PEER REVIEW NEW PROGRAMME
WO-BACHELOR COMPUTATIONAL SOCIAL SCIENCE

University of Amsterdam

1 Peer Review

The quality of a new programme is assessed by means of peer review. A panel of independent peers including a student reviews the plans during a site visit to the institution. A discussion amongst peer experts forms the basis for the panel's final judgement and the advisory report. The focus is on the curriculum, the teaching and learning environment, and student assessment.

The Accreditation Organisation of the Netherlands and Flanders (NVAO) takes a formal decision on the quality of the new programme based on the outcome of the peer review. This decision can be positive, conditionally positive or negative. Following a positive NVAO decision with or without conditions the institution can proceed to offer the new programme. Upon completion of the programme graduates are entitled to receive a legally accredited degree.

This summary report contains the main outcomes of the peer review. A full report with more details including the panel's findings and analysis is also available. NVAO bases an accreditation decision on the full report.

Both the full and summary reports of peer reviews are published on NVAO's website www.nvao.net. There you can also find more information on NVAO and peer reviews of new programmes.

Because of COVID-19 temporary measures apply for this peer review.

2 Panel

Peer experts
1. Prof. Dr. S.M.E. (Sally) Wyatt, professor of Digital Cultures, Technology & Society Studies, Faculty of Arts and Social Sciences, Maastricht University, *chair*;
2. Prof. Dr. Ir. M.R. (Maarten) van Steen, Scientific Director Digital Society Institute, University of Twente;
3. Dr. M. (Marie) Postma, vice-chair Department of Cognitive Science and Artificial Intelligence, Tilburg School of Humanities and Digital Sciences, Tilburg University;
4. R. (Ruward) Karper, student joint master Data Science & Entrepreneurship Eindhoven University of Technology & Tilburg University, *student-member*.

Assisting staff
– Mark Delmartino, secretary;
– Frank Wamelink, NVAO policy advisor and process coordinator.

Site visit (online)
1 March 2021

3 Outcome

The NVAO approved panel reaches a conditionally positive conclusion regarding the quality of the Bachelor Computational Social Science offered by the University of Amsterdam.

The defining objective of the bachelor programme Computational Social Science (CSS) is that all students acquire the skills and knowledge to design sustainable digital interventions for complex societal challenges – interventions that are appropriate for the socio-cultural, political, economic, technical and ethical contexts. The programme is positioned at the intersection of social sciences, humanities and computational sciences. It constitutes an innovative complement to existing programmes and responds to a clear need identified by the professional field. The panel welcomes the transdisciplinary features of the programme, its focus on a broad and diverse set of research methods and techniques, and its ambition to address and solve real-world problems.

The panel appreciates the curriculum structure featuring semester-long thematic projects and the HILL (High Impact Learning that Lasts) didactic model. Both elements are innovative and particularly suited to implement a programme with five different areas of expertise that all receive attention in the curriculum. Nevertheless, the panel is concerned that the strong emphasis on group-work might jeopardize the pursuit of individual learning goals. The institutional and programme management, the development team and the envisaged tutors have good expertise and are enthusiastic about the new programme. The panel supports the decision to offer the programme in English. It subscribes to the arguments for this choice and welcomes the plan to facilitate and encourage international students to learn Dutch.

The principles of the university-wide assessment system provide an adequate framework for the new programme to develop its own dedicated assessment practice. The panel considers that the envisaged assessment principles align very well with the general philosophy and the didactic underpinning of the curriculum. The panel invites the programme to look into the reliability and transparency of individual assessments, to enhance opportunities for individual students to demonstrate their expertise throughout the programme, and to prevent that rules and regulations on exam grades create unnecessary drop-out and study delay.

All in all, the panel assesses the quality of the programme as conditionally positive. The two conditions relate to the formulation of more concise learning outcomes at module level and an adjustment of the assessments to establish that individual students meet both the learning goals per module and the overall exit qualifications. Given that the CSS programme is already extensively developed, the panel considers that these conditions can be met before the programme starts in the academic year 2022-2023.

4 Commendations

The programme is commended for the following features of good practice.

1. Innovative multi- and inter-disciplinary combination of domains across and between data science, social science and the humanities

2. HILL didactical concept

3. Innovative integration of societal challenges with research methods and techniques to tackle them

4. Support for the programme by staff and management

5. Support by professional field and their direct involvement in the definition of projects

5 Recommendations

For further improvement to the programme, the panel recommends a number of follow-up actions.

1. Refining learning goals of individual courses and their relationship to overall ILOs

2. Systematic and incremental introduction into the domain to ensure a shared common ground of knowledge

3. Feasibility of the curriculum (*studeerbaarheid*)

4. Reliability and transparency of the assessment methods, especially individual assessment

6 What comes next?

NVAO grants initial accreditation to a new programme on the basis of a panel's full report. The decision is valid for a maximum of six years. For conditional accreditation other regulations apply. Upon accreditation the new programme will follow the NVAO review procedures for existing programmes. NVAO publishes the accreditation decision together with the full report and this summary report.[1]

Each institution has a system of quality assurance in place ensuring continuous follow-up actions and periodic peer-review activities. Peer reviews help the institution to improve the quality of its programmes. The progress made since the last review is therefore taken into consideration when preparing for the next review. The follow-up activities are also part of the following peer-review report. For more information, visit the institution's website.[2]

7 Summary in Dutch

Het panel oordeelt positief onder voorwaarden over de kwaliteit van de Bacheloropleiding Computational Social Science van de Universiteit van Amsterdam. Dit is de uitkomst van de kwaliteitstoets uitgevoerd door een panel van *peers* op verzoek van de Nederlands-Vlaamse Accreditatieorganisatie (NVAO). Voor deze beoordeling heeft het panel gesprekken gevoerd met de opleiding op 1 maart 2021.

