# CAPSTONE: Making social change with digital innovations

## Title of Course
CAPSTONE: Making social change with digital innovations

## Course Catalogue Number
738300001Y

## Credits
30 EC

## Examiners
dr. Nanne van Noord

## Entry Requirements
The entry requirements for the course are specified in the Course Catalogue, available online at https://studiegids.uva.nl/xmlpages/page/2024-2025/zoek-vak/vak/122410

## Instruction Language
English

## Time Period(s)
Academic year 2024-2025, semester 6

## Location
Please see the UvA schedule webpage https://rooster.uva.nl/

## Video Recording of Lectures
None

## Core Lecturers
dr. Lukas Ansteeg
dr. Kunhe Li
dr. Kirils Makarovs
dr. Daniel Mayerhoffer
dr. Regina Nockerts
dr. Diliara Valeeva

## Course Content
The Capstone project requires students to apply and integrate their social science and humanities expertise (SSHE), digital expertise (DE), research expertise (RE)

and change-making expertise (CME) into a transdisciplinary project for an external partner. It serves as the final assessment where students have to demonstrate their mastery of the intended learning outcomes of the CSSci programme. A significant portion of the semester is dedicated to independent group work, where students tackle problems presented by Project partners, with oversight from a Core lecturer.

In this semester-long course, students will be part of a project team tasked with developing, implementing, and delivering a Capstone project. They initiate, develop and evaluate their project together with external partners such as governments, companies and civil society organisations. The subjects of the projects can vary but each Capstone project will meet some general criteria, defined by the programme in terms of appropriate themes, relevant methodological approaches, and potential empirical and theoretical entries. A crucial characteristic of each project is that it challenges students to use the knowledge and skills they developed during the programme and reach an interdisciplinary synthesis of the compiled information in consultation with the Project partner.

The Capstone project runs the entire sixth semester. In the first phase of the Capstone, students determine, in close interaction with their partner organization the goals, priorities and expected outputs of the project. They explore the societal challenge they need to address, identify stakeholders and their views, define decisive dilemmas, identify potentially promising opportunities for change, and write down a clear project plan for an open-ended, iterative process that generates commitment and favours deliberative decision-making. This phase concludes with the preparation of a project proposal, which outlines all the key steps of the project.

In the second phase of the Capstone, students elaborate and refine their analysis of the societal challenge and develop a digital intervention, relying on expertise of their Project partners, Domain experts, and Core lecturers. They design, test, evaluate, and refine a specific digital intervention while also developing an implementation plan. Students conduct extensive research (using social science and data science methodologies) to ensure their intervention is relevant to the targeted group of stakeholders and firmly grounded in theoretical foundations. This phase concludes with the delivery of a (prototype of a) digital intervention and a final research report detailing the research conducted.

In the third and final phase, students write an individual Reflection essay that outlines their contributions to the group project, critically discusses the key steps taken, and evaluates the processes and outcomes of the project. This Reflection essay serves as the basis for a discussion during the Explainer session with a Core lecturer. During this session, students defend a selection of the substantive choices made by their team and reflect on their role and contributions to the project, drawing on the expertise they developed throughout the programme.

To successfully complete their Capstone projects, student groups will:

- Critically assess the landscape of existing solutions, identifying gaps and opportunities for innovation and develop intervention that effectively addresses social challenges.

- Design and develop intervention that is grounded in robust theoretical frameworks.
- Conduct research using a variety of social science methodologies and approaches.
- Conduct research using a variety of data science methodologies and approaches.
- Apply the change-making skills needed to understand stakeholder perspectives and approach innovation projects with a prototyping mindset.

# Teaching Methods/Learning Formats

During the Capstone, students will demonstrate their ability to independently conduct a research project with their group. They will apply the knowledge and skills obtained in previous CSSci courses. To effectively work as a research group, it is crucial that students remain available full-time on working days (Monday to Friday) for the Capstone research project. Students are also required to be present in the Netherlands to conduct their Capstone research. Failure to meet these requirements may result in receiving an Insufficient or Unacceptable grade for the 'Early Phase Individual Contribution to Group Project' or 'Final Individual Contribution to Group Project' assignments.

