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# **LIBERAL ARTS AND SCIENCES**

MAASTRICHT SCHOOL OF  
LIBERAL ARTS AND SCIENCES  
**MAASTRICHT UNIVERSITY**

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This report was finalised on 28/03/2019



## REPORT ON THE BACHELOR'S PROGRAMME LIBERAL ARTS AND SCIENCES OF MAASTRICHT UNIVERSITY

This report takes the NVAO's Assessment Framework for Limited Programme Assessments (September 2016) and the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (November 2011 and January 2018) as a starting point.

### ADMINISTRATIVE DATA REGARDING THE PROGRAMME

#### Bachelor's programme Liberal Arts and Sciences

Name of the programme:	Liberal Arts and Sciences
CROHO number:	50393
Level of the programme:	bachelor's
Orientation of the programme:	academic
Number of credits:	180 EC
Specialisations or tracks:	Maastricht Science Programme University College Maastricht University College Venlo
Location(s):	Maastricht, Venlo
Mode(s) of study:	full time
Language of instruction:	English
Submission deadline:	01/05/2019

The visit of the assessment panel Liberal Arts and Sciences to Maastricht University took place on 7 - 9 November 2018.

### ADMINISTRATIVE DATA REGARDING THE INSTITUTION

Name of the institution:	Maastricht University
Status of the institution:	publicly funded institution
Result institutional quality assurance assessment:	positive: 15/05/2025

### COMPOSITION OF THE ASSESSMENT PANEL

#### *Cluster Liberal Arts and Sciences*

The assessment of the bachelor's programme Liberal Arts and Sciences, during which also the assessment of the Distinctive Feature Small-scale and Intensive Education took place, is part of the cluster assessment Liberal Arts and Sciences. From May to December 2018, a panel assessed bachelor's programmes Liberal Arts and Sciences at eight universities. A panel of six to nine members was appointed for each site visit, based on the expertise and availability of each panel member and taking into account possible conflicts of interest.

The full panel Liberal Arts and Sciences consisted of seventeen members:

- Prof. dr. Th.L.M. (Theo) Engelen, professor in Historical Demography, and former Rector Magnificus, of the Radboud University [chair];
- Em. prof. H. L. (Laurent) Boetsch, founding executive co-director of the European Consortium of Liberal Arts and Sciences (ECOLAS) and emeritus professor Romance Languages at Washington and Lee University (United States) [vice chair];
- Prof. S. (Samuel) Abraham, co-founder and managing director of ECOLAS and founder, professor and rector of Bratislava International School of Liberal Education (BISLA, Slovakia);



- Dr. S.I. (Sylvia) Bergh, associate professor in Development Management and Governance at the International Institute of Social Studies in The Hague;
- Dr. H. (Helen) Brookman, director of Liberal Arts & Pro-Vice-Dean at King's College London (United Kingdom);
- Prof. dr. M.M.T.A. (Marcel) Brus, professor in Public International Law at the University of Groningen;
- Prof. W.M. (Wayne) Cranton, assistant dean (research) at the Faculty of Arts, Computing, Engineering and Sciences of Sheffield Hallam University (United Kingdom);
- Prof. C. (Carl) Gombrich, MSc programme director of the BAsc Art and Sciences at the University College London (United Kingdom);
- Dr. K. (Katherine) Goodman, assistant professor and associate director of Inworks at the University of Colorado Denver (United States);
- Prof. dr. V. (Veronika) Lipphardt, professor in Science and Technology Studies at University College Freiburg of Albert-Ludwigs-Universität Freiburg (Germany);
- Dr. A. (Alyssa) Schneebaum, Assistant Professor at Vienna University of Economics and Business (WU Wien) and external lecturer at University of Vienna (Austria);
- Dr. M. (Mark) Sommerville, associate dean of Faculty Affairs and Development and associate professor in Electrical Engineering and Physics at Olin College of Engineering (United States)
- Dr. J.(Jos) Willems, former member of the board of Zuyd University of Applied Sciences and educational advisor for Higher Education;
- Drs. S.C. (Sylvia) Witteveen, academic director of the Psychobiology programme at the Faculty of Science of the University of Amsterdam;
- (Isidora) Cvetkovska, bachelor's student Liberal Arts and Sciences, University College Groningen;
- Y. (Yara) van Ingen, bachelor's student Maastricht Science Programme, Maastricht University;
- M. (Maya) Ouwehand, bachelor's student Liberal Arts and Sciences, Utrecht University.

For the assessment of the Distinctive Feature Small-scale and Intensive Education, two panel members (Prof. dr. Th.L.M. Engelen and prof. dr. M.M.T.A Brus) were trained by the NVAO and appointed to head the assessment of the Distinctive Feature. Prof. dr. Th.L.M. Engelen was involved in all site visits. Prof. dr. M.M.T.A. Brus was involved in the site visits at Leiden University College, University College Utrecht, University College Roosevelt, Liberal Arts and Sciences at Utrecht University, Amsterdam University College, Erasmus University College, University College Venlo, University College Maastricht and Maastricht Science Programme.

The panel was supported by dr. Els Schröder as project coordinator of the cluster assessment Liberal Arts and Sciences. She also acted as secretary during the visit to Leiden University College, University College Roosevelt, University College Utrecht, Liberal Arts and Sciences Utrecht, Amsterdam University College, Erasmus University College, University College Venlo, University College Maastricht and the Maastricht Science Programme. She was supported by dr. Joke Corporaal at University College Roosevelt, University College Utrecht, Liberal Arts and Sciences Utrecht, Amsterdam University College, Erasmus University College, University College Venlo, University College Maastricht and the Maastricht Science Programme, who also wrote the reports of the first five colleges. Dr. Marianne van der Weiden acted as secretary during the site visits to Groningen University College, University College Tilburg and University College Twente.

The project coordinator attended all site visits, briefed all panel members and read and commented on draft versions of each report in order to monitor the consistency of the assessments and the resulting reports. Calibration of the assessments took place between the core panel members at several moments during, between and after the various site visits.

#### *Maastricht University:*

The panel that assessed the bachelor's programme Liberal Arts and Sciences consisted of eight members:

- Prof. dr. Th.L.M. (Theo) Engelen, professor in Historical Demography, and former Rector Magnificus, of the Radboud University [chair];
- Em. prof. H. L. (Laurent) Boetsch, founding executive co-director of the European Consortium of Liberal Arts and Sciences (ECOLAS) and emeritus professor Romance Languages at Washington and Lee University (United States) [vice-chair];
- Prof. C. (Carl) Gombrich, programme director of the BSc Art and Sciences at University College London (United Kingdom);
- Prof. dr. M.M.T.A. (Marcel) Brus, professor in Public International Law at the University of Groningen;
- Dr. J.(Jos) Willems, former member of the board of Zuyd University of Applied Sciences and educational advisor for Higher Education;
- Drs. S.C. (Sylvia) Witteveen, academic director of the Psychobiology programme of the Faculty of Science of the University of Amsterdam;
- Dr. A. (Alyssa) Schneebaum, Assistant Professor at Vienna University of Economics and Business (WU Wien) and lecturer at University of Vienna (Austria);
- M. (Maya) Ouwehand, bachelor's student Liberal Arts and Sciences at Utrecht University Utrecht [studentlid].

The panel was supported by dr. J. (Joke) Corporaal and by dr. E. (Els) Schröder, who acted as secretary. The report was written by dr. E. Schröder.

For the assessment of the Distinctive Feature Small-scale and Intensive Education, Prof. dr. Th.L.M. Engelen and prof. dr. M.M.T.A Brus) headed the assessment of the Distinctive Feature. The practice-based assessment took place on 7-9 November 2018 combined with the regular assessment of the bachelor's programme.

For University College Maastricht, the criteria pertaining to the Distinctive Feature Small-scale and Intensive Education 2011 were used. For University College Venlo and Maastricht Science programme, the criteria pertaining to the Distinctive Feature Small-scale and Intensive Education 2018 were used.

The NVAO approved the composition of the panel on 16 April 2018.

## WORKING METHOD OF THE ASSESSMENT PANEL

### *Preparation*

Before the assessment panel's site visit to the bachelor's programme Liberal Arts and Sciences (LAS) at Maastricht University, the project coordinator received the programme's self-evaluation report, based on both the NVAO framework and the framework with the assessment criteria for the Distinctive Feature Small-scale and Intensive Education. The QANU project coordinator sent it to the panel after checking it for completeness of information. Upon reading the self-evaluation report, the panel members formulated their preliminary findings.