[1] https://www.nvao.net/nl/besluiten
[2] https://www.uva.nl

De opleiding beoogt studenten de nodige competenties bij te brengen om duurzame digitale interventies te ontwikkelen voor complexe maatschappelijke uitdagingen. Het programma zit op het snijvlak van sociale wetenschappen, menswetenschappen en computationele wetenschappen, en beantwoordt aan een duidelijke behoefte in het werkveld. Het panel is gecharmeerd door het transdisciplinaire karakter van het programma, de focus op onderzoeksmethoden en -technieken en de ambitie om met deze opleiding reële problemen aan te pakken en op te lossen.

Het curriculum is opgebouwd rond langlopende thematische projecten en het HILL (High Impact Learning that Lasts) onderwijsmodel. Beide elementen zijn vernieuwend en zeer passend voor een curriculum dat aandacht besteedt aan verschillende expertisedomeinen. Het panel merkt wel op dat een te sterke nadruk op groepswerk het behalen van individuele leerdoelen kan bemoeilijken. Het management, het ontwikkelteam en de beoogde lesgevers beschikken over de nodige expertise en zijn erg enthousiast over het nieuwe programma. Het panel ondersteunt de beslissing om de opleiding in het Engels aan te bieden. Het panel heeft kennis genomen van de argumenten voor deze keuze en vindt het een goed plan dat de opleiding internationale studenten zal ondersteunen en aanmoedigen om Nederlands te leren.

Het universiteitsbrede toetssysteem biedt een helder kader waarbinnen de opleiding de eigen toetspraktijk kan ontwikkelen. Het panel is van oordeel dat de beoogde toetsprincipes goed aansluiten bij de algemene filosofie en de didactische onderbouwing van het curriculum. Het panel nodigt de opleiding wel uit om nog eens goed te kijken naar de betrouwbaarheid en de transparantie van individuele toetsen. Voorts kunnen regels en procedures rond cijfers en hertentamens aangescherpt worden zodat een slecht eindcijfer op een groot opleidingsonderdeel niet automatisch leidt tot drop-out of studievertraging.

Het panel stelt twee voorwaarden bij de positieve beoordeling: de formulering van een beperkter aantal leerdoelen per opleidingscomponent en een aanpassing van de toetsen zodat onomstotelijk kan worden vastgesteld dat individuele studenten alle leerdoelen en beoogde eindkwalificaties hebben bereikt. Omdat het programma reeds in grote mate is uitgewerkt, is het panel van oordeel dat deze voorwaarden kunnen gerealiseerd worden vooraleer het programma van start gaat in het academiejaar 2022-2023.

Meer informatie over de NVAO-werkwijze en de toetsing van nieuwe opleidingen is te vinden op www.nvao.net. Voor informatie over de Universiteit van Amsterdam verwijzen we naar de website van de instelling.[3]

Als gevolg van de beperkende omstandigheden door COVID-19 geldt voor deze kwaliteitstoets een tijdelijke procedure.
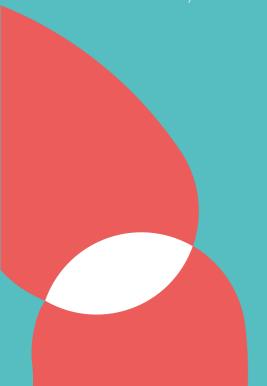
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[3] https://www.uva.nl

NVAO

INITIAL ACCREDITATION
WO-BACHELOR COMPUTATIONAL SOCIAL SCIENCE

University of Amsterdam

FULL REPORT
21 may 2021

Content

1   Peer review

The Accreditation Organisation of the Netherlands and Flanders (NVAO) determines the quality of a new programme on the basis of a peer review. This initial accreditation procedure is required when an institution wishes to award a recognised degree after the successful completion of a study programme.

The procedure for new programmes differs slightly from the approach to existing programmes that have already been accredited. Initial accreditation is in fact an ex ante assessment of a programme. Once accredited the new programme becomes subject to the regular review process.

The quality of a new programme is assessed by means of peer review. A panel of independent peers including a student reviews the plans during a site visit to the institution. A discussion amongst peer experts forms the basis for the panel's final judgement and the advisory report. The agenda for the panel visit and the documents reviewed are available from the NVAO office upon request.

The outcome of this peer review is based on the standards described and published in the limited NVAO Assessment framework for the higher education accreditation system of the Netherlands (Stcrt. 2019, nr. 3198). Each standard is judged on a three-point scale: meets, does not meet or partially meets the standard. The panel will reach a conclusion about the quality of the programme, also on a three-point scale: positive, conditionally positive or negative.

This report contains the findings, analysis and judgements of the panel resulting from the peer review. It also details the commendations as well as recommendations for follow-up actions. A summary report with the main outcomes of the peer review is also available.

NVAO takes an accreditation decision on the basis of the full report. The NVAO decision can be positive, conditionally positive or negative. Following a positive NVAO decision with or without conditions the institution can proceed to offer the new programme.

Both the full and summary reports of each peer review are published on NVAO's website www.nvao.net. More information on NVAO and peer reviews of new programmes can be found there.

Because of COVID-19 temporary measures apply for this peer review.

