledge. Please use this discussion board to discuss formal and GI Science related aspects like GIS or remote sensing/earth observation functionalities.

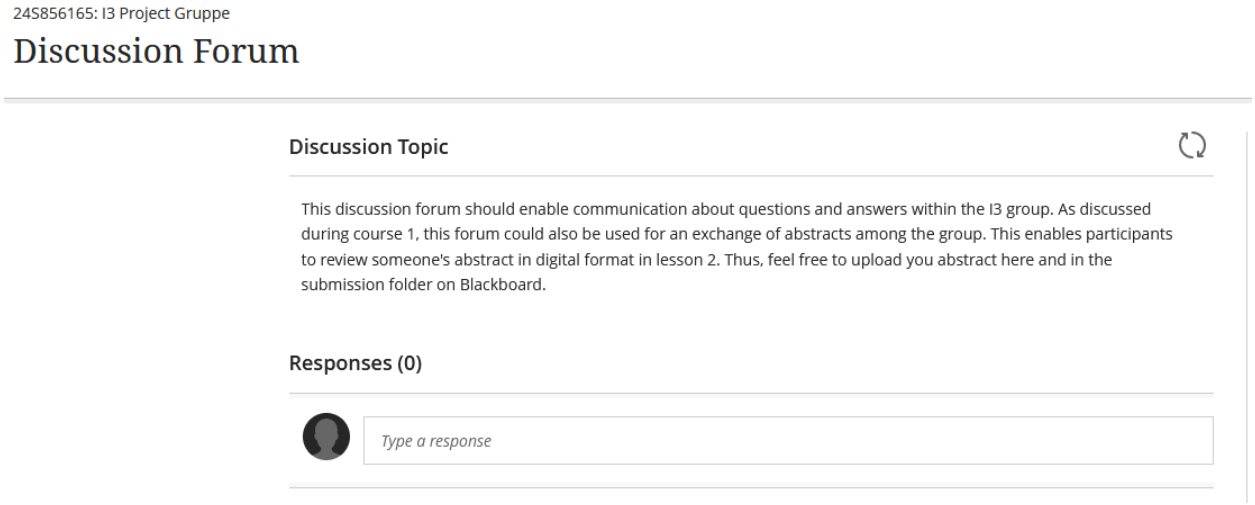

Figure 2: Integrated Project Forum

2 COURSE CONTENT

2.1 SUMMARY

As a capstone project, students develop, test, and validate the competences required for 'putting all Geoinformatics together'. Acknowledging the differences between 'the whole and its many parts', challenges from completing a major project through all its stages are successfully dealt with. From problem analysis, conceptualization, workflow design and data acquisition to schema implementation, analyses, validation and communication of essential outcomes, all major phases of a project are practiced. Skill sets for collaborative work and structuring of larger projects are developed. Based on impulse elements and structured inputs in the domains of project management, presentation techniques, moderation / facilitation and controlling / supervision, a project reflecting the key elements of practice-oriented workflows will qualify students to function in teams and to start organizing tasks and challenges into structured projects. In addition, by being familiar with standard project management and communication steps, graduates will confidently accept responsibilities within major project environments. At the same time, this experience will be a major contribution to successfully develop and complete the master thesis.

2.2 PREREQUISITES

Students should have passed the first part of the MSc study programme. Solid experiences in techniques and methods in Geoinformatics are required. To enter the course, students should have a solid plan about the topic to be tackled in this course. This topic needs to be discussed with the course instructor and upon topic agreement the course participation is granted up to 16 participants. Students should also have fundamental knowledge in Scientific Methods and Writing (course 856.111). This includes profound skills in structuring of their work in a manuscript and proper citation of international literature.

2.3 CONTENT AND OBJECTIVES

2.3.1 COURSE EXPECTATIONS

This IP is an I3 project on **I**nterdisciplinary, **I**ntegrated, and **I**nteractive elements. It is based on a project realised by one or in exceptional cases two students. The project should focus on applied research with a strong emphasis on practical implementation of spatial-temporal entities and phenomena. The choice of topic, problem analysis, framing of objectives, hypothesis and research questions, a definition of user groups including an assessment of customer and/or target group needs and requirements should be accomplished. Subsequently, the students are responsible choosing a proper research design and planning of workflows towards operationally derived and validated products (deliverables) using GIScience analysis and processing algorithms. This includes data collection, data storage techniques, data integration, data harmonisation and metadata creation. Thus, students experience the complete project management cycle including the use of project management methods (e.g., logical framework matrix), tool set and strategies. Communication and intervention planning with users/customers may be necessary. Communication and presentation techniques aligned with an overall project work plan and quality assurance and reporting of deliverables is required.