The panel also studied a selection of 35 final works and the accompanying assessment forms for the bachelor's programme LAS, based on a provided list with final works of the last two years: 15 capstones were studied for University College Maastricht, 5 capstones for University College Venlo and 15 bachelor theses for the Maastricht Science Programme. This selection was made by the panel's chair, in cooperation with the secretary, based on input from the other panel members. The chair and secretary took care that a variety of topics and disciplines was covered, and made sure that the distribution of grades in the theses selection matched the distribution of grades over all theses. The panel chair, secretary and programme jointly composed a schedule for the site visit. Prior to the site visit, the programme selected representative partners for the various interviews. See Appendix 4 for the definitive schedule.



*Site visit*

The site visit to the Maastricht University took place from 7 to 9 November 2018. Locations in Venlo, Geleen and Maastricht were visited during these days. At the start of the site visit, the panel held a preparatory meeting during which it was instructed regarding all assessment frameworks and procedures. After this, the panel discussed its working method and its preliminary findings for the site visit with respect to both the regular assessment and the assessment of the Distinctive Feature. It also paid attention to the content and use of the programme's domain-specific framework of reference, which is included in Appendix 1.

The visit started with a development dialogue, in which the panel and representatives of the programme discussed various developments routes for the programme. The result of this conversation are summarised in a separate report, which will be published through the programme's communication channels. The information received during the development dialogue are not part of the conducted assessments.

After this initial meeting, the panel focused on its assessments. The panel conducted interviews with representatives of the programmes and toured the premises to see the available facilities, and examined materials provided by the programmes. An overview of these materials is given in Appendix 5. The panel used the final part of the visit to discuss its findings in an internal meeting. Afterwards the panel chair gave an oral presentation, in which he expressed the panel's preliminary impressions and general observations.

*Report*

After the site visit, the secretary wrote a draft report with two separate chapters based on the assessment panel's findings: the first part of the report focuses on the regular NVAO programme assessment of the bachelor's programme, and the second part of the report specifically addresses the standards related to the Distinctive Feature Small-scale and Intensive Education. Subsequently, the secretary sent the report to the assessment panel and project coordinator. After processing the panel members' feedback, the project coordinator sent the draft reports to the university in order to have these checked for factual irregularities. The secretary discussed the ensuing comments with the panel's chair and adapted the report accordingly before its finalisation.

*Definition of judgements standards*

In accordance with the NVAO's Assessment framework for Limited Programme Assessments 2016, the panel used the following definitions for the assessment of both the standards and the programme as a whole.

**Generic quality**

The quality that, in an international perspective, may reasonably be expected from a higher education Associate Degree, Bachelor's or Master's programme.

**Unsatisfactory**

The programme does not meet the generic quality standard and shows shortcomings with respect to multiple aspects of the standard.

**Satisfactory**

The programme meets the generic quality standard across its entire spectrum.

**Good**

The programme systematically surpasses the generic quality standard.

**Excellent**

The programme systematically well surpasses the generic quality standard and is regarded as an international example.



In accordance with the NVAO's Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (November 2011; January 2018), the panel used the following definitions for the assessment of the standards:

**Meets the standard**

The programme meets the generic quality standard.

**Does not meet the standard**

The programme does not meet the generic quality standard.

The panel used the following definitions for the assessment of the programme as a whole:

**Positive**

All the criteria are scored as "meets the standard".

**Negative**

One or more of the criteria are scored as "does not meet the standard".



## SUMMARY JUDGEMENT

### *Summary Bachelor's programme Liberal Arts and Sciences*

The Maastricht School of Liberal Arts and Sciences (MSoLAS) offers a bachelor's degree in Liberal Arts and Sciences (LAS) in three course offerings at University College Maastricht (UCM), Maastricht Science Programme (MSP) and University College Venlo (UCV). After successful completion, students receive a degree as Bachelor of Arts (BA) or Bachelor of Science (BSc), depending on the composition of the individual programme.

#### *Standard 1*

The panel established that MSoLAS has an attractive bachelor's programme with interesting and varied profiles for ambitious students. UCM offers a classic LAS education in the international tradition. MSP attracts students with an interest in the natural sciences who want to cross scientific disciplinary boundaries. UCV has embraced a thematic focus on two main areas of interest: 'Food, Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. The Intended Learning Outcomes (ILOs) of UCM, UCV and MSP together match the national requirements formulated in the domain-specific framework of reference for a LAS education in the Netherlands, and offer unique study trajectories for students aiming to cross disciplinary boundaries. They are also in line with international requirements regarding the degree level, such as the Dublin descriptors, and aim at a good degree level. The bachelor's programme LAS at MSoLAS therefore meets all requirements. Nevertheless, the panel advises MSoLAS to reflect in the coming years on the current model in which UCM, UCV and MSP all fall under the umbrella of the bachelor's programme LAS.

The panel considers the intended learning outcomes as formulated attainable for students, but recommends sharpening the formulations in such a way that they are more easily measurable. MSP's ILOs, which the panel already considered more precise, could hereby serve as a starting point. With appreciation, the panel noted that UCM reacted to earlier suggestions and updated its ILOs to include a clear focus on multi- and interdisciplinary skills. For MSP, the panel noted that personal communication skills and development of an independent research attitude are not clearly expressed in its ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. It thus recommends incorporating these specific skills in MSP's ILOs. The panel considers UCV's aim to valorise academic knowledge in practice a strong point of its current profile, as long as academic principles are hereby observed. In addition, the additional value of the combined teaching UCV's thematic focus should be clarified and become an integral part of the communication of its aims.

#### *Standard 2*

The panel encountered at the bachelor's programme LAS at MSoLAS three stimulating curricula for UCM, UCV and MSP that all ensure a challenging and intensive teaching-learning environment for the MSoLAS students of good standards. Academic advising at the programme is extensive, well-monitored and of high quality. Facilities are of good quality at all three course offerings. In particular, UCM's safe study environment with extensive attention to a healthy study-life balance and a good support system is considered an example of excellent practice by the panel. MSP's career advice is also highly appreciated, resulting in good career opportunities for students. In the coming years, attention to the effects of growth at UCV should be closely monitored, including health and safety measures and requirements for students at the Brightlands Campus Greenport Venlo. In addition, the panel strongly feels that direct access to psychological support in Venlo should be realised.

Students at MSoLAS feel sufficiently supported and prepared for the choices they face and feel heard and respected. They are highly motivated and enthusiastic about the programme. Staff members are, according to students, approachable and reliable and offer good support and feedback. They are also well-qualified to teach in a small-scale and intensive learning environment according to the Problem-Based/Research-Based Learning method. MSoLAS also has a sound career advancement policy in place that ensures stability and a good mix of teaching and research expertise available



within UCM, UCV and MSP. UCM in particular should be commended for its hiring policy that now explicitly embraces the hiring of non-Western staff members, which is highly appreciated by UCM students as conducive to their learning experience.

The curriculum structure at the bachelor's programme LAS at MSoLAS is conducive to obtaining the ILOs. The panel, however, challenges UCM, UCV and UCV to seek further connections among the three curricula within the programme, in particular for the purpose of providing curricular and research opportunities for all students within the life and natural sciences, social sciences and humanities. The panel was impressed with the options for all MSoLAS students to participate in undergraduate research. UCM's curriculum is considered very strong, with a breadth of courses that are both interdisciplinary and of good disciplinary standard. At MSP, a research-oriented approach is prominent. It results in a challenging programme that allows plenty of opportunities for students to self-direct their studies in a safe study environment. The panel suggests paying more attention in the MSP curriculum to the role of ethics within science. The panel ascertained that UCV established in its fourth year of development a promising curriculum within the remits of its thematic focus. To strengthen the current curriculum, UCV-specific courses on food technology and plant biology need to be developed in the coming years. Other potential options include courses in logistics and basic statistics.

### *Standard 3*

The panel confirmed that the assessment and evaluation system at the bachelor's programme LAS at MSoLAS functions at a high level. Exams and tests are well-designed and of good quality, continuous feedback and assessment drive student learning, a variety of assessment methods assure the training of various skills and the attainment of the intended learning outcomes. MSoLAS has a clear assessment policy and an assessment plan. Criteria and modes of assessment are sufficiently communicated. The quality assurance of this systems functions well. The Board of Examiners fulfils its legal tasks, actively monitors grades, proactively reacts to occurring needs and also works towards the further professionalization of assessment in three learning paths that differ in infrastructure and that are at various development stages, which is commendable in the panel's view. The panel compliments the programme on the ways in which it enhanced the transparency of assessment over the period under review. It advises the programme to reap the benefits of the examples of good practice, such as good capstone feedback practices at UCM, the excellent control of the Bachelor Thesis Coordinator on the thesis assessment at MSP, and the design of the interdisciplinary element and its assessment of the capstone at UCV.