2 New programme

2.1 General data

Institution : University of Amsterdam
Programme : Computational Social Science
Mode of study : full-time
Degree : Bachelor of Science
Tracks : not applicable
Location : Amsterdam
Study load : 180 EC[1]
Field of study : sector-overstijgend; sub-sector: Onderwijs/Landbouw en natuurlijke omgeving/Natuur/Techniek/Gezondheid (approved)

2.2 Profile

Computational Social Science is positioned at the intersection of social sciences, humanities and computational sciences, and includes expertise in research and statistics, as well as change-making skills. Students in Computational Social Science learn to design and create sustainable digital interventions for complex societal challenges and acquire five interrelated competencies: to analyse data on social problems, to identify opportunities for change, to design evidence-based strategies that seize upon digital opportunities, to programme digital interventions hands-on, and to create conditions that support digital innovation. They do so through a transdisciplinary project-based curriculum featuring student engagement and High Impact Learning. The new bachelor programme is offered by three faculties of the University of Amsterdam (Science, Humanities and Social and Behavioural Science) and is hosted by the College of Social Sciences.

2.3 Panel

Peer experts
1. Prof. Dr. S.M.E. (Sally) Wyatt, professor of Digital Cultures, Technology & Society Studies, Faculty of Arts and Social Sciences, Maastricht University, chair;
2. Prof. Dr. Ir. M.R. (Maarten) van Steen, Scientific Director Digital Society Institute, University of Twente;
3. Dr. M. (Marie) Postma, vice-chair Department of Cognitive Science and Artificial Intelligence, Tilburg School of Humanities and Digital Sciences, Tilburg University;
4. R. (Ruward) Karper, (*student-member*), student joint master Data Science & Entrepreneurship Eindhoven University of Technology & Tilburg University.

Assisting staff
− M. (Mark) Delmartino, secretary;
− F. (Frank) Wamelink, NVAO policy advisor and process coordinator.

Site visit (online): 1 March 2021

[1] European Credits

3   Outcome

This document reports on the initial accreditation of the academic bachelor programme Computational Social Science (CSS) of the University of Amsterdam.
The three-year programme provides students with an interdisciplinary, research-based understanding of data science, digital technology and digital transformation in their social, political, cultural and technological contexts. The assessment was carried out by an expert panel convened by the NVAO. <u>The panel reaches a conditionally positive conclusion regarding the quality of the bachelor programme Computational Social Science.</u> The new programme complies with Standard 1 and partially complies with Standards 2 and 3.

The defining objective of CSS is that all students acquire the skills and knowledge to design sustainable digital interventions for complex societal challenges – interventions that are appropriate for the socio-cultural, political, economic, technical and ethical contexts. They will also learn to decide when digital interventions are not appropriate. The CSS programme has been extensively prepared and will be further developed in view of its envisaged start in September 2022. The programme is positioned at the intersection of social sciences, humanities and computational sciences; its multidisciplinary character is also demonstrated in the organisational set-up involving three Faculties and the College of Social Sciences. The new programme constitutes an innovative complement to existing programmes and responds to a clear need identified by the professional field. The panel welcomes the transdisciplinary features of the programme, its focus on a broad and diverse set of research methods and techniques, and its ambition to address and solve real-world problems. The exit qualifications are adequate: the set of intended learning outcomes is comprehensive and neatly aligns with the purpose of the programme, the breadth and depth of the different constituent disciplines and the requirements of an academically oriented bachelor programme.

The panel appreciates the curriculum structure featuring semester-long thematic projects and the HILL (High Impact Learning that Lasts) didactic model. Both elements are innovative and particularly suited to implement a programme with five different areas of expertise that all receive attention in the curriculum. However, the strong emphasis on group-work might jeopardize the pursue of individual learning goals by students and restricts the creativity of individual students. An additional risk is that individual study progress becomes dependent on achievements in the group. The envisaged staffing is sufficient. Management, development team and envisaged tutors have the necessary expertise and are enthusiastic about the new programme. During the interviews, stakeholders displayed ownership of the programme and its development process. Furthermore, the panel supports the decision to offer the CSS programme in English. It subscribes to the arguments for this choice and welcomes the plan to facilitate and encourage international students to learn Dutch.

The principles of the university-wide assessment system provide an adequate framework for the CSS programme to develop its own dedicated assessment practice. The panel considers that the envisaged assessment principles align very well with the general philosophy and the didactic underpinning of the curriculum. Moreover, the provisions for assuring the quality of assessment are in place: the dedicated Examinations Board plays an important role in this regard and its members have relevant experience.

These identified strengths contribute to an overall positive impression on the programme and its standards. Nonetheless, the panel has also identified a number of issues which it would

like the programme to take into account. The panel noticed that not all interviewees were on the same page with regard to the breadth and depth of what students should and will learn in the respective areas of expertise. Therefore, it suggests that the programme management helps all staff members to achieve a common understanding of what the CSS programme entails and communicate this accordingly to peer academic staff, students and field representatives.

The breadth of the programme requires a more effective use of the study time to equip students with the skills and knowledge to meet the objective of the programme. There is need for greater clarity regarding the extent to which students have to be familiarized with and become competent in each of the domains. This could be achieved by a reformulation of the course learning goals. Notwithstanding the considerable and highly appreciated development work so far, the programme should identify per course what students need to learn within the available study load to achieve the exit qualifications, and then (re)formulate more concisely the respective learning outcomes per course. Moreover, the didactical underpinning of the programme brings some tensions between individual and group learning. There should be appropriate provisions for working on personal study goals by individual students. In this regard, the developers may want to take the perspective of an individual (first-year) student to check whether teaching, learning and assessment methods allow this student to flourish in the CSS programme.

In terms of assessment, the panel invites the programme to look into the reliability and transparency of individual assessments, to enhance opportunities for individual students to demonstrate their expertise throughout the programme and their exit qualifications in the Capstone project, and to prevent that rules and regulations on course grades create unnecessary drop-out and study delay.

The above findings and considerations result in a conditionally positive advice to the NVAO. In view of the envisaged starting date in the academic year 2022-2023, the panel proposes that the following conditions are met by June 2022:
1. a revised set of (more concise) learning outcomes at course level, which reflect the course contents and build towards the exit qualifications at programme level;
2. a revised set of course assessments, which allow for a valid, reliable and transparent way to establish that individual students meet the course objectives and the exit qualifications and can help students develop themselves on an individual level.

