

UNIVERSITY OF TWENTE.

ACADEMIC SKILLS COURSE IN MGEO
-
AN OVERVIEW

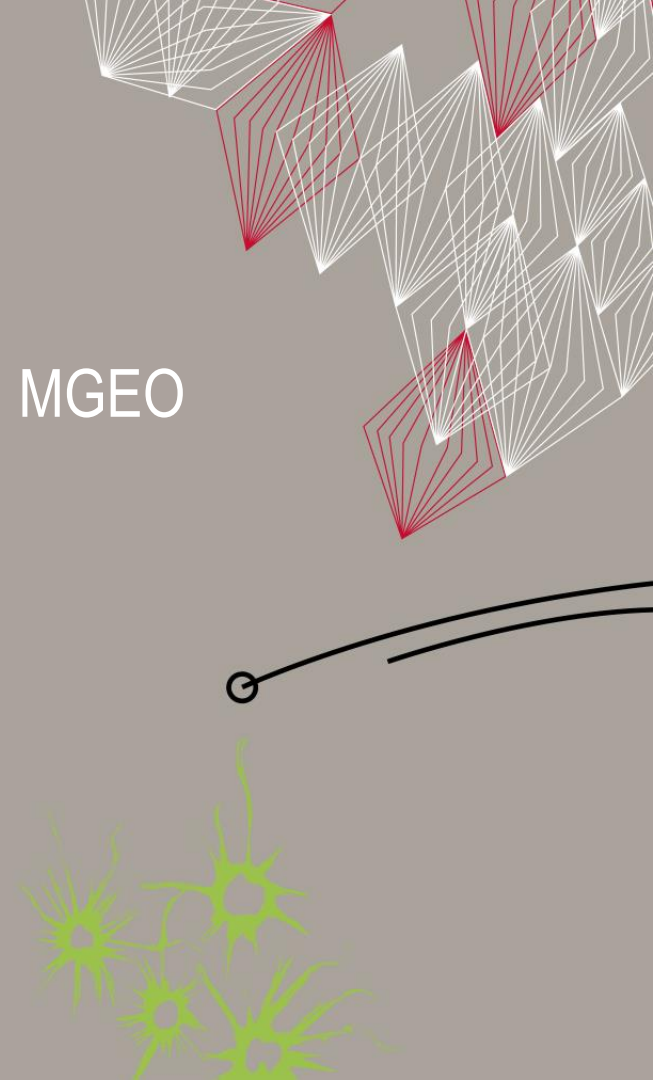
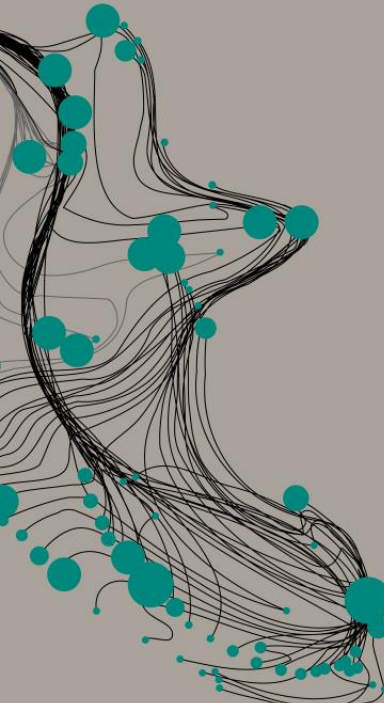
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13 SEPTEMBER, 2023

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FACULTY OF GEO-INFORMATION SCIENCE AND EARTH OBSERVATION



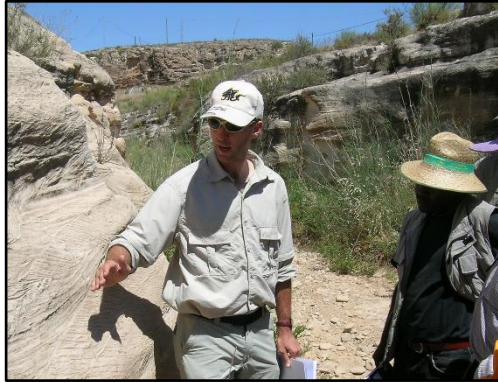


GOAL OF PRESENTATION

- Give an overview of what we do
- Mention philosophy and decisions
- Discuss ways forward / future developments

=> basis for interaction / discussion

MEET YOUR SPEAKERS



- Dr. Chris Hecker
- Background: Geology and Remote Sensing
- Associate Professor
With ITC since 2001
- Function: Coordinator Academic Skills



- Grietha de Jonge MSc
- Background: Educational & Communication Sciences
- Information Specialist at ITC since December 2019