### *Standard 4*

Based on the overall level of the final works and the performance of graduates and studied materials during the site visit, the panel ascertained that MSoLAS graduates achieve the ILOs as formulated for UCM, MSP and UCV at a good level. The high average scores, the variety of disciplines to which the graduates gravitate, the publications based on undergraduate research and the acceptance of UCM and MSP graduates in master programmes at universities of good international standing and reputation are all clear evidence of the high level realised within UCM and MSP. Alumni of UCM and MSP look back on their bachelor's degree with appreciation and enthusiasm and consider it a very good basis for their further careers. The panel also acknowledges the promising results of UCV first cohort of graduates, who performed well.

The panel assesses the standards from the *Assessment Framework for Limited Programme Assessments 2016* in the following way:

### *Bachelor's programme Liberal Arts and Sciences*

Standard 1: Intended learning outcomes	satisfactory
Standard 2: Teaching-learning environment	good
Standard 3: Student assessment	good
Standard 4: Achieved learning outcomes	good

General conclusion

good

The chair, prof. dr. Theo Engelen, and the secretary of the panel, dr. Els Schröder, hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 28/03/2019

*Summary judgment Distinctive Feature Small-scale and Intensive Education bachelor's programme Liberal Arts and Sciences - University College Maastricht (UCM)*

*Standard A:*

The formulated ILOs for UCM attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary academic and societal context. The programme is interdisciplinary in its focus and aims at a broad academic development in a wide spectrum of disciplines of the humanities, social sciences and (life) sciences. Skills-training aims for a high level of competence and includes problem-solving, critical thinking and decision-making.

*Standard B:*

Extracurricular activities inform and complement UCM's learning content. Students are intrinsically motivated to explore topics and interests related to the curriculum in their extra-curricular activities. Many of these activities are inseparably connected to the curriculum. Other initiatives clearly favour the execution of skills-learning and often go beyond what is expected and defined in UCM's intended learning outcomes. Artistic talent and intellectual curiosity are cherished and reinforced through extra-curricular activities. Many of the initiatives are aimed at supporting others within the community, and some UCM initiatives reach out to vulnerable groups within society.

*Standard C:*

UCM offers a programme that is organised in a small-scale setting. Commendable is that UCM creates an environment that both caters towards an intensive learning experience while simultaneously offering a safe and healthy study environment. The number of hours of face-to-face teaching is appropriate for UCM's small-scale setting and its highly student-centred didactic approach. Students and staff closely interact and form a close-knit community of learners, also beyond the classroom.

*Standard D:*

UCM has a sound selection procedure in place that is regularly reviewed and refined. The panel appreciates UCM's efforts to increase the diversity of its student population by actively reaching out with scholarships to non-EU students demonstrating need and merit. It encourages UCM to actively seek ways to address the current gender imbalance.

*Standard E:*

Teaching staff at UCM has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Staff members speak favourably of the management, praise their autonomy and flexibility in organising their teaching and enjoy interaction with their students at UCM.

*Standard F:*

The staff to student ratio of 1:17 is sufficient to provide an education in a small-scale and intensive setting, with opportunities for individual contact.

*Standard G:*

UCM's facilities are considered excellent by the panel and well-tailored to the demands of the didactical concept underpinning the programme for both staff and students.

*Standard H:*

Graduate success of UCM is evident in the panel's view. Graduates perform well, both professionally and academically, and enrol in excellent, often highly selective, master programmes in the Netherlands and abroad. The panel considers the broadening of interests sufficiently proven. Capstone theses are of good quality and reflect the benefits of students' broadened interdisciplinary training. Success and graduation rates are significantly higher than those at other Maastricht University (UM) programmes. The panel also noted a positive trend with respect to the study duration: students tend to graduate more quickly at UCM than at other UM programmes.

*Practice-based assessment*

With regard to the Distinctive Feature Small-scale and Intensive Education, the panel has verified that UCM meets all standards. In its assessment under Standard H, the panel also paid specific attention to the quality of the theses, the achievement level in general and the broadening of themes as set out in the intended learning outcomes. All were considered favourably for the programme in comparison to other relevant programmes.

For this practice-based assessment, the following aspects were considered as areas for improvement, based on the review of 2014:

- Attention to the multi- and interdisciplinary nature of the programme as formulated in the Intended Learning Outcomes through reformulation (ILOs);
- The incorporation of the science-component of the curriculum and the methods used to teach these within the UCM educational philosophy;
- Graduation rates in combination with study duration;

The panel noted under Standard A that attention for the multi- and interdisciplinary nature of the programme has now been clearly motivated in the ILOs. The panel is thus satisfied that UCM gravitated towards improvement in this respect. It also concluded that further honing of the ILOs is desirable to make the goals aimed for to be more measurable, but it trusts UCM to react to this suggestion adequately. Under Standard C, the panel concluded that UCM's curriculum structure and its didactic approach creates a student-centred classroom, catering towards an intensive learning experience. The panel also noted that teaching methods are used in a flexible way, always allowing for a good match between learning needs and UCM's educational philosophy. Under Standard H, the panel noted that UCM's graduation rates are good in comparison to other relevant UM programmes and that students increasingly graduate more quickly than used to be the case. Measures to bring down students' study duration bear fruit. Again, UCM favourably compares to other relevant programmes in this respect and the panel is therefore satisfied regarding UCM's progress.

The panel that visited UCM in 2014 was not convinced that UCM's science component was sufficiently balanced within the curriculum's offering. As part of the assessment of Standard 2 of the NVAO Limited Programme Assessment of the bachelor's programme LAS at MSoLas, the panel also looked at this aspect of UCM's curriculum. It noted that students can choose out of 39 humanities courses, 32 sciences courses and 63 social science courses. Science modules focus on biomedical sciences, applied mathematics, information sciences, cognitive sciences and some courses in sustainability science. The panel considers this quantity of modules sufficient in terms of range and scope and sees a clear strengthening of UCM's scientific orientation. This also follows from UCM's reformulation of the ILOs, which now more explicitly emphasise UCM's goal to obtain knowledge in the humanities, social sciences and (life) sciences. The panel observed that UCM often uses Research-Based Learning methods next to Problem-Based Learning methods in science modules and that staff also designs UCM's modules taking learners' needs into account. The didactic approach is therefore used in an appropriate way and conducive to students' learning needs, also with respect to scientific learning.

These combined findings result in a positive assessment of the Distinctive Feature by the panel, and also in a positive advice regarding the practice-based assessment.

The panel assesses the standards from the *Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (November 2011)* in the following way:

*Bachelor's programme Liberal Arts and Sciences - University College Maastricht*

Standard A: Intended learning outcomes	meets the standard
Standard B: Relationship goals and content	meets the standard
Standard C: Structure and didactic concept	meets the standard
Standard D: Intake	meets the standard
Standard E: Quality of staff	meets the standard
Standard F: Number of staff	meets the standard



Standard G: Available facilities	meets the standard
Standard H: Level realised	meets the standard
General conclusion	positive

The chair, prof. dr. Theo Engelen, and the secretary of the panel, dr. Els Schröder, hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 28/03/2019



*Summary judgment Distinctive Feature Small-scale and Intensive Education bachelor's programme Liberal Arts and Sciences, University College Venlo*

*Standard A:*

The ILOs for UCV are formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary academic and societal context. The programme offers a broad academic development in the social sciences and (life) sciences in line with the required broadening of interests. Skills-training is geared to reaching a high level, including problem-solving, critical thinking and decision-making skills. The panel asks UCV to reflect on the additional value of the combined study of the two themes that inform UCV's curriculum in its profiling and its ILOs.

*Standard B:*

UCV is currently in its fourth year of development. UCV's core curriculum is taking shape and its contents match the orientation of the curriculum and the intended broadening of interests as defined in the UCV-specific ILOs. The curriculum could be strengthened in the coming years by offering more courses on logistics. Also, perspectives derived from the humanities may offer useful insights to enrich the curriculum contents. UCV has invested in the creation of extra-curricular activities that add in a meaningful way to the existing curriculum in the period under review. With the students and staff, the panel feels that many opportunities for strengthening the current offer in extracurricular activities will come to fruition with the further growth of UCV. The panel recommends to first look for ways to interact with the local enterprises at the Brightlands Campus Greenport Venlo in a meaningful way; these companies offer an excellent opportunity for a shared student-staff initiative that also contributes to the contents of UCV's curriculum.