Standard	Judgement
1 Intended learning outcomes	meets the standard
2 Teaching-learning environment	partially meets the standard
3 Student assessment	partially meets the standard
Conclusion	**conditionally positive**

4   Commendations

The programme is commended for the following features of good practice.

1. Innovative multi- and inter-disciplinary combination of domains across and between data science, social science and the humanities

2. HILL didactical concept

3. Innovative integration of societal challenges with research methods and techniques to tackle them

4. Support for the programme by staff and management

5. Support by professional field and their direct involvement in the definition of projects

5   Recommendations

For further improvement to the programme, the panel recommends a number of follow-up actions.

1. Refining learning goals of individual courses and their relationship to overall ILOs

2. Systematic and incremental introduction into the domain to ensure a shared common ground of knowledge

3. Feasibility of the curriculum (*studeerbaarheid*)

4. Reliability and transparency of the assessment methods, especially individual assessment

6   Assessment

6.1   Standard 1: Intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Judgement
Meets the standard.

Findings, analysis and considerations

Profile
The new bachelor programme Computational Social Science (CSS) is positioned at the intersection of social sciences, humanities and computational sciences. CSS students will develop an interdisciplinary, research-based understanding of data science, digital technology and digital transformation in their social, political, cultural and technological contexts. The defining objective of CSS is that all students acquire the skills and knowledge to design sustainable digital interventions for complex societal challenges – interventions that have socio-cultural, political, economic, technical and ethical relevance.

The panel noted that the multi- and interdisciplinary character of the programme is strengthened by its organisational set-up: the envisaged degree programme was created by – and will continue to involve – the Faculties of Science, Humanities, and Social and Behavioural Sciences at the University of Amsterdam. The new programme will be hosted by the College of Social Sciences, in full respect of its interdisciplinary origins.

According to the panel, the discussion demonstrated to the panel that this programme has been designed involving extensive collaboration between content experts and management from the three Faculties and the College. In this regard, the programme is supported by the current research expertise within and between the different Faculties. The University of Amsterdam as a whole and the participating Faculties have a track record in offering inter-disciplinary programmes, as well as in implementing joint degree programmes with the Vrije Universiteit Amsterdam. Deans of the participating faculties convincingly argued that the new programme fits the strategic ambitions that are also pursued in research. The Executive Board of the University of Amsterdam is actively promoting inter-faculty cooperation and supports the development of the new programme. While the organisation of such programmes is always complex, the management and the programme developers presented a strong case for the organisational feasibility of this new programme. Moreover, the panel is convinced that the envisaged starting date of September 2022 will allow the programme to settle any outstanding organisational issue prior to the arrival of the first cohort of students.

The panel understands from the written materials and the discussions that the new programme occupies a somewhat unique position in and beyond the Netherlands due to its focus on both digital technology and societal challenges, and its aim to help students achieve combined expertise in technical and social sciences and humanities (SSH). Its educational set-up as transdisciplinary project-based curriculum featuring student engagement, high impact learning and collaboration with societal partners, adds to the innovative character of the programme. Upon graduation, moreover, CSS alumni have the potential to fill an important gap on the labour market as they combine a background in SSH and computational science

with digital, social and cultural expertise and skills. The panel acknowledges that CSS students are likely to possess relevant 21st-century skills by the time they enter the labour market.

Intended learning outcomes
The overarching objective of the programme is that CSS students learn to design and create sustainable digital interventions for complex societal challenges. Throughout the programme students acquire five interrelated competencies: to analyse data related to particular social problems, to identify opportunities for change, to design evidence-based strategies for interventions based on digital opportunities, to program digital interventions hands-on, and to create conditions that support digital innovation. They cover four recognized fields of expertise (knowledge and skills) that CSS students need to study: 1) social sciences and humanities expertise; 2) digital expertise; 3) research expertise and 4) change-making expertise, and the ability to integrate these fields: the transdisciplinary expertise.

What a student will have acquired and will be able to do upon successfully completing this study is defined in eleven exit qualifications, i.e., intended learning outcomes at programme level. The programme convincingly demonstrated that these exit qualifications in turn reflect the requirements of an academic bachelor programme as set out by the Dublin Descriptors and address the four fields of expertise – i.e., the combination of knowledge and skills – that CSS students need to cover: social sciences and humanities expertise, digital expertise, research expertise and change-making expertise. The intended learning outcomes also explicitly refer to the students' overarching ability to integrate and apply these four types of expertise in transdisciplinary projects. According to the panel, the 11 exit qualifications form a good basis for the CSS programme as they reflect the purpose of the programme and describe the breadth and depth of the different constituent disciplines. Given that the programme is very ambitious, it seems logical that the set of intended learning outcomes is comprehensive. The panel acknowledges that such breadth is necessary to train a new generation of academic professionals who understand and contextualise the language of both social scientists and digital experts, and act upon their contributions.

Whilst appreciating the purpose and the exit qualifications of the programme, the panel is concerned that the proposed programme is too broad to prepare students adequately for a follow-up study at master level in one of the CSS-related domains. On the one hand, a graduate who has acquired the CSS exit qualifications will meet the expectations of the labour market by having a broad and creative ability to tackle complex problems, but on the other hand, might have too little disciplinary know-how and skills to enter a master degree/2nd cycle in one of the constituent domains. The programme developers, however, consider that CSS graduates will be particularly suitable for follow-up master programmes because they will have extensive research and 21st-century skills in addition to adequate disciplinary know-how. In addition, agreements on eligibility of graduates to enrol in specific master tracks / programmes have been made across the faculties within the University of Amsterdam.