2.3.2 Objectives and Acquired Competences

The objectives of this I3 project are:

- a competent and proper (formal, technical, methodological, and content wise) handling of a project,
- the use if manifold moderation and presentation techniques and materials,
- realisation of high-quality information retrieval and processing (data and literature),
- analysis of scientific literature,
- synthesis of social, economic, and environmental entities and phenomena in space and time,
- design and planning of workflows towards operationally derived and validated products,
- adequate presentation of results and findings (PPT/Poster presentation, report).

2.4 Dates and Times

The IP will be in presence and requires being present at the course. The course duration will be on Tuesdays from 8:00 – 12:00 am. According to Table 2 and the "Submissions" paragraph in the eLearning platform, the following dates need to be kept in mind and require (as during the whole course) active participation:

- Introduction to the IP incl. abstract development (04.03.2025),
- presentation of the very first project idea (18.03.2025),
- the four project management homework (Gantt chart, PERT diagram, risk management matrix, time sheet) and the Project Overview Document have to be submitted to the eLearning platform (01.04.2025),
- the presentation and submission of an extended abstract (01.04.2024).
- Substantial work should have been done until the mid-term review meeting (06.05.2025), which should outline your work in a Pecha Kucha presentation.
- The final presentation based on your developed poster will be on 24.06.2025.
- The final project manuscript should be delivered to the eLearning platform on 30.06.2025.

The course schedule is listed in PLUS Online and in Table 2. Please review the main subjects to be elaborated chronologically. Within the first weeks, we are continuously working on getting the project running. Afterwards, two weeks of Easter Break apply, where you should still work on the project to ensure solid progress towards the mid-term presentation to be due in lecture eight. Until the beginning of May, solid progress and first results should already be available.

In between the lectures and presentations, consulting sessions are planned. Consulting sessions will be bilateral between the instructor(s) and the student. They will last ten (10) minutes, where students present their progress and particularly address challenges to overcome. The course instructor will provide help, advice, and recommendations to guide you to a successful completion of the intended project results.

Table 2: Dates and Objectives

No	Date	Content
1	04.03.2025	Introduction to the Course
2	11.03.2025	Project Management I
3	18.03.2025	Abstract presentations
4	25.03.2025	Project Management II (hands on Kanban, Gitlab, Wiki, Gantt) Blended Learning with video tutorial!
5	01.04.2025	Consulting 1 (Poll Link)
6	08.04.2025	Consulting 2 (Poll Link)
	15. + 22.04.2025	Easter Break
7	29.04.2025	Preparing the mid-term Pecha Kucha presentation
8	06.05.2025	Mid Term presentation
9	13.05.2025	Consulting 3 (Poll Link)
10	20.05.2025	Consulting 4 (Poll Link)
	27.05.2025	No course presence (working on the project!)
11	03.06.2025	Communication & Presentation
	10.06.2025	Whit "Tuesday" (working on the project!)
12	17.06.2025	Consulting 5 (Poll Link)
13	24.06.2025	Final Poster Presentation & Submission
	30.06.2025	Submission of the project achievements (no course attendance)

2.5 Compulsory Attendance

The curriculum foresees a compulsory attendance (!) of the scheduled course events as detailed in Table 2. Eighty percent of the presence time in the course needs to be ensured for a successful participation. Course evaluation will be negative in case of less than 80 % participation time. Especially in examination times (e.g., mid-term and final presentation), participation is mandatory. To avoid a negative course evaluation, students can unregister from the course until the second lecture day in the summer semester (11.03.2025).

2.6 Submissions & Evaluations

Within this Integrated Project (IP), students need to submit their homework to the eLearning platform Moodle for grading. Submission deadlines are very strict and as mentioned in each heading below. On these dates, you need to ensure that the files enter the eLearning platform system until the time specified in Moodle.

Each submission to the eLearning platform is automatically checked for plagiarism using Turnitin. Please ensure that no copy/paste and AI (artificial intelligence) relicts without citation(s) are remaining in your manuscript and ensure that all work done is yours and not someone else's.

The final evaluation is based on six submissions as detailed in chapter 2.6.1 to chapter 2.6.7 and in Table 3 as a summary. The latest delivery time is assigned on the eLearning platform is (as already mentioned)!