*Standard C:*

UCV's combination of an open curriculum and the PBL/RBL method creates a dynamic, challenging and intrinsically student-led learning environment. Students and staff members form together a learning community that benefits from UCV's small-scale organisation and its collegiate setting that allows for both formal and informal interaction. Students are active stake-holders in designing their own learning experience, which is intensive due to the nature of their interdisciplinary curriculum and due to the number of hours of active participation and preparation expected by students. The curriculum is structured in such a manner as to ensure nominal study progress, including extracurricular activities. The panel appreciates in particular that students also have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure.

*Standard D:*

UCV has a sound selection procedure in place that successfully balances the need to grow and the need to be selective. A positive is that UCV has been able to ensure an international classroom over the full period under consideration. The panel encourages UCV to actively seek ways to address head on the current gender imbalance to avoid any negative consequences on the attractiveness of UCV for prospective applicants. It is, however, aware that a gender imbalance is not uncommon at LAS programmes and that the need to grow currently prevails.

*Standard E:*

Dedicated and enthusiastic staff members are committed to further development of UCV. They have the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Students feel that they have sufficient access to UCV staff members. The teaching staff to student ratio of 1:9 also favours an intensive, small-scale educational setting.

*Standard F:*

UCV currently has suitable facilities for offering small-scale and intensive learning opportunities. The Venlo city campus offers sufficient space for interaction between students and staff. Again, the panel emphasises the need for anticipation of further growth, not only in the availability of facilities but also in way in which health and safety measures are implemented and secured to guarantee a safe research environment for students. The efforts by UCV and the City of Venlo to create also a suitable living situation for international students in Venlo are, in the panel's view, of vital importance for the



development and success of UCV. All facilities at UCV currently meet the standard with one exception, namely UCV students' access to psychological support. Although students may have access to the central university facilities in Maastricht, this is considered by the panel insufficient considering UCV's unique student population. Psychological support should be available in Venlo.

*Standard H:*

UCV delivered its first cohort of graduates. Although the current sample is rather small, the panel trusts UCV to build on its first results. These are promising. The GPA results are high and comparable to the results of UCM and MSP at MSoLAS. The reviewed capstones reflect the broadening of interests as formulated in UCV's intended learning outcomes and contain a recognisable interdisciplinary element. Success rates are good, although based on limited numbers. Most graduates of the programme continued their education in the Netherlands. This is in line with the panel's expectations for a first cohort of graduates.

All standards of the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018) currently meet the standard. These combined findings result in a positive assessment of the Distinctive Feature by the panel and it advises to grant UCV the Distinctive Feature of Small-scale and Intensive Education.

For a practice-based assessment, the panel advises considering:

- The way in which UCV responds to the recommendations regarding the added value of the combined thematic approach in UCV's curriculum, profile and ILOs;
- The further advancement of structural, extracurricular activities related to the UCV's curriculum and aims;
- The way in which UCV's approaches curriculum development;
- The way in which UCV reacts to further growth, including safe access to laboratory facilities, the availability of psychological support in Venlo and sufficient study and social space for students at Campus Venlo.

The panel assesses the standards from the *Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018)* in the following way:

*Bachelor's programme Liberal Arts and Sciences - University College Venlo*

Standard A: Intended learning outcomes	meets the standard
Standard B: Curriculum: contents	meets the standard
Standard C: Curriculum: learning environment	meets the standard
Standard D: Intake	meets the standard
Standard E: Staff	meets the standard
Standard F: Facilities	meets the standard
Standard G: Achieved learning outcomes	meets the standard

General conclusion	positive
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The chair, prof. dr. Theo Engelen, and the secretary of the panel, dr. Els Schröder, hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 28/03/2019

*Summary judgment Distinctive Feature Small-scale and Intensive Education bachelor's programme Liberal Arts and Sciences, Maastricht Science Programme*

*Standard A*

The intended learning outcomes (ILOs) for MSP are attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for above-average degree level. The programme is geared towards broad academic development in the natural sciences, paying attention to the fields of biology, physics, chemistry and the most relevant tools in mathematics and interdisciplinary combinations of these fields. This widening of perspectives is considered valuable for students with an interest in the natural sciences. Skills-training is geared towards achieving a high level, including problem-solving, critical thinking and decision-making skills. The panel noted that personal communication skills and development of an independent research attitude are not clearly expressed in the ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. The panel thus recommends incorporating these specific skills in the MSP's ILOs.

*Standard B*

MSP offers a strong, science-based curriculum that meets the intended broadening of interests as set down in the MSP's ILOs. Modules on the role of ethics within science and courses with regards to the importance of the ways in which the sciences, social sciences and humanities mutually relate would be welcomed by the panel to further enrich the current curriculum offering. MSP offers a range of extra-curricular opportunities for students to deepen and broaden their interests, some of which are clearly inextricably bound to the curriculum such as extra-curricular lectures, field trips and career events organised in collaboration with alumni. The panel encourages staff and students to take MSP's move to the Tapijntuin Campus as an incentive to rethink its current offering of extra-curricular activities and expand upon it.

*Standard C*

MSP forms a thriving community of learners in which both staff members and students reap the benefits from the programme's small-scale, intensive setting. MSP's didactic take, a combination of the RBL/PBL-approach and the principles of an open curriculum, create a dynamic, student-centred classroom. The didactic principles both structure their preparation and self-study hours while also ensuring a good numbers of hours filled with face-to-face teaching. The curriculum is structured in such a manner as to ensure nominal study progress by the students, including extracurricular activities. The panel appreciates in particular that students also have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure.

*Standard D*

MSP attracts diverse, motivated and able applicants who are familiarised with MSP's specific structure and unique profile in the application process. The application process including its interviews is highly valued by students and functions as a two-way selection process that allow applicants to weight their interest in MSP as well allowing MSP to weigh candidate's suitability and motivation for its curriculum offering. MSP guarantees an international classroom which also is diverse in terms of gender. This is considered a positive for a programme dedicated to the natural sciences. Dropout rates at MSP are significantly lower than at other Maastricht University programmes, which is considered further proof of the successful match realised between the MSP and its students.

*Standard E*

Teaching staff at MSP has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Teaching staff at MSP is dedicated to the programme and committed to their students. The teaching staff to student ratio of approximately 1:14 also favours an intensive, small-scale teaching setting.

*Standard F*

MSP has its own infrastructure, including very good facilities for undergraduate research. The panel considers the biology and chemistry facilities at the Brightlands Chemelot Campus state-of-the-art





## DESCRIPTION OF THE STANDARDS FROM THE ASSESSMENT FRAMEWORK FOR LIMITED FRAMEWORK ASSESSMENTS

This part of the report takes the NVAO's Assessment Framework for Limited Programme Assessments (September 2016) as its vantage point.

### Introduction

The Maastricht School of Liberal Arts and Sciences (MSoLAS) offers bachelor's degrees at three organised units: University College Maastricht (UCM), Maastricht Science Programme (MSP) and University College Venlo (UCV). After successful completion, students receive a degree as Bachelor of Arts (BA) or Bachelor of Science (BSc), depending on the composition of the individual programme.

MSoLAS is part of the Faculty of Science and Engineering (FSE). While at the curricula of UCM, MSP and UCV are linked, they are considered units within FSE for organisational purposes yet are expressively seen as three alternative course offerings within a single bachelor's programme Liberal Arts and Sciences (LAS). UCM, UCV and MSP are headed by a Dean, who are responsible for all academic and other processes. The three Deans formally meet each month in a scheduled Deans' meeting. They preserve the identity of UCM, UCV and MSP within the bachelor's programme LAS. In addition, the Deans aim to safeguard the uniformity and coherence between the programme's curricula in close collaboration with the Educational Programme Committee (EPC) and the Board of Examiners (BoE). The EPC and BoE each have a central organisation with chambers representing UCM, MSP, and UCV; these chambers and the central boards come together on a regular basis.

In this chapter of the report, UCM, MSP and UCV are presented collectively as they are three specific course offerings within the bachelor's programme LAS at MSoLAS; the presented findings and considerations reflect on each of the three course offerings of the bachelor's programme LAS at MSoLAS, unless otherwise indicated.