Professional field
During much of the programme, students will closely interact with external partners. At the time of this initial accreditation, different public and private partners enthusiastically offered support and are committed to collaborating as client organisations for students. Key external partners will be invited to join an external advisory board. From the discussion with representatives from the professional field, the panel understood that they very much

support the objectives of the CSS programme and are keen to play an active role in the training of the students, e.g., by making available real-world data sets. The panel observed that the professional field seemed to look for graduates with exactly those competencies that the programme aims to deliver: professionals who can distinguish between data and meaning, who are knowledgeable about data techniques and data content, who can oversee the breadth of the task and identify the most relevant approach to handling the data, and who have the ability to tackle complex problems - in sum, social data professionals who are knowledgeable about societal questions and have the technical skills to tackle these issues in collaboration with technical experts.

Considerations
In sum, the panel is positive about the purpose of the new bachelor programme CSS, which constitutes an innovative complement to existing programmes and responds adequately to a clear need identified by the professional field. It welcomes, in particular, the inter- and transdisciplinary character of the programme, its focus on a broad and diverse set of research methods and techniques, and its ambition to address and solve real-world problems. The objective of the CSS programme and its delivery through an innovative curriculum make it highly relevant for society. Hence, the panel looks forward to the graduates the programme will deliver and the range of expertise and 21st-century skills the alumni will bring to the labour market.

The panel considers the exit qualifications to be adequate: the set of intended learning outcomes is comprehensive yet reflects the purpose of the programme, describes the breadth and depth of the different constituent disciplines and is formulated in line with the requirements of an academically oriented bachelor programme.

The panel thinks that the University, the Faculties and the College are on top of the challenges that come with the organisation of such a multi-disciplinary endeavour. It invites the programme team to ensure ongoing student involvement in the further elaboration of the CSS design and in monitoring the quality of the curriculum components once the programme is up and running. In this regard, the panel welcomes the envisaged set-up of a dedicated CSS Programme Committee of students and staff.

Two issues require attention and action.

First, there was lack of consistency in the responses to the panel's questions about the scope and meaning of 'social data'. Do they include simply human behavioural data, or data that can be used to solve societal problems (which goes far beyond behavioural data), or data about the cultural outputs of people from the past and present? Much emphasis was placed on the collection and analysis of machine-readable, structured data which could lead to gaps in the understanding of social problems.

Second, the panel noticed during the discussions that not all interviewees were on the same page with regard to the breadth and depth of what students should and will learn in the respective areas of expertise, and where the emphasis of the programme is. The panel invites the programme to work further towards a single, shared understanding of the CSS programme that can be easily communicated to academic peers, (potential) students and representatives from the professional fields. According to the panel, the new CSS programme ensures that its graduates will have the skills to perform basic analyses of social data, while

fully understanding where the data come from and what the consequences of using such data could be in the analysis of and application to social contexts, assuming it may lead to a digital intervention.

The aligned communication of what CSS is and aims to achieve will strengthen the purpose and ambitions of the programme even more. These clarifications will enable the course team to articulate which master programmes outside of UvA graduates of CSS could reasonably be envisaged to follow after graduation.

6.2   Standard 2: Teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Judgement
Partially meets the standard.

Findings, analysis and considerations

Curriculum
The new BSc in Computational Social Science is a full-time programme of three years, six semesters and 180 study credits. The first and second year consist of twenty-week, semester-long courses of 30 EC each. The learning activities in these courses are organised around projects where students develop and integrate their expertise in five areas and work on assignments provided in a realistic context or by a real-world client organisation. In the fifth semester students either select electives from other programmes, take an internship or go on a study period abroad. The final semester is dedicated to a Capstone project for a real-world organisation.

The panel noticed in the documentation annexes that programme developers have gone to great lengths to describe the learning outcomes of each course, the way they cover the five programme areas of expertise and their connection to the respective exit qualifications at programme level. According to the panel, this exercise is overly detailed: although it demonstrates that all areas of expertise are covered in each semester course, there are far too many course goals. They seem to be formulated in such a way as to provide instructions for specific learning activities and are often far too specific. This could also limit innovation and flexibility in delivering the courses. It will be very difficult for students to use these learning goals to reflect on their progress in achieving the 'defining objectives' of the programme and on what is expected in terms of the depth of the acquired knowledge. The current learning goals frequently focus on a specific ability, tool or concept, demonstrated by use or explanation of principles, but lacking depth of understanding and reflection. Looking at all course goals, the panel thinks that there should be far fewer learning objectives per course. In addition, the panel is concerned that the detailed and fragmented learning goals hinder a comprehensive view on what is expected of the students and the depth to be achieved in each of the domains. This, in turn, may result in a lack of deep understanding and reflection, e.g. of what can and cannot be done with data. The learning goals should express the expectation that a profound level of knowledge and skills is reached in designated areas and the ability to find solutions that fit the social context. It is to be expected that graduates have developed the capacity to continue learning and updating their skills in a changing

world. After all, academically trained bachelor students can be expected to be able to reflect on their competencies and to acquire new knowledge and skills when necessary.

The finding on the relationship between the learning outcomes at course and programme level is linked to another finding. According to the panel, there is room for enhancing the course contents. The programme presented a calculation of the number of study credit points devoted to each of the domains. This suggests that, given the breadth of the programme, good attention is paid to the respective domains of expertise. However, the panel is of the opinion that the content of what is learned can be delivered more effectively. Since all knowledge and skills have to be acquired in projects, the acquisition of expertise in the domains is fragmented rather than incremental. The panel believes that students need to be introduced to the traditions of the relevant domains in a more systematic manner, in order to establish a common ground shared with other domain experts. They need to develop the crucial ability to communicate their ideas and findings in a way that is understandable and conventional. In particular, attention needs to be paid to how students will navigate between the different disciplines being taught, to recognise when they can be productively combined, and when they are incommensurable, either methodologically or theoretically. Revising some of the course contents will address the panel's previous consideration on the depth and breadth of the overall programme and will mitigate its concern that the programme ambitions are too broad to guarantee sufficient in-depth coverage of the areas of expertise.