Learning take place through a set of formats, including project meetings and feedback sessions with Core lecturer, Project partner, Domain expert; a Mid-term Prototype Event; independent teamwork; teamwork with Project partner and other relevant stakeholders. You can find additional information about teaching and learning activities on Canvas.

# Course Evaluations & Adjustments of the Course

This is a new course.

# Professional Study Attitude

During the Capstone project, it is crucial to participate in all the scheduled sessions with Core lecturer, Project partner, Domain expert, and your team members. Your well-prepared, on-site participation is required for all scheduled activities with Core lecturer, Project partner, Doman expert, and your team members. In the event of any activity that you have missed, it is your responsibility to make up for the content that was covered during your absence. In case of absence, you must always inform your Core lecturer beforehand or as soon as possible. Note that attending Camp Week is mandatory.

## Requirements

During the Capstone project, students work together, in student teams and with external partners. You must therefore demonstrate a professional study attitude (the four P's):

1. Present
2. Prepared

3. Participating
4. Proper and clear communication

After all, absence or low-quality participation from one team member will impair the ability of other group members to excel and perform well. Additionally, a student's own learning is inhibited by an insufficient professional study attitude.

## Consequences

### General lack of participation

If a student cannot take part in any activity related to the execution of the Capstone project, it is their responsibility to catch up on the contents that were covered during the related session and always inform their Core Lecturer beforehand or as soon as possible.

If the Core Lecturer notices patterns of absence or low-quality participation of a student in the group project, the Core Lecturer will request an explanation from the student. In some cases, the Core Lecturer may refer the student to the programme's Study Adviser to seek guidance.

In case the Core Lecturer does not observe any improvement in performance, they will schedule a meeting with the student to determine:

- If the student can still meet the participation requirement.
- Which pattern of professional study attitude the student needs to develop.
- In which timeframe this improvement in performance needs to be sufficiently demonstrated.

The Core Lecturer will make a reasonable attempt to schedule this meeting with the student; should the student be unresponsive, or a time and location cannot be agreed upon in a timely manner, the Core Lecture will instead issue a written warning covering the same points.

A summary of this meeting will be shared with the student via email and counts as a first written warning (if an in-person meeting was unable to be scheduled, the original written warning will serve and no additional summary will be sent). In case the student has not sufficiently demonstrated improvement in performance during the set timeframe, a second written warning is issued. This email is also shared with the examiners of the semester course and the programme's Examinations Board.

Lack of immediate adequate further improvement of performance or accountability from the student will lead to an 'Unacceptable' result for the individual assignments 'Early Phase Individual Contribution to Group Project' and/or 'Final Individual Contribution to Group Project'. Consequently, the student will not be able to complete the semester course. This student must begin a new Capstone project in the next academic year when Capstone projects will be offered as part of the program.

### Group work

Failure to participate in a group project, such that the student does not contribute at all stages of its development, failure to fulfil the participation requirements, failure to demonstrate professional study attitudes, failure to follow agreements established with a Core lecturer, or continuous and serious disruptive behavior

may also result in a student being removed from their project group. This student receives an ‘Unacceptable’ result for the individual assignments ‘Early Phase Individual Contribution to Group Project' and/or ‘Final Individual Contribution to Group Project' and will not be able to complete the semester course. This student must begin a new Capstone project in the next academic year when Capstone projects will be offered as part of the program.

### Lateness Policy

Students, partners and staff participating in scheduled activities are disrupted and distracted when persons arrive after the starting time (late). In case an activity has commenced (e.g. if the door is closed and/or if a person is given instructions or a presentation), a student arriving late should not enter the room or activity. In this case the student will need to wait until the break before entering the room.

## Force Majeur

When students are unable to fully participate because of reasons beyond their control, they should notify the Study Adviser and their Core Lecturer as soon as possible. Notification should be given ahead of time if the absence is foreseeable, or as soon as possible in case of unforeseen circumstances such as illness. The programme will make serious efforts to facilitate these students and prevent unnecessary delays. If students are not able to participate in graded assessments due to reasons beyond their control; or they wish to ask for a deadline extension or permission to participate in the resit/repair opportunity without having submitted a serious attempt first, they need to file a documented request with the Examinations Board (see the Deadline Extension Request Procedure for Graded Assignments below).