### 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.

### Findings

The educational philosophy of MSoLAS is rooted in the Liberal Arts tradition. Its programme is modelled on the open curriculum model; students are offered a wide range of courses and modules from which to choose and can all individually design their own programme. They are supported by their Academic Advisors. The BoE performs the final check that students eventually meet the intended learning outcomes (ILOs). UCM, MSP and UCV differ in focus and have translated their respective focus into the specific intended learning outcomes for each course offering.

As an open curriculum with flexibility of choice demands a certain flexibility of its ILOs, MSoLAS has settled on open intended learning outcomes for the bachelor's programme LAS. The programme shares four aims which could therefore be seen as the overarching goals of the MSoLAS degree. Graduates are expected to have:

1. A broad academic development – a breadth of academic knowledge;
2. in-depth academic expertise in a number of related academic fields and disciplines;
3. highly-developed academic and professional skills; and
4. highly-developed personal and social skills.

The panel confirms that these underlying objectives of MSoLAS are in line with the principles of an open curriculum and aim for a high level of achievement with its strong focus on developed skills and knowledge training. The focus on breadth of intellectual and academic knowledge and the development of in-depth academic expertise in a variety of academic fields and disciplines is also in



line with the expectations for a LAS degree programme in an international context, as is a focus on the development of problem-solving skills and the development of critical thinking.

Specific ILOs have been defined for UCM, UCV and MSP respectively. After studying the ILOs reflecting these objectives, the panel noted that whereas the ILOs of UCM clearly reflect the international LAS philosophy of multi- and interdisciplinary research in the humanities, social sciences, and natural sciences, those of MSP and UCV reflect multi- and interdisciplinary degrees addressing a more limited range of disciplines that adopt ideas from the international LAS philosophy. The panel asks MSoLAS to consider reformulating MSP's and UCV's intended learning outcomes in such a way that they more comfortably fit the international LAS philosophy or, alternatively, to reflect on the current model in which UCM, UCV and MSP all fall under the umbrella of a LAS education. Nevertheless, the ILOs of UCM, UCV and MSP together match the national requirements formulated in the domain-specific framework of reference for a LAS education in the Netherlands, and offer unique study trajectories for students aiming to cross disciplinary boundaries at an ambitious level. They are also in line with international requirements regarding the degree level, such as the Dublin descriptors, and aim at a good degree level.

#### *University College Maastricht*

UCM covers the social sciences, the humanities, and the natural and life sciences, the latter with an emphasis on the life sciences. It aims to give students a sound basis in the three main domains of human inquiry and gives students the opportunity to cross disciplinary boundaries. With appreciation, the panel noted that UCM reacted to earlier suggestions and updated its ILOs to include a clear focus on multi- and interdisciplinary skills. This is most clearly visible in the ILOs focussing on broad academic development, with attention for all three main domains of scientific inquiry, i.e. the humanities, social sciences and (life) sciences (ILO 1.1) and in the intended learning outcomes adhering to the application of inter- and multidisciplinary skills (ILO 2.2 and 2.3). The panel considers the formulated ILOs attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary context in line with the international LAS philosophy.

#### *University College Venlo*

UCV is rooted in an orientation on the (life) sciences and social sciences, with a thematic focus on 'Food, Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. Valorisation of academic knowledge through application and innovation are part of UCV's educational profile. The panel considers the formulated ILOs attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for excellence. UCV's intended learning outcomes also reflect a societal orientation, with its interest in ideas regarding globalisation and sustainability (ILO 1.2). In this sense, the learning outcomes reflect values and interests underlying international LAS programmes and also follow the open curriculum model. In the panel's view, a broad multidisciplinary programme focussing on food, nutrition and economics could benefit from historical and moral concepts underpinning human behaviour and technology, without losing its attractiveness for students interested in UCV's unique thematic focus. These panel suggestions were acknowledged by the UCV's Dean, who emphasised that UCV is willing to further broaden its focus when maturing as a college. Additionally, the panel considers it important to make clear how the two focus areas of UCV fit together and deepen the students' learning experience. The aim to valorise academic knowledge in practice is considered a strong point by the panel, but it warns UCV to always foster academic principles of research in doing so.

#### *Maastricht Science Programme*

MSP offers an open curriculum in the natural and life sciences. It has no specific thematic focus and offers students an opportunity to explore the disciplines of biology, chemistry, mathematics, neurosciences and physics as well as a range of interdisciplinary topics that are at the interface of these fields. In addition, MSP embraces elements of the LAS model, such as the open curriculum, the importance of the development of (inter)personal skills (ILO 3 and 4), attention for multidisciplinary scientific problems (ILO 2.3) and attention to the need for a study of the context



and central concepts interfering with scientific research (ILO 2.1). The panel considers the ILOs attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary scientific context. The panel acknowledges MSP's unique profile and its attractiveness for students with an interest in the sciences that crosses scientific disciplinary boundaries. The panel also noted that personal communication skills and development of an independent research attitude are not clearly expressed in the MSP's ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. It thus recommends incorporating these in the ILOs.

In addition to its earlier observation regarding the ILOs orientation, the panel recommends MSoLAS reformulate the intended learning outcomes in such a way that they are more easily measurable. In the panel's view, the current phrasing allows too much room for interpretation regarding the expected level of expertise and could therefore result in subjectivity regarding the ways in which these ILOs have been achieved by the programme's graduates. For example, all three sets of ILOs refer to intercultural skills as a programme aim. This inclusion is in itself commendable, but without any indication of what kind of specific interaction between different socio-cultural and national backgrounds is aimed for, the successful achievement of this ILO is hard to assess. More measurable goals could then drive student learning in a more focused way by providing a clear framework to inform the programme's assessment. According to the panel, MSP is already well on its way with formulating the ILOs in a more quantifiable way. The panel thus commends the programmes to take the MSP phrasing of its ILOs as starting point for a discussion of how to address this matter.

### **Considerations**

The panel established that MSoLAS has an attractive bachelor's programme with interesting and varied profiles for ambitious students. UCM offers a classic LAS education in the international tradition. MSP attracts students with an interest in the sciences that want to cross scientific disciplinary boundaries. UCV has embraced a thematic focus on two main areas of interest: 'Food, Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. The programme has a radically open curriculum structure and invite students to cross disciplinary boundaries, two aspects stemming from the international LAS philosophy. The panel asks MSoLAS to reformulate MSP and UCV's intended learning outcomes in such a way that they more comfortably fit the international LAS philosophy with regard to the importance of the ways in which the sciences, social sciences and humanities mutually relate or, alternatively, to reflect on the current model in which UCM, UCV and UCV all fall under the umbrella of a LAS education. The ILOs of UCM, UCV and MSP together match, however, the national requirements formulated in the domain-specific framework of reference for a LAS education in the Netherlands and are also in line with international requirements regarding the degree level, such as the Dublin descriptors. They also aim at a good degree level. The panel's observations regarding MSoLAS' profiling are therefore considered instructive rather than of consequence for a positive assessment of this standard.

The panel considers the intended learning outcomes as formulated for the programme attainable for students, but recommends sharpening the formulations in such a way that they are more easily measurable. The phrasing of MSP's ILOs, which the panel considered already more clearly defined, could hereby serve as a starting point. This would further benefit the transparency of the goals aimed at and could help students in the achievement of them. The panel therefore assesses MSoLAS' intended learning outcomes currently as of satisfactory level. For MSP, the panel noted that personal communication skills and development of an independent research attitude are not clearly expressed in its ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. It thus recommends incorporating these specific skills in MSP's ILOs. The panel considers UCV's aim to valorise academic knowledge in practice a strong point of its current profile, as long as academic principles are observed in the process. In addition, the panel would like to see the combination of UCV's thematic focus areas explained in both UCV's profile and its ILOs. The additional value of the combined teaching of both themes should be clarified and become an integral part of UCV's communication of its aims. With appreciation, the panel noted that UCM reacted to earlier suggestions and updated its ILOs to include a clear focus on multi- and interdisciplinary skills.



## Conclusion

*Bachelor's programme Liberal Arts and Sciences: the panel assesses Standard 1 as 'satisfactory'.*

### **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.

## Findings

### *Educational philosophy and didactic concept*

MSoLAS has implemented at UCM, UCV, and MSP the principles of an open curriculum, offering students a clear opportunity to direct their studies in a way that they meet their needs and requirements. Combined with multi- and interdisciplinary approaches, this open curriculum is indebted to principles deriving from the LAS philosophy. Often conducted in a strong international context, LAS programmes promote intercultural understanding, abilities and societal engagement. The dedication to the LAS philosophy at MSoLAS is also reflected in the fact that the first professor of Liberal Arts and Sciences Education in the Netherlands has recently been appointed at UCM.