Didactics
The didactical approach underpinning the CSS programme is based on the seven building blocks of the HILL model, which stands for High Impact Learning that Lasts. While the university has a track record in setting up multi-faculty and multi-disciplinary programmes, this is the first attempt at implementing the HILL model. Students work in small groups on one or two project challenges that are carefully chosen and organised in such a way that students obtain the knowledge, understanding and skills identified in the learning outcomes. The first four semesters have their own theme: climate change, digital surveillance, health and mobility, and equality. Every course week has the same structure with tutor-led groups of about twenty students, workshops, lectures, self-study and small group assignments in teams of five. On average, students have 14-18 contact hours per week.

The panel welcomes the use of HILL as an educational underpinning of this transdisciplinary programme and thinks it is highly relevant in view of the envisaged profile of the CSS graduates. While the panel understands that this approach with a lot of contact hours, group work, coaching and guidance may not be to the liking of every student, the programme is very clear on what it intends to offer and how. Nonetheless, the programme will need to reflect upon and eventually clarify how it will deliver certain technical and mathematical fundamentals needed for the coding skills and statistics, since students have to acquire the fundamentals in these subjects and build on that towards application and reflection on the results.

Moreover, the panel notices that the programme in its current form and stage of development is overly focused on the group approach and pays insufficient attention to the individual student. The HILL model is renowned for being student-centred, yet the envisaged delivery is not very centred on the individual student. The panel is concerned that the programme setup jeopardises the feasibility of individual students being able to pursue individual study goals.

Intake

The programme wants to attract both Dutch and international students with a secondary school degree that prepares for academic study, substantial expertise in mathematics, and English language skills at *vwo*-level. While aiming for a first intake with around 100 students, the programme would like to arrive soon at a steady annual enrolment of 140 students. Given that there is no further 'selection at the gate', the programme expects (in line with other bachelor programmes in the Netherlands) a drop-out rate of around 25% in the first year. In order to mitigate the consequences of such a drop-out on group work (and individual progress), the programme foresees two consecutive project challenges in the first semester when students are most likely to leave the programme.

Language

The programme's language of instruction and testing will be English. The panel was informed that this is a conscious choice made by the Faculties and the College: an international and diverse intake of students allows education to be organised according to the principles of the International Classroom where a mixture of nationalities and cultures creates value added for the participants. Moreover, it enables the programme to involve its international staff. Given that part of the professional field, including public bodies like the Gemeente Amsterdam, operates in Dutch, the programme adopts a pragmatic approach to the working languages. On the one hand, it will encourage international students to take Dutch language class in order to integrate more easily with the local community of residents, students and professionals. On the other hand, the programme is also open to other languages such as French and German in the context of small group assignments, though tutors may wish to consider how they will ensure the International Classroom is realised and that students from the same language group do not congregate to the exclusion of others. The external stakeholders indicated to the panel that they appreciate this pragmatic approach to language use while underscoring the value added by English being the language of instruction. The panel is somewhat concerned about the ability of international students to learn Dutch at a level that would allow for professional communication within a relatively short span. However, the panel thinks that the choice for an English language programme is properly motivated and welcomes the intention of the programme to facilitate and encourage Dutch language classes for international students. The programme is advised to work out the availability of language classes very concretely and communicate this to prospective international students in a timely manner.

Staff

The panel gathered from the written materials and the discussions that CSS courses are taught by academic staff from three faculties. Senior scholars contribute to the programme as examiners of the semester courses and as experts teaching particular topics. All examiners are associate or full professors; they are responsible for the quality of the courses and the assessments. Expert teachers are staff members with a research appointment, who have a teaching role in lectures and workshops and supervise capstone projects. The weekly group meetings are supervised by experienced tutors who coach and guide individual students and student teams. These tutors constitute the backbone of the CSS programme and are the first point of contact for the students. They are appointed at D3-level of experienced lecturers holding a PhD. One tutor is appointed for each group of 20 students. The average staff-student ratio (only counting the D3 level experienced lecturers) is estimated at 1 full-time

staff equivalent per 31.5 students. According to the panel, this ratio is slightly disappointing given the didactic concept. All scholars and tutors are permanent or tenure track scientific staff with a university teaching qualification. They are familiar with the didactic concept of HILL. Moreover, tutors receive dedicated training that covers the principles of HILL, the challenges of interdisciplinary and transdisciplinary work, change-making skills and coaching skills.

Given that the programme is likely to start in September 2022, the tutors have not yet been appointed. Nonetheless, each Faculty has already looked for qualified and interested staff at post-doctoral level, some of whom are currently involved in programme development and spoke to the panel. Several tutors have been trained in-house, are currently on temporary research / teaching / project contracts, and would obtain a permanent position at the university. At the time of the initial accreditation, the Faculties have put forward the envisaged examiners who are part of the development team. The Faculty Deans indicated to the panel that they will be able to find suitable senior scholars to teach lectures and workshops: the assignments are small, well-supported and provided with sufficient time allocation. Moreover the topics are appealing content-wise and thus interesting from a staff professionalisation point of view. The panel observed during the discussions that there is great enthusiasm for the new programme and its didactic concept among the management, the development team, the envisaged tutors, and the examiners. The staff on the development team appears proficient in terms of (multi)disciplinary know-how and didactic skills.