# Assessment

In the Computational Social Science programme, assessment is geared towards learning. Some assignments are formative, which means that the students receive progress check report to further improve and learn, but do not receive a grade. In addition, there are summative and therefore graded assignments. These assignments receive a descriptive grade but–in principle–no feedback beyond an explanation of the grade.

Computational Social Science uses the UvA descriptive grading scheme: Excellent, Good, Satisfactory, Sufficient, Insufficient, Unacceptable. For selected assignments in the Capstone semester, a Pass or Fail grading scheme is also used. See https://student.uva.nl/en/topics/assessment-of-your-grade-point-average

Grades will be determined in no longer than 15 working days.

The main part of this semester is the group work. Students are individually assessed for their contributions to the group project at three stages of the Capstone project: at the beginning, in the middle, and at the end (with “Early phase individual contribution to group project” and “Final individual contribution to group project” assignments). These assessments are based on roles and responsibilities as specified in a Team Charter, feedback from teammates, Project partner, and the student’s active, consistent, and professional participation in all

activities scheduled with project team members, Project partners, Core lecturers and Domain experts.

Students are required to score at least ‘Sufficient’ for all individual and group assessments to pass the course. In case a student group receives an ‘Insufficient’ final grade for the ‘Final Product’ and ‘Final report’ assignments, students can not compensate this with their individual assignments. These students must begin a new Capstone project in the next academic year when Capstone projects will be offered as part of the program.

All assignments need to be handed in through Canvas. Inspection of the graded work will be possible, by appointment with the relevant Core lecturer in the week following the release of grades. All assignments must be submitted as static files; links to online files/storage will only be accepted in extraordinary cases and with preapproval by the Core Lecturer.

| **Graded Assessment** | **Date / Deadline** | **Weight (%)** |
|---|---|---|
| *Individual assignments* | | 40 |
| Early phase individual contribution to group project | Thursday, 20 March, 2025 (17.00) | Pass or Fail |
| Reflection essay | Wednesday, 11 June, 2025 (17.00) | 20 |
| Explainer session | In the week of 16 June 2025 – exact dates will be determined by the CL | 10 |
| Final individual contribution to group project | Friday, June 13, 2025 (17.00) | 10 |
| *Group assignments* | | 60 |
| Project proposal | Wednesday 19 March, 2025 (17.00) | Pass or Fail |
| Final product | Thursday 5 June, 2025 (17.00) | 30 |
| Final report | Friday 6 June, 2025 (17.00) | 30 |

## Rules Regarding Resits

In the case of an Insufficient or Fail for a graded assessment following a serious attempt, one resit or repair possibility will be offered before the end of the semester (except for ‘Final product’, ‘Final report’ and the ‘Final individual contribution to group project’ assignments).

The grade for all repair or resit assignments, which are evaluated using a descriptive grading system, is capped at 'Sufficient'.

| **Eligible Graded Assessments** | **Repair or Resit?** | **Date / Deadline** |
|---|---|---|

| | | |
|---|---|---|
| Early phase individual contribution to group project | Resit | Tuesday 22 April, 2025 (17.00) |
| Project proposal | Repair | Thursday 17 April, 2025 (17.00) |
| Explainer session | Repair | Monday 14 July, 2025 (17.00) |
| Reflection essay | Repair | Monday 14 July, 2025 (17.00) |

## Serious Effort

Students must make a “serious effort” to complete every required component of a graded assignment in order to receive a grade for that assignment. A serious effort is the deliberate and sustained attempt to fulfill the requirements of a task or project to the best of one’s ability and in a timely manner.

The teaching staff will determine if submitted work constitutes a serious effort, looking at aspects such as (but not restricted to) the time committed, depth of work, alignment with stated requirements, utilization of available resources (including Progress Check opportunities), seriousness of revisions, and/or effort at self-reflection. If no serious effort is made, the student will receive a grade of Unacceptable on that assignment, be ineligible for repair of that assignment, thus ending their participation in the course.

Failure to submit *any required component* of an assignment is also considered to demonstrate a lack of serious effort and the student will receive a grade of Unacceptable for the assignment.

If no serious attempt has been made by a student, the grade will be registered as Unacceptable, and no resit or repair opportunity will be possible.