At Maastricht University (UM), education is based on the Problem-Based Learning (PBL) method, which is based on the learning process of the student. Students meet usually twice per week per course in small groups, discussing specific problems in depth. These problems are formulated in such a way that students are led to pose all types of explanatory questions. Based on this discussion, students formulate the subject matter to be studied. The PBL approach and group discussions stimulate students to acquire relevant knowledge, insight and skills relatively independently. This emphasis on self-motivation is a core feature of PBL. After individually acquiring the relevant knowledge, it is shared with the other group members and discussed.

MSoLAS's educational philosophy naturally results in a student-led curriculum and student-centred classroom, the panel concluded. This suits a bachelor's programme in Liberal Arts and Sciences well. It guarantees close interaction between students and staff, between students amongst themselves and results in an intensive study experience for students, in which they have to take personal responsibility for their own learning trajectory. Every course is supported by a PBL tutorial group with a maximum class size of 14 students. If a specific course is in high demand, the bachelor's programme offers more PBL tutorial groups. In this way, a place in the course of first choice is guaranteed for all students, which is commendable. PBL tutorials are mandatory and offer an interactive, intensive and active educational experience to those partaking. The tutorials also result in concrete tasks and goals for all group members to efficiently plan and direct the necessary hours of self-study. The panel also appreciates the flexible way in which PBL is implemented at the programme. PBL is used in combination with more traditional methods such as lectures, tutorials, interactive seminars, workshops and, when appropriate, Research-Based Learning RBL. RBL take scientific and socio-political problems as a starting point, asking students to carry out research to answer these problems.

### *Curriculum structure*

MSoLas offers a full-time English-language programme of 180 ECTS in three course offerings, taught over six semesters. Each semester consists of three periods: two eight week periods, in which students take two courses and one skills module, and one four-week period in which students do a full-time project. Students have a reflection week after exam weeks in the periods 1, 2, 4 and 5, which is highly appreciated by the students. The reflection week is also highly appreciated by the panel as it allows for a moment to internalise for students what has been learnt and what may lay ahead.

The principles of the open curriculum are fully embraced within the bachelor's programme LAS at MSoLAS. Students design their own curriculum from the range of modules offered in the course



catalogue. All MSoLAS modules are open to all MSoLAS students, although they are tailored to the specific profiles of UCM, UCV and MSP. UCM, UCV and MSP all have its own graduation requirements, which feed into student's choices. Students are coached and, when necessary, guided by personal academic advisors to ensure that all the aims are met. Attention is paid to the level of chosen courses. Modules are taught at three levels: introductory 1000-level, the intermediate 2000-level and the advanced 3000-level. Students may only choose a limited number of introductory modules and have to take a certain number of advanced level modules.

The programme exists of six components, which are required for all MSoLAS students but are tailored to their specific curriculum offering. First, students complete a mandatory set of modules: the core curriculum. Second, they choose from a broad array of subjects that correspond to the MSoLAS aim of a broad academic development. In this way, students gain a breadth of academic and intellectual knowledge across disciplinary boundaries. Third, students meet conditions regarding academic depth; focus is acquired by choosing a set of related courses out of the course catalogue, in which students progress from the introductory level to the advanced level. Fourth, students follow a wide range of skills modules in which their research and professional skills are advanced. Fifth, students complete five projects. The projects have a strong collaborative element and stimulate students to draw on their individual academic profile. And finally, sixth, all students complete a final project – called 'capstone' at UCM and UCV and bachelor thesis research, also referred to as bachelor thesis in the remainder of this report, at MSP.

All students submit a summary of their planned topic, write a proposal/outline including a literature review and write a thesis/report on their specified topic. At UCM, UCV and MSP, students are required to present their capstone or thesis. The panel considers this good practice and an excellent opportunity for students to demonstrate their communication and presentation skills. The panel noted that only UCV has clear guidelines assuring that UCV capstones always contain an interdisciplinary element. The panel was enthusiastic about this approach and recommends UCM and MSP to consider this option also for their respective capstone and bachelor thesis project. For their final work, students at all three course offerings are supervised by an experienced researcher. A coordinator at UCM, UCV and MSP oversees the process and safeguards the overall quality of the projects; this coordinator is always a core staff member of the respective learning path to safeguard that the specific nature of UCM, UCV and MSP are taken into account when students are supervised by staff members from other Maastricht University faculties, as is regularly the case at UCM and UCV. Requirements for external supervisors are in place, attuned to the content and set-up of the capstone and bachelor thesis..

#### *Curriculum content: UCM*

The UCM course catalogue offers 138 courses for 2017-2018. The core curriculum consists of four courses related to the aim of the degree programme. In it, students are familiarised with the principles of scientific research, the major political issues of our time, historical developments in the world over the last 70 years, and why abstract concepts and models are vital in science. Students may further choose out of 10 projects, 19 skills courses as well as a range of research modules. In these courses, collaboration, professional and academic skills such as the use of research methods, writing, presenting, argumentation and laboratory skills are taught. In addition, students can choose out of 39 humanities courses, 32 sciences courses and 63 social science courses.

The panel studied the choices available at UCM. The choice in humanities encompasses courses in philosophy, history, art and literature, science and technology studies, as well as cultural and gender studies. Science modules focus on biomedical sciences, applied mathematics, information sciences, and some courses in sustainability science. In the social sciences a wide array of courses are available. It includes modules in sociology, political science and international relations, conflict resolution, psychology, entrepreneurship, public policy and development studies. Also, UCM offers many courses in international/EU law, human rights, economics and business. The panel appreciates the variety of topics and interests represented and is pleased to note that, over the years, the amount of modules in the humanities and sciences has been enlarged.



The panel also studied a selection of courses for UCM to get an idea of the level of courses on offer and the way in which PBL is implemented. PBL is implemented in an open, flexible way. Many courses employ its principles for parts of the course, while mixing it with more traditional approaches to learning if appropriate. The interdisciplinary character of the programme manifests itself in the modules' content. Many courses are thematic or explicitly interdisciplinary. The supply in modules is diverse and so are the panel's impressions. Some of the studied courses are considered excellent. In 'Economics and Society', students are challenged with high-level reading and exams with creative questions provoking critical thinking. 'Theory Construction and Modelling' offers excellent illustrative case studies and is considered highly relevant for foundational study on interdisciplinary programmes. One course was slightly less appreciated. The panel thought that the module on 'Cognitive Neuroscience' would benefit from a fresh look at the reading materials and the modes of testing. On the other hand, this particular course required students to present a research proposal, what was considered challenging and fun by the panel. The panel considered the studied courses at UCM in general as of good level.

Students have ample research opportunities at UCM. During the site visit, the panel was introduced to some exciting opportunities. Students with an interest in research have the opportunity to apply for a place in the 'MaRBLe- project' (Maastricht Research-Based Learning-Project). This is a semester-long module that replaces two skill courses and a project, in which students do research under the guidance of a senior UM researcher. MaRBLe is offered in the form of projects that focus on a theme or method that is not generally addressed in the regular curriculum, is current and topical and/or multidisciplinary. The panel also noted some very interesting projects at UCM, using a myriad of research methods and skills including interviewing techniques and the arts. For example, the 'Documentary Project' for which students use film-making as a method to publish results based on an archival experiences. Another interesting proposition is 'Ethnography and Qualitative Interviewing', for which students take part in an active research project. It has resulted in some UCM students actually publishing in research journals. UCM also introduced since the previous assessment a double degree programme with the University of Freiburg, which also adds to the number of prospective challenges for students available at UCM.

Also, students at UCM can apply for an Applied Research Internship (ARI). For partaking in this opportunity, the programme recruits organisations with a good, research-based problem and/or academic problems to guarantee the academic level of the internship. Among its former clients, UCM counts impressive partners such as Free Press Unlimited, Bonnefantenmuseum, Ecolab, NATO, Limburg province and various Ministries. The panel is impressed by these opportunities and compliments UCM on its good opportunities for undergraduate research.