Guidance
The didactic concept of the programme puts a lot of attention on student guidance, which, in turn, makes the programme quite intensive in terms of teaching, guidance and intervision. The panel understood from the programme materials and the discussions that sufficient staff will be made available to deliver the programme and provide guidance for students. The group tutors will play a crucial role in this respect. In addition to university-wide and faculty-wide services, programme-specific guidance through the study adviser, the programme coordinator and the external contacts coordinator ensure that students are properly guided in the curriculum choices, the programme logistics and the exposure of students to projects and the professional field.

Considerations
In sum, the panel appreciates the curriculum structure and the didactic model that underpins the programme. The approach of semester-long courses with specific challenges and integrated learning trajectories is innovative. If implemented properly, the HILL approach is likely to produce graduates who are in high demand on the labour market.

Moreover, the structure and the didactic model are, according to the panel, particularly suited for the implementation of a programme with the envisioned breadth, featuring five different areas of expertise. In this regard, the panel thinks that the dispersed study load over the area of expertise reflects the breath of the curriculum.

The panel is of the view that the staffing of the programme has been well considered. Moreover, the development team and the envisaged tutors are highly competent and very enthusiastic about the new programme. Across the interviews, the panel felt that all stakeholders displayed ownership of both the programme and its development process.

The panel supports the decision of the University, the Faculties and the College to offer the CSS programme in English. It subscribes to the arguments for this choice, welcomes the plan to facilitate and encourage international students to learn Dutch, and advises the programme to operationalise these language classes prior to the start of the programme.

This overarching appreciation contributes to an overall positive impression on this standard. Nonetheless, the panel noticed some serious flaws in the way the curriculum and its didactic underpinning are currently developed. These require immediate action in view of the programme start in September 2022. The solution lies in finding a better balance between the breadth and depth of the programme, and between group and individual learning.

Regarding the first concern of the panel on the breadth and depth of the programme: in the course content it should be made more explicit how students acquire the basic knowledge considered to be the common ground in the different domains in a systematic and incremental manner. Students need to be knowledgeable in the relevant disciplines to the extent that they are able to communicate between disciplines and are able to: "design sustainable digital interventions for complex societal challenges –interventions that have socio-cultural, political, economic, technical and ethical relevance". A better balance between breadth and depth could be achieved by a reconsideration of the content and the learning goals at course level starting from the exit qualifications at programme level. Working backwards through the programme, it is necessary to identify per course what students need and can learn within the available study load in order to achieve the intended learning outcomes at programme level after semester six. This will strengthen constructive alignment between the level of insight, understanding and reflection as defined in the overall ILOs and the expectations per course. This will also result in more concise learning goals per course stimulating students to reflect on their level of understanding.

Second, the didactical underpinning of the CSS programme is currently overly focused on the group approach to the extent that it jeopardises the feasibility of the programme (components) for the achievement of personal study goals by individual students. Hence, the panel suggests to look again at the components from an individual (first-year) student point of view and check whether the course methods and assignments allow individual students to flourish.

The language of instruction for the CSS programme will be English. Based on the arguments presented by the Department, the panel considers it a logical choice that the new bachelor programme is offered in English.

6.3   Standard 3: Student assessment

The programme has an adequate system of student assessment in place.

Judgement
Partially meets the standard.

Findings, analysis and considerations
Assessment system

All programmes hosted by the College of Social Sciences have a similar assessment policy, which operates within the conditions and objectives set by the central Assessment Policy Framework of the university.

It is based on three guiding principles: the need for close alignment between exit qualifications, course objectives, and formative and summative assessments; confidence in the professional qualifications of the lecturers; and the desirability of a periodic peer evaluation of assessments. In line with these policy arrangements, the programme director defines the exit qualifications and is responsible for curriculum design and staff recruitment and planning; the appointed examiners are responsible for designing assessments in their own courses. The panel gathered from the information materials that the overarching principles of the assessment system are sufficient. It provides an adequate framework for the programme to develop its own dedicated assessment practice.

Course assessment

The proposed programme has a project-based didactic approach. All formative and summative assignments are collected in a portfolio. Frequent formative assessments and regular feedback provided during the courses should ensure that most students are well prepared for the summative assignments. Performance and progress are checked by tutors and students themselves at regular intervals. Each learning trajectory will be assessed once with an individual summative assignment. Students also create at least one group product or intervention that covers and integrates the outcomes of the four trajectories. At the end of the course, students receive a final grade, which is the weighted average of the team grade for the group project (50%), the grade for individual contributions to the group project (10%), and the grades for the four individual assignments (40%). Although the final grade is an average, students must pass the individual assignments and individual group contribution.

This focus on group work is also visible in the final semester, when students demonstrate that they have achieved the exit qualifications through a 30 EC Capstone project. This project consists of four team deliverables (70%) and two individual tests (30%). In order to ensure that all students individually meet the learning outcomes of the Capstone project – and thus of the overall CSS programme – students need to pass the individual components. The panel has looked into some of the assessment materials related to the Capstone project. According to the panel the documents do not provide conclusive evidence that individual achievement of the exit qualifications is determined based solely on personal performance in the Capstone project by the graduate.

The panel acknowledges that the assessment methods in the CSS programme align well with the HILL concept. However, the panel also observed that there is a strong emphasis on teamwork and hence on team grades in the programme. The panel is concerned that at the current stage of programme development course assessment in the CSS programme is jeopardising the feasibility (*studeerbaarheid*) of the programme (components) for students. The strong emphasis on group-work might hamper the pursuit of individual study goals by students. In addition, the set-up of the assessment system raises questions regarding the reliability and transparency of assessment for individual students. The panel studied examples of course assessments. These examples aggravated the concern of the panel that demonstration of achievement of the learning goals is not always based on personal performance. In a number of assignments, there is room for students to submit answers and solutions that could be obtained from third parties. Although the panel recognizes that the intensive guidance of students can help to detect some cases of fraud, the projected number

of students makes it necessary that more systematic precautions are taken to minimize the chance of fraud and to guarantee the reliability and validity of the assessment.