Table 3: Evaluation Criteria

ID	Content	Percent
1	Project abstract	10 %
2	Project management homework & 2x ongoing PM eval.	15 %
3	Project extended abstract	10 %
4	Mid-term presentation (Pecha Kucha)	10 %
5	Final poster presentation & submission	10 %
6	Final manuscript submission	45 %

2.6.1 Project abstract

The project abstract provides a first idea on the project topic. A template with further information on the abstract design and length is available on the eLearning platform. Altogether, this abstract is making 10 % of the overall evaluation mark. We will use the abstract in the second lesson of the semester. Please ensure you have it ready to use (printed) in the classroom. After the session, upload the abstract to the eLearning platform ("Submissions") until the time specified on Moodle.

2.6.2 Project management homework and its continuous evaluation

Accompanied to the project management course there are smaller homework session required. Among them are ❶ the design of a 'Project implementation Plan' (Gantt chart), ❷ a PERT diagram a Wiki setup, ❸ a 'Risk Matrix', ❹ filled time sheets, ❺ a Project Overview Document, and ❻ the GitLab documentation (5 %). Progress from point 1-6 will be evaluated continuously starting in May and June, each time accounting for maximum 5 evaluation points (10 %) out of hundred. Every student must present the project management progress once during the semester (10.00-10.15 as part of the consulting sessions). Further details will be discussed during the course. Please submit the final graphical representations from 1-4 in a PPT and submit them together with the Project Overview Document to the eLearning platform. Altogether, the submissions are worth 15 % of the overall mark. The project management homework must be delivered within the presentation at the mid-term review report.

2.6.3 Short presentations on the project idea

This presentation should provide a fist idea on one or two PPT slides. The intention is a working presentation to get feedback from the group and to demonstrate the progress of the last weeks. The presentations will not be collected and are not subject to evaluation but are mandatory to be presented.

2.6.4 Extended abstract

The extended abstract considers the comments, hints from the supervision session, and further elaborates the previous abstract. This progress ensures that students are working into the right direction. For your assistance, the eLearning platform contains a template from the

journal sensors, from which you can get an idea of the general structure of a scientific article and particularly what is expected in the chapters 'Introduction', 'Material and Methods' and 'Expected results'. It is mandatory to use Endnote as citation engine. The software is available in the PLUS repositories and on Moodle. The submission of about two to three pages is worth 10 % of the overall mark.

2.6.5 Mid-term review meeting

The mid-term review meeting will be based on a Pecha Kucha presentation. Twenty PowerPoint slides will be displayed for twenty seconds each and automatically progressing. Students need to restrict themselves to the 6:40 minutes to present their status quo, progress, challenges, and solutions of their project. Slide design (content, structure) and the presentation itself will be evaluated and counts another 10 % of the overall mark. A separate performance evaluation sheet will be discussed and distributed before the presentation.

2.6.6 Final presentation & poster submission

The final presentation will be based on a (digital) poster to be designed according to the GI Salzburg Conference poster session requirements (see extra materials in the eLearning platform). Poster presentations are designed as 'pitch' talk and will last five (5) minutes and additional three (3) minutes for discussion.

The idea is that we will submit the best poster to the AGIT conference in 2025. The call for papers came out in the end of the previous year. The final submission of the poster abstract will be in May this year. If successful, students will participate in the public poster presentation of this year's AGIT and will take part in the poster competition.

For each presentation, students are assigned to be moderator, timekeeper, and discussant. Students introduce the next presenter(s) and structure the discussion process after the poster presentation. For both, presentation, and the poster 10 % of the overall mark will be accounted. Again, a performance evaluation sheet will be discussed and distributed before the presentation.

2.6.7 Final manuscript submission

The final project documentation will be delivered in digital format to the eLearning platform. GI_Forum paper submission guidelines apply as documented in the eLearning platform. Please ensure proper English will be used and scientific writing methods are successfully applied. The latter includes the use of the reference manager Endnote for citations and references (mandatory!). The publication should follow the template, citation, and reference formatting style for the GI_Salzburg journal (AGIT.ens in the eLearning platform, mandatory). The idea is that we will submit the best manuscript to the GI_Forum journal.

Additionally, the manuscript submission should be accompanied with an annex. This annex requires to include the used and result geodata AND metadata (Dublin core as minimum requirement) for each dataset (see project management requirements). In case of big data, only dataset snippets are required to be delivered. The annex further includes hourly time sheets (see template in the eLearning platform). The whole manuscript submission including all above-mentioned parts will be 45 % of the overall evaluation mark.

2.7 SCRIPT

This documentation and additional course materials are available on the eLearning platform.

3 PARTICIPANTS

Table 4 lists the enrolled students to the IP I3. Please find the contact of your classmates to get into discussion and help from each other.

Table 4: Participant List

ID	Last name	First name	Email
1			
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12			
13			
14			
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16			