Furthermore, UCM offers, just as UCV, the elective project called 'Think Tank' in which students write a recommendation for an external client, i.e. company or organisation. The panel liked this project tremendously for its clear conceptualisation of the course and its rationale. During the site visit at both Venlo and Maastricht, it was introduced to several examples of successful projects resulting from this module. UCV and UCM also efforts in ascertaining that these projects are benefitting society.

#### *Curriculum content: UCV*

The UCV course catalogue offers 56 courses for 2017-2018. The core courses provide knowledge and skills all UCV graduates must have, paying attention to the philosophy of science, the politics and economics of globalisation, the modelling of nature and offering an introduction to cultural studies. Students may further choose out of 8 projects, 15 skills courses as well as their own undergraduate research projects. To stimulate all students to broaden their horizon, UCV has a general education requirement: all students have to take some courses outside their concentration on social sciences and (life) sciences to encourage students to broaden their interests. Within and across these concentrations, UCV focuses on the themes of 'Food, Nutrition and Health' or 'Business, Logistics and Entrepreneurship'. In total, there are 21 courses in (Life) Sciences, 23 in Social Sciences and 8 that can be clustered under each of the two concentrations.

Research skills, in addition, are applied throughout the project work students undertake. They start in their second semester in an undergraduate research project named 'The Applied Researcher', for which students conduct original research in a small group. They pose their own research question, based on a pre-determined framework, and present their findings in a poster presentation at the UCV Conference. The panel liked the hands-on approach of this project and the practice of presenting the achievements through a poster, of which it studied some examples during the site visit.

Across both concentrations, UCV modules focus on current topics in 'Food, Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. The first theme is found, amongst other options, in modules on food law, the psychology of eating and macrosociology, gut biology, public health and sustainable food production in the sciences concentration. The second theme can be studied through modules on entrepreneurship and micro- and macroeconomics, next to modules on game theory, marketing and statistics. After studying the available options, the panel agreed that UCV offers a fairly unique programme with an interesting variety of courses. The panel would, however, advise UCV to strengthen its curriculum with further modules focusing on logistics in the coming years, especially as UCV aims for direct valorisation in the region of Venlo, which has a large concentration of logistics-related businesses. The management indicated during the site visit to be aware of the potential benefits.

Also, the panel feels that UCV may want to consider incorporating some perspectives taken from the humanities in its curriculum, either by adding a course to the core curriculum discussing the principles of Liberal Arts and Sciences or by setting a requirement for students to follow a relevant course, or courses, at, for example, UCM. In the panel's view, a broad multidisciplinary programme with a thematic focus on food and nutrition could benefit from some of the historical and moral concepts underpinning human behaviour and technology, without losing its attractiveness for students interested in UCV's unique thematic focus. It would also bring UCV's focus more in line with the international principles of the LAS philosophy. During the site visit, the management mentioned that UCV students already had the option of following courses at UCM. Conversely, students indicated that not many made use of this opportunity. The panel is concerned that students at UCV would not naturally gravitate by themselves to humanities options. The panel would thus encourage UCV to seek an incentive for students moving out of their comfort zone, for example by setting requirements to do so.

The panel also studied a selection of courses for UCV to get an idea of the level of courses on offer and the way in which PBL is implemented. These modules are at an adequate level. The panel noted, in general, that the studied courses flexibly used the principles of the PBL method, often formulating clear, well-defined cases or problems that gave a good indication of what the course is about. The panel liked the studied core course on 'World Orientation'. It was clearly interdisciplinary in character, used suitable study materials and adequate and diverse forms of assessment. The skills course studied on 'Presentation skills' seemed adequate: students implement knowledge taken from other courses, which helps them to deepen their knowledge of those courses while applying their skills to a scientific problem. For the course 'Writing a grant proposal', the panel suggest considering working with given simple research topics over the current model in which students have to search for content information. This would free time up to pay more attention to essential elements that are always hard for students, such as the formulation of a good research question and the delineation of a topic.

At the moment, two courses in 'Plant Biology' are taught in collaboration with Fontys University of Applied Sciences (Fontys) and a course in 'Food Technology' is taught in collaboration with HAS University of Applied Sciences, both also based in Venlo. Bachelor students of UCV, Fontys and HAS respectively may enrol in these courses. The management explained that Fontys and HAS currently have qualified staff members available with expertise relevant for these specific courses. The panel discussed with students and the management whether provisions were taken to assure that these courses were sufficiently aimed at an academic level and UCV's specific educational needs. Students had no specific complaints regarding the level of the courses, but indicated that UCV's distinct profile was less clear in these courses. The management admitted that the current set up was not ideal, a



conclusion shared by the panel. It therefore strongly recommends creating UCV-specific courses, tailored towards the demands for small-scale group teaching and tailored to the LAS principles.

When looking at the capstone trajectory, the panel noted that UCV students present their topics and research questions to their fellow students at an early stage of their capstone trajectory. This was appreciated by the panel and considered an example of good practice. The panel also very much appreciated the interdisciplinary element in UCV's capstone. With UCV staff members, the panel discussed the idea of introducing a project-based capstone for UCV students aimed at achieving closer contact with regional partners. The panel appreciated the staff's enthusiastic and open response, demonstrating an entrepreneurial and development-oriented spirit which will result in further advancement of UCV's profile and curriculum building.

The panel acknowledges that UCV is only in its fourth year since its foundation and is therefore still very much developing its curriculum. When asked, students indicated that they would appreciate a core course on statistics, perhaps trained as a core skill for all students enrolling in UCV. The management is currently researching how to address this wish in the best manner. Last year, optional SPSS courses were offered during reflection weeks for those wanting to brush up their statistical skills and the UCV management is now contemplating whether these courses should be mandatory or whether an alternative solution should be considered. The panel considers this a good example of the ways in which UCV reacts to the needs of the community it serves. In the panel's view, this example is proof of the way in which recommendations and suggestions feed into the further development of UCV's curriculum.

#### *Curriculum content: MSP*

The core of MSP encompasses four core courses ('Biology', 'Chemistry', 'The mathematical foundations of Physics' and 'Liberal Arts and Sciences'), two core skills ('Research methods' and 'Research, data analysis and presentation academic skills') and one mandatory project ('Philosophy of Science'). The course catalogue shows a wide array of courses within the fields of Biology, Chemistry, Physics and Neurosciences next to courses in Mathematics and a good set of interdisciplinary courses drawing on several disciplines of the natural sciences and searching for cross-overs. In total, students could choose out of 75 courses and 34 skills modules for 2017-2018. The various disciplines of the natural sciences are well-represented and the interdisciplinary courses bring MSP's strength and added value to the forefront. Some of these interdisciplinary courses were offered twice a year, to allow students maximal flexibility.

Next to these modules, the students reflect on the interdisciplinarity of the sciences in their research projects. In 2017-2018, a total of 78 research projects were offered. Uniquely for MSP, these research projects are not only initiated by staff members but also by students and businesses. Research projects are commonly exercised in a laboratory setting at the Brightlands Chemelot Campus or, in some cases, at other faculties of UM, in the field or at companies. The panel verified that MSP assured that students always work under qualified supervision and that all necessary safety regulations were closely followed. It is for the panel another example of the advantages of a truly student-centred approach to teaching, resulting in good variation of research options across the spectrum of the sciences.

All courses studied by the panel for MSP were considered solid and interesting, offering content at the required bachelor level. Many courses encouraged or required students to apply their knowledge to active problems, which was considered a strong point by the panel. Skills courses address a variety of scientific skills, ranging from techniques, methodologies and data analysis next to academic skills as communication, writing and presenting. These courses use a RBL, rather than the PBL approach as scientific skills are often best learnt in a research setting. This is in line with what the panel would have expected and further proof of the sound way in which PBL is implemented within MSoLAS. The panel noted with appreciation that in 'Theory of relativity', students were asked set their own task of their own choice that fit the module requirements. It considered it an example of student-led learning that was challenging and also encouraged students to think outside of the box. 'Science in Action',

was considered an interesting course. It brings together historical issues, ethics and sociology in understanding how science is created. The courses used a myriad of sources (film, lectures, readings, discussion papers) and was set up in such a way that critical thinking was encouraged.

The panel appreciates the fact that MSP has one core course explicitly addressing the Liberal Arts and Sciences and that the mandatory project 'Philosophy of Science' aims to address MSP scientific orientation within a broader context drawing from ideas of the humanities, and sometimes the social sciences. Students explained during the site visit that 'Liberal Arts and Sciences' existed of two components. They explored the views of some famous philosophers on science (Descartes, Hume and Copper). In addition, they paid attention to critiquing – on how to give a good rebuttal and feedback by using course materials on the problems famous scientists faced during their careers. Students also pointed out that their research projects could be art-based, for instance art restoration, and that recently a project was introduced researching how scientific facts could be presented to the general public. They felt that the balance in the course offering at MSP was right, in particular as MSP's focus is explicitly directed towards the natural sciences.