Moreover, due to the current provisions on grade setting (one all-or-nothing grade per semester), resits and missed deadlines are likely to result in (too) many failed courses. Failing courses requires students to retake entire semester courses and thus incur considerable study delay even in cases where their overall course failure may have been caused by a minor deficiency. In this regard, the panel noticed that students who do not successfully complete semester 1 and/or 2 (again possibly because of a minor deficiency) receive a negative Binding Study Advice and cannot continue their studies. Students who receive a fail grade for semester 3 or 4 will need to repeat the same semester in the next year before they can continue with semester 4 or 6, respectively.

Quality assurance
The CSS programme has its own dedicated Examinations Board, which consists of five members and is supported by a secretary. The internal members will be educators who teach in the programme and reflect the diversity of expertise and disciplinary backgrounds. The external member is not involved in the programme. The Examinations Board meets about ten times per year and guarantees that assessment is in line with the programme's purposes, that students are treated fairly and equally, that cheating is punished, and that assessment and grading are reliable, valid and transparent. Once the programme will be up and running, the Examinations Board will play an active role in so-called periodical test assessment days: peer learning events on the quality of testing and assessment involving the peer review of course materials, assessment forms, feedback formats, and a selection of assignments completed by students.

At the time of the initial accreditation, the envisaged members of the Examinations Board had been appointed and spoke to the panel. The panel welcomes their appointment as the individual members have good expertise in assuring the quality of assessment. As a team they represent the various Faculties and cover the respective areas of expertise. The transdisciplinary nature of the new CSS programme is innovative and this innovation brings along new methods of assessment. According to the panel, the Examinations Board is aware of the challenges ahead in guaranteeing the quality of assessment (methods) while adhering to the overall assessment policy.

Considerations
In sum, the panel believes that the assessment system adopted for this new transdisciplinary programme aligns very well with the general philosophy and the didactical underpinning of the curriculum. In this regard the proposed assessment forms will contribute to the envisaged graduate profiles.

Moreover, the panel thinks that the CSS course assessment is well embedded in the overall assessment policy of the University, the respective Faculties and the College. The principles of the university-wide assessment system provide an adequate framework for the programme to develop its own dedicated assessment practice.

The provisions for assuring the quality of assessment are adequate, according to the panel. The Examination Board plays an important role in this regard. Its members have relevant experience to ensure that the assessment quality is up to par. The panel invites the

Examinations Board to follow-up further programme developments prior to the start of the programme and to advise the development team and the appointed course examiners on the quality of the envisaged assessments.

The institutional approach to assessment is adequate. Nonetheless, the panel has some fundamental questions about the way course assessment is envisaged and implemented. There are four issues that require action prior to the programme start in September 2022: first, the balance between individual and group assessment; second, the reliability and transparency of (some of the) individual assessments; third, the opportunities for individual students to demonstrate their expertise throughout the programme and their exit qualifications in the Capstone project; and fourth, the feasibility of the programme in that overall grades per 30 EC courses entail a risk of considerable (partly avoidable) study-delay and even drop-outs. In line with its suggestions on the curriculum, the panel advises the programme to look again at the assessment from an individual (first-year) student perspective and to address the following questions: do the course assessment methods allow for all individual students to flourish and how can unnecessary study delays be prevented?

6.4   Degree and field of study

The panel advises awarding the following degree to the new programme: Bachelor of Science

The panel supports the programme's preference for the following field of study: Sector-overstijgend; sub-sector: Onderwijs/Landbouw en natuurlijke omgeving / Natuur / Techniek / Gezondheid

The programme intends to produce interdisciplinary graduates who have acquired the skills and knowledge to design sustainable digital interventions for complex societal challenges. Such interventions combine socio-cultural, political, economic, technical and normative aspects. The programme is built around four fields of expertise: 1) social sciences and humanities expertise, 2) digital expertise, 3) research expertise, and 4) change making expertise, and the ability to integrate these by acquiring transdisciplinary expertise. The programme is delivered by lecturers from three collaborating Faculties: Science, Humanities, and Social and Behavioural Sciences. The programme emphasises the knowledge and skills needed to produce and evaluate digital technologies in different societal domains. For this, 'state-of-the-art' facilities are needed: research labs and maker labs providing high quality and secure computer facilities and digital and technical infrastructures to develop and test the digital tools.

The panel is convinced that "sector-overstijgend" is the appropriate classification in the CROHO sectors. The sub-sector "Onderwijs/Landbouw en natuurlijke omgeving / Natuur / Techniek / Gezondheid" explicitly introduces a wide range of disciplinary perspectives. Programmes classified in this subsector covers at least several of the disciplines mentioned in liberal arts and sciences programmes or in programmes starting from global challenges.

The panel advises positively on the sub-sector "Onderwijs/Landbouw en natuurlijke omgeving/Natuur/Techniek/Gezondheid". The programme starts from social challenges and the interdisciplinary abilities to face these challenges. The programme shows interdisciplinary breadth in the semester themes, comparable with other programmes classified in this

subsector. To achieve the intended learning outcomes, substantial technical expertise and infrastructure are needed. This can only be realized if appropriate funding is available at the level of the Science Faculty.

The conclusion is that the panel approves of the CROHO sector applied for: "Sector-overstijgend; sub-sector Onderwijs/Landbouw en natuurlijke omgeving / Natuur / Techniek / Gezondheid". The ministry still has to decide on this matter.

The full report was written at the request of NVAO and is the outcome of the peer review of the new programme
wo-bachelor Computational Social Science of University of Amsterdam

Application no: 009923

NVAO