# Description of Graded Assignments

## Group Assignment: Project proposal

In collaboration with an external partner, each student group will select a societal challenge to address. Student group will write up a project proposal that provides a review of the relevant theoretical and empirical literature on the topic of the challenge. They formulate the research question(s) for the project, decide on the theoretical framework, propose the research design, and outline key elements of the proposed intervention. As part of the project proposal, students are also required to identify and justify the opportunity for a system intervention and explain and reflect on the diverging perspectives of stakeholders in terms of underlying interests, power relations, values, and worldviews. The appendix of the project proposal should contain the prospective timeline for the project implementation.

## Group Assignment: Final product

As part of the Capstone project, student groups design and implement a digital intervention to address a societal challenge presented by a Project partner. The intervention is developed to meet the needs of identified stakeholder groups and is grounded in relevant social science theories. Students identify key intervention points and apply a combination of social science and data science methodologies

to design, implement, and refine their digital intervention. The Final product demonstrates relevance to both policy and academic audiences, showcasing its potential to drive meaningful societal impact.

## Group Assignment: Final report

To accompany their digital intervention, each student group writes a Final report that documents the key steps in the design and implementation process. The Final Report is grounded in an extensive literature review and desk research, incorporating relevant social science theories to contextualize the project within its broader academic and policy frameworks. The Final report outlines the datasets and methodologies applied and includes a critical reflection on the limitations and potential biases of the chosen approaches and the results obtained. The Final report highlights the key findings of the project, offering insights into its relevance to stakeholders, including the Project partner. It evaluates the potential societal and policy impacts of the intervention, addressing its significance and contributions to the identified challenge.

## Individual Assignment: Early Phase Individual Contribution to Group Project

When participating in a group project, it is important for each individual to contribute effectively to the success of the Capstone project from its earliest stages. This requires a professional attitude towards one's colleagues in the group, Project partners, Core lecturers, Domain experts from the earliest stages of the Capstone project. Students must therefore demonstrate a professional study attitude (the four P's): Present, Prepared, Participating, Proper and clear communication. Beyond demonstrating an ongoing professional study attitude (the four P's) from the earliest stages of the Capstone project, for this assignment students will be asked to meet their obligations under that Team Charter and engage thoughtfully in the Student Reflection Survey.

## Individual Assignment: Final Individual Contribution to Group Project:

When participating in a group project, it is essential for each individual to contribute effectively and consistently to the success of the Capstone project throughout all stages of the process. This requires a professional attitude towards one's colleagues in the group, Project partners, Core lecturers, Domain experts throughout all stages of the Capstone project. Students must therefore demonstrate a professional study attitude (the four P's): Present, Prepared, Participating, Proper and clear communication. Beyond demonstrating an ongoing professional study attitude (the four P's) throughout the Capstone project, for this assignment students will be required to fulfil their obligations under the Team Charter, actively participate in the Student Reflection Survey, discuss their progress with the Core Lecturer, and address any areas for improvement if such improvements have been identified and agreed upon with the Core Lecturer.

## Individual Assignment: Reflection essay

In the Reflection essay, students will evaluate and reflect on the critical choices made by the project group during the implementation of the Capstone project. They will examine the theoretical implications of their research, contextualize it

within the broader empirical, theoretical, and policy literature, and analyze its potential policy implications and relevance for stakeholders. Students will critically evaluate the intervention and its effectiveness, identify shortcomings, and discuss avenues for future research. Additionally, students will reflect on their specific roles in the project, outlining their involvement across all four expertise tracks (RE, DE, CME, SSH). They will provide concrete examples of their work, articulate how their contributions impacted the overall project outcomes, and reflect on the task allocation and decision-making processes during the group work.

### Individual Assignment: Explainer session

The Explainer Session is an individual oral assessment where students discuss their work on the semester-long Capstone project with the Core Lecturer. During this session, the Reflection Essay serves as a basis for discussing specific elements of the Capstone project and the student's contributions to it. The purpose of the Explainer Session is to evaluate each student's understanding of the project's objectives, methodologies, outcomes, and workflow, as well as their ability to critically analyze and reflect on all stages of the project. It also verifies their individual participation in the group project. Students will respond to questions about their role in the project, demonstrating their knowledge of its processes and their specific tasks, and explaining how their contributions complemented the team's efforts. This session allows students to articulate their contributions clearly, reflect on the project's impact, and showcase their engagement with the work. The Explainer Session ensures that the student has a comprehensive understanding of all components of the group project, can critically reflect on the project, and has gained the knowledge necessary to successfully complete the program.