COURSE GOALS AND LEARNING OUTCOMES

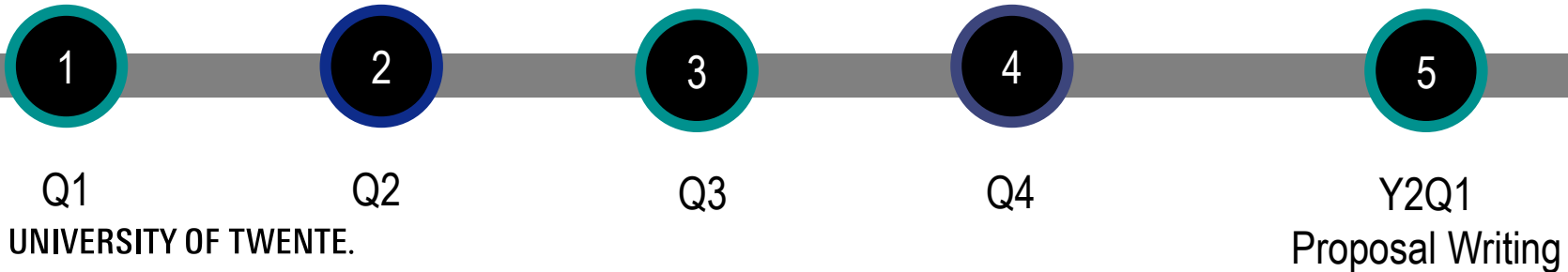
- Give foundational knowledge and skills required to undertake scientific research
- Handling scientific information
- Critical reading of scientific literature
- Develop a research design
- Scientific communication
- Critically attitude

=> Some skills and some understanding of how it works (bigger picture)



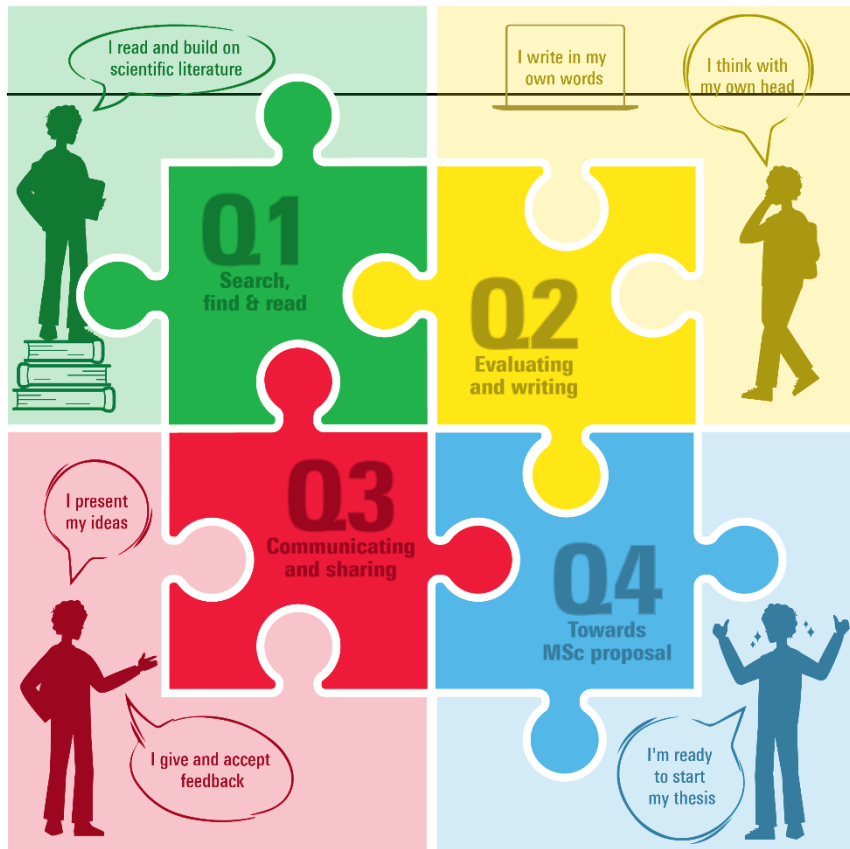
AS LEARNING LINE

- Extends from Q1 to Q4 in Year1
 - Topics gradually introduced when they are needed
 - Allows time to acquire skills
- Direct link to Q1 Year2: Proposal Writing



Academic Skills Course

MSc Programme in Geo-information Science and Earth Observation (MGEO)



Course content:

Q1 - Search, find & read

- Information skills: search&find, organize, cite
- Critical reading: quick scan
- Flowcharts and mindmaps
- Assignment: Document your Search Strategy

Q2 - Evaluating and writing

- Critical reading: evaluating and summarizing a paper
- Scientific writing: structure, plagiarism, writing in English, use of chatbots
- Assignment: Summarize and Evaluate a paper

Q3 - Communicating and sharing

- Review and publication process
- Open science
- Data management
- Oral presentation and graphics skills
- Peer feedback: How to?
- Assignment: Good and bad graphics

Q4 - Towards the MSc proposal

- Research proposals
- Scientific writing: argumentation
- Peer Feedback: Practice
- Assignment: Write Introduction to Research Topic

What can students do?

1. Prepare self-study material on time
2. Actively participate during contact hours
3. Apply and practice skills in other courses
4. Review material regularly to stay sharp
5. Master these skills for life-long benefit

Tools

Zotero
Scopus / WoS
GeoBase

Templates

APA 7th referencing style
MSc proposal template



Completed course with all materials (start September 2022)
<https://canvas.utwente.nl/courses/10533>



Currently running course (start September 2023)
<https://canvas.utwente.nl/courses/13321>



INFOGRAPHIC – COURSE CONTENT

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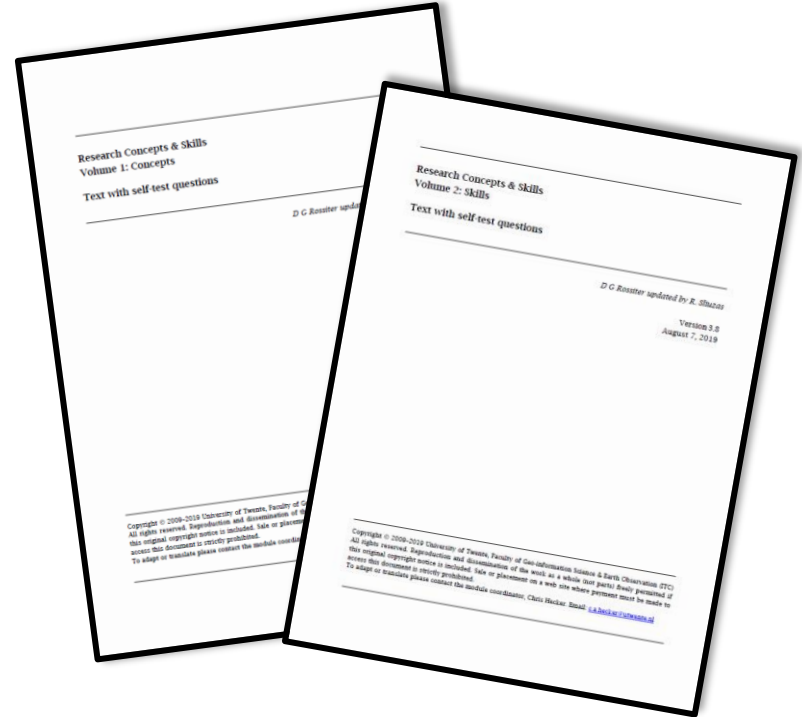
- Review and publication process
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Q4 - Towards the MSc proposal

- Research proposals
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- Assignment: Write Introduction to Research Topic

TEXT BOOKS

- Research concepts and skills
- Digital on CANVAS
- Other sources and links in CANVAS





ASSESSMENT

- Formative (ungraded) assignments throughout course
- Mandatory to hand in:
 - Graded assignment Q1 (Pass/Fail)
 - Graded assignment Q2 (40%)
 - Graded assignment Q3 (Pass/Fail)
 - Graded assignment Q4 (60%)
- Pass mark (after Q4) needed to continue into MSc research phase without delays!





TEAM (DOMAIN COORDINATORS)

- 1 coordinator
- 1 teacher from each of the 6 specializations (specific domain knowledge)
- 2 Information specialists
- Guest lecturers on specific topics

DELIVERY

- Typically on Wednesday morning
- Some central lectures (auditorium)
- Exercises introduced in the “domain” cluster
- Self study time to work on it
- In-depth discussions to round off assignments





LEARNING LINE PROS/CONS

- Pro
 - Right material at right time (e.g. research design at end of Y1)
 - Time to develop skills (e.g. writing skills, critical thinking..)
- Cons
 - Hard to manage
 - Hard to follow (students tired; less engaged)
 - “Right time” differs per specialization



SEPARATE COURSE VS INSIDE REGULAR PROGRAMME

- Pro
 - Avoid duplication
 - Common baseline of what students learn and know in AS
 - Quality control
- Con
 - “right time” varies per specialization
 - topic importance varies per specialization (example “conceptual diagram”)

=> M-SE programme does it differently



DOMAIN COORDINATORS PROS/CONS

- PROs
 - Give Individual “flavours”
 - Nice to hear personal experience of “own” teachers
 - Link with departments (while protecting rest of staff)
- CONs
 - More complex for coordination
 - Critical mass sometimes not reached (group dynamics)
 - Academic Skills should be generic enough for all



ASSIGNMENTS PRO AND CONS

- Advantage of essays
 - Write, write, write!
 - Monitor progress better than in multiple choice
 - Preparation proposal writing (Year2)
- But
 - Time-consuming for students and graders
 - Hard to be cross-comparable between graders
 - Difficult to do 2nd test opportunity



BALANCE OLD AND NEW TOPICS

- Traditional
 - Presentation skills
 - Information skills
 - Critical reading ...
- “New”
 - Open Science
 - Research Data Management
 - Chat Bots/ AI



WAY FORWARD

Content

- AI Bots are big challenge
 - What do students still need to learn?
 - What will bots do in future?
- New topics important but which ones to “drop”?
- Which skills are missing? (project and time management; ..?)



WAY FORWARD (2)

Timing

- When in programme to place it?

Style

- Frontal teaching? Online / Asynchronous? => mixed experiences
- Common topics only or common + flavours?



DISCUSSION

- What are Academic / life / professional skills that you want students to master?
- What do they already know from their BSc programmes?
- What do they need to learn in the MSc programme?

- What changes have you observe in students skills in past 5-10 (e.g. computer literacy; Google; ...)?