## Assignment Deadlines

Assignment deadlines are strict. **Canvas will not accept submissions after the deadline**. If you miss the deadline for a graded assignment, you will not receive a grade (NAP), you are not eligible for a repair opportunity, and you cannot complete the course. Your Core Lecturer cannot change this. If you are unable to submit your assignment in a timely manner due to extenuating circumstances, contact the Study Advisor immediately.

When submitting an assignment, please allow sufficient time to deal with potential minor technical issues (problems with your computer or internet connection, time required to upload large files, etc.) as they are not considered a valid reason for missing a deadline.

Please be aware that Canvas does allow multiple submissions of your non-quiz assignments. If you are concerned about the deadline, we recommend that you first submit your deliverable as soon as you have what you consider to be a serious attempt at the assignment. You may then later – but before the deadline! - resubmit the finished version of your deliverable. The most recent submission of the assignment that is made before the deadline will be graded.

### Deadline Extension Request Procedure for Graded Assignments

Deadline extensions are given only in exceptional, unforeseen circumstances. To request an extension of the deadline due to extenuating circumstances, such as illness, **please submit your request as soon as you are experiencing the circumstance** (e.g., at the start of the illness)**. Do not wait until after you have missed the deadline.**

Extensions up to five working days will be handled by the Examiner of the course, and extensions of more than five working days need to be submitted (on time) to the Examinations Board. If the request is sent to the Examiners or the Examinations Board in the five days leading up to the assignment deadline, it can not be guaranteed that your request will be processed before the deadline. If the outcome of your request is still pending on the day of the deadline, please make sure to upload your (incomplete) assignment to ensure that you are eligible for participation in the repair opportunity should your request be denied and your submitted assignment be graded with Insufficient. In case of extenuating circumstances, it is crucial to communicate clearly and timely about your situation with both the Study adviser and your Core lecturer, and if possible, document your circumstances with the Study adviser.

In case of sudden, short and unforeseen emergencies on the day of the deadline, or the day before it, that require an extension of a maximum of three days, students should directly contact the Study adviser and the Course coordinator for an extension request without submitting a request to the Examinations Board or Examiners. Students can be asked for documentation to substantiate their request. **Again, please make sure to upload your (incomplete) assignment to ensure that you are eligible for participation in the repair opportunity should your request be denied, and in case of an Insufficient result.**

# Academic Integrity

## Rules Regarding Fraud and Plagiarism

The provisions of the Regulations Governing Fraud and Plagiarism for UvA Students apply in full.
Access this regulation at https://student.uva.nl/en/content/az/plagiarism-and-fraud/plagiarism-and-fraud.html.

Plagiarism can take many forms, including (but not limited to!):

- making use of or reproducing another person's texts, data or ideas without complete and correct acknowledgement of the sources;
- presenting the structure or central body of ideas taken from third-party sources as one's own work or ideas, even if a reference to other authors is included;
- submitting a text that has previously been submitted, or is similar to a text that has previously been submitted, in the context of assignments for other courses;
- reproducing the work of fellow students and passing it off as one's own;

If you have not read these regulations before, please do so! Note that plagiarism and fraud is extremely serious. In case of alleged plagiarism and/or fraud your supervisor is obliged to inform the Examinations Board immediately.

The examination committee may decide on a range of actions, including dismissing the assessment attempt. In that case the grade will be registered as 'Unacceptable'.

It is important to realize that plagiarism applies to all of your academic output, **including programming code**.

## Rules Regarding the Use of Artificial Intelligence Software

As we continue to advance in the digital era, we wholeheartedly embrace the positive contributions that artificial intelligence offers to your learning journey. An example of this are Large Language Models (LLMs), like ChatGPT. These can help adequately phrase ideas that you feed them, summarise texts they are explicitly fed, or help you when you encounter clearly defined issues in coding. However, we must emphasize that LLMs are no substitutes for your intellectual efforts and critical thinking. Prudentially, they do not rely on any external criterion for truth - this means they may present made-up information as real (even inventing sources), remain vague in their answers and neglect key aspects, or produce buggy code. Ethically, they raise issues of claiming authorship for ideas that are not your own and may undermine responsibility for your own output. Hence, the development of original work remains an essential part of our educational mandate. Remember that LLMs are here to assist, not to replace your creative process.
Please also get acquainted with the UvA general information on the use of ChatGPT and AI tools in your studies: https://student.uva.nl/en/topics/chatgpt-and-your-studies

If a student has made use of ChatGPT or a similar tool for an assignment, this should always be mentioned by the student and the tool should be cited as a source in the bibliography.

## Open Research, Data Integrity and Storage

CSSci supports open research. Unless otherwise specified, the results of research conducted with external Project partners will be shared with those partners and may be further distributed by them. CSSci may choose to share student results, reports, data visualizations, or other products for research or educational purposes. If a student objects, they must contact their Core Lecturer as soon as possible to explain why the research should not be made available.

It is therefore of the highest importance that research by students should be conducted responsibly, neatly, and archived for a period of two years. Both during ongoing research and for archiving purposes, all data should be stored with UvA storage facilities (OneDrive or another option approved by your Core Lecturer) and appropriately secured. You **may not** use 3rd party options (Google Drive or Dropbox, for example) to store any data which may contain personal information as per the GDPR.

For the rules, see the "Ethical Guidelines for Students" on the GSSS page (especially: Section V. Data storage): https://gsss.uva.nl/about/policy-documents/policy-documents.html

# Personal Safety and Security

We want students to be assured they have a positive environment and a safe basis for their studies. We hope you never experience an unsafe situation or undesirable behaviour at the UvA, but should this occur there are different individuals and institutions you can turn to (such as the student adviser and the programme director).
Please see https://student.uva.nl/en/content/az/social-safety/social-safety.html

# Literature and Materials

Readings and additional materials are announced through Canvas.

# Date of Final Grade

No later than 15 working days after the last graded assessment.

# Programme / Weekly Planning and Deadlines

Weekly schedules can be found in Canvas and rooster.uva.nl.

# Learning Objectives

The activities of this semester together work towards the following learning trajectory objectives:

## Social Sciences and Humanities Expertise

- *Analyse at different levels the basic causes, complexity, dynamics and leverage points of a specific social challenge using relevant theories from various disciplines*
- *Clearly identify stakeholders and local context and actively involve them in the diagnosis of the challenge*
- *Explain and reflect on the diverging perspectives of stakeholders, in terms of underlying interests, power relations, values and worldviews*
- *Create a theoretically informed integrated and balanced vision on the strengths and weaknesses of digital interventions*
- *Develop and justify arguments with theoretical and empirical knowledge*

## Changemaking Expertise

- *Create an overview of different potential ideas for opportunities for change*
- *Reflect critically on the project, team collaboration and individual learning processes*
- *Evaluate the limitations of the project and assess the value and sustainable contribution to the (research) field and community*
- *Reflect on the team roles, team expectations and team collaboration*
- *Decide what the most suitable digital intervention is given the challenge situation based on a synthesis of insights*
- *Propose systemic conditions and policy interventions necessary or desirable to make the digital intervention a success*

- *Connect specific skills and knowledge developed as a result of the project to personal interests/goals and societal needs/goals*
- *Communicate information, ideas, problems and solutions constructively and effectively to members of the academic community and to external partners and lay audiences*
- *Cooperate effectively and work constructively and agile on digital innovation projects in diverse teams*
- *Formulate clear, achievable and well-documented goals and priorities that are agreed upon by the team and the client organization, and organize and execute the project accordingly*
- *Organize and structure the project as an open-ended, iterative process that generates commitment and favours deliberative decision-making*
- *Define and prioritize the requirements of the digital innovation clearly and concisely*
  *Engage team members in ways that facilitate their contributions by both constructively building upon or synthesizing the contributions of others*

## Research Expertise

- *Propose research questions and hypotheses for empirical studies on the basis of societal and/or stakeholder needs*
- *Choose the research design (data collection and analysis) appropriate to the research question*
- *Assess different levels and types of bias in their data collection and analysis strategies*
- *Critically reflect on the ethical, legal and social aspects of their data collection and analysis strategies as well as of their underlying assumptions and biases*

## Digital Expertise

- *Apply methods and techniques in the field of modelling, design, development, evaluation and management of interactive information systems*
- *Apply database management processes and machine learning (with the programming language of choice)*

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