The panel appreciates the students' viewpoint in this respect, but encourages MSP – and more specifically MSoLAS in general as a large liberal arts institution – to challenge these views. The panel feels that LAS students should be made aware of their own disciplinary preconceptions and be able to reflect on the limitations of their discipline. The MSP students, who in general made an excellent impression to the panel for their balanced and meticulous appreciation of MSP, seemed unaware that they classify themselves in a group that also excludes certain interest areas, in particular those within the humanities. The panel feels that these dividing lines should not be institutionalised by creating overly specific narratives for the three course offerings and cultivated identities, but challenged within MSoLAS according to the LAS-philosophy. This could be achieved, for example, by exposing MSP students to more explicit interdisciplinary courses over the fields of the humanities, social sciences and natural sciences. Another suggestion would be, beneficial to all MSoLAS students, to confront students on a more regular basis with each other's approaches and disciplinary takes, for example by organising shared MSoLAS events or courses between UCM, UCV and MSP.

After having studied the curriculum, the panel considers MSP's curriculum interesting and challenging. It feels, however that the intended broadening of interest as defined in MSP's ILOs could be further strengthened, for example by introducing more modules that pay explicit attention to the role of ethics within science and in the way in which the sciences are influenced by social and moral ideas and attitudes. In line with the panel's observations regarding MSP's profile under Standard 1 and its suggestion to rethink MSP's current positioning within MSoLAS, the panel feels that any repositioning of MSP would naturally also be reflected in the module choices for students. The panel discussed these issues with the MSP management and with the deans of UCM, UCV and MSP during the site visit. It heard that MSoLAS is currently in the process of reviewing its current setup. The management assured the panel to value its considerations and take these findings seriously. The panel trusts the MSoLAS programme to make good use of these observations and want to emphasise that while these may reflect a missing aspect of the MSP curriculum, it does not impede on students' current teaching-learning environment at MSP.

#### *Advice, guidance and support*

Academic advisors are a core part of education at MSoLAS and its learning environment at the programme and ensure the coherence of a student's curriculum. All students have an appointed academic advisor, who assist students in structuring their learning trajectory and guide students through the decision-making process that is crucial for creating coherence in an abundance of choice. The advisor is a UM-staff member and has a link to the academic field the students is interested in. If required, students may change advisors, for example when their interests shift throughout the years and different expertise is called upon. Changing of advisors is, however, not encouraged to ensure stability of academic advisor system. Students meet their academic advisors at least twice a year to discuss their choices, progress and general academic development.





UCM, MSP and UCV each have an Office of Academic Advising (OAA). The OAAs coordinate the advising efforts at the three learning trajectories as well as attune practices amongst MSOLAS. In addition, the OAAs provide regular training for advisors to ensure and enhance the advisors' practices, often in combination with the management. Students at UCM, UCV and MSP were positive about their advisors, the quality of the service and the support offered to help them with shaping their own curricula. Staff members felt supported and praised the OAAs. Online advising tools include a website with the latest information and materials, such as the Academic Advising Handbook, course catalogues and registrations forms next to rules and regulations.

The OAA at UCM also organises, next to the standard advising meetings for students, the opportunity to drop in for additional advice at twice-weekly office hours. They collaborate for these sessions with UCM's Student Counselling coordinators who may, if needed, offer personal support. Furthermore, UCM has created a series of workshops which assist students in developing the necessary skills to make decisions about their curriculum. UCM students explained that they also set up their own, individual (ad-hoc) peer advising system to add to the existing infrastructure. The panel appreciates these additional opportunities that help students shape their decisions.

At UCV, students partake in peer-advising in a more structured setting. Students who share the same academic advisor, e.g. students within the same field, meet their peers in sessions during the reflection weeks. In these weeks, students focus on their Life-Long Learning Skills through workshops, orientation fairs, social activities and peer advising sessions. In these peer advising sessions, students tackle challenges in their field of interest and design strategies to navigate these. The panel appreciates this set-up that allows students to both reflect on past experiences and to prepare for their future and considers it excellent practice within MSOLAS.

Next to academic guidance, the panel also paid attention to personal and psychological support at UCM, UCV and MSP, and to the communication between students and the management. Students indicated that they felt represented and heard by the management teams through formal (Educational Programme Committee) and informal means (direct contact with lecturers and management). They considered their teachers easy to approach, attentive and considerate for both academic and personal needs. Students from UCM, UCV and MSP gave examples of how their feedback resulted into changes. When MSP students encountered a major scheduling issue, the MSP management directly took this up; as a result students did not encounter any inconvenience in their curriculum planning. At UCM, students gave the example of how their wish for content warnings was taken up within a semester. The UCV Educational Programme Committee currently looks into the improvement of the UCV facilities with the management in reaction to student feedback. To the panel, communication between students and the programme seems to function well.

At UCM, personal student counselling is available in-house through a twice-weekly office hour; student counselling also refers students to additional psychological support, if necessary. At UCV and MSP, students are referred for psychological support to the psychological support services at UM in Maastricht. During the site visit at UCV, students pointed out that Maastricht is actually quite some distance for those in psychological distress. The panel agrees with the students in this respect and considers it important that this distance is bridged in the near future: the Venlo campus has its own infrastructure and UCV is an environment that aims to challenge and test students, who are also often from a variation of (international) backgrounds. Psychological support should therefore be readily available within this context. The panel therefore strongly supports this student request with the advice to organise office hours for in-house psychological support at UCV, perhaps in some way inspired by the UCM model. The panel also wants to compliment UCM in this context on its annual organisation of a dedicated 'Health week'. In this week, UCM students are challenged to focus on the attitudes necessary for creating a healthy study-life balance. UCM organises together with its students plenary and extra-curricular events to discuss mental and physical health and offer information on the available support networks in order to raise awareness.

For career advice, students also turn to their respective college or programme. MSP students complimented both their teachers and advisors for the excellent way in which they were prepared for future career options. They thought that one of the biggest assets of MSP was in the way in which they were trained to adapt. As a result, they felt no hesitation to apply for ambitious master programmes and were very confident that they would get in. If needed, teachers or the MSP staff management were always available to support them through the application process, providing further information on the MSP philosophy and profile, if needed. UCM students also felt amply prepared and felt that they, through their projects and research options available, could explore professional interests in preparation for their future. Currently, UCM students are working with the management and the Board of Examiners on a system that would allow them to make their specific skills and interest even more tangible through data mining, the so-called 'Recommender System'. The panel looks at this initiative with interest. At UCV, students mentioned that they currently missed opportunities for connecting with businesses for internships. According to the management, this is indeed a point of attention in the coming years which will be addressed.

### *Staff*

The bachelor's programme LAS makes use of core staff members employed directly by UCM, UCV and MSP and 'hired' staff, e.g. staff members from other UM-faculties depending on the module demands. In this way, students benefit from a small-scale LAS setting and the expertise of active researchers from a wide field of disciplines and interests. The panel appreciates this combination, which, based on the evidence presented in the self-evaluation report and testimonies during the site visit, is balanced and well-monitored by the MSoLAS management. Hired staff members from other faculties are vetted by the management. All hold a relevant university qualification, are intensively trained by UM on the didactic needs of PBL with further attention to the open curriculum and the needs of a small-scale teaching environment. All staff members regularly attend teaching workshops to further develop their teaching practice.

At UCM, 40% of the modules are currently taught by core staff members and 60% by hired staff members from other UM-faculties. UCM also employs a number of junior teaching fellows as UCM tutors, of whom the panel ascertained that they were sufficiently supported and prepared for their role within UCM. The student to teaching staff ratio of 17 to 1 allows for personalised attention and a small-scale approach in modules. Half of the MSP modules are currently coordinated by core staff and half by other academic staff. The current student to teaching staff ratio of 14.4 to 1 allows for a small-scale, interactive classroom with a lot of face-to-face time for individualised attention to students' learning process. Core staff members form 40% of UCV's teaching force. Next to staff members of other faculties (59% of the total), UCV also hires some external (1%) staff members from Fontys and HAS for expertise not available within UM, as discussed before. Its current student to teaching staff ratio of 9 to 1 is highly favourable for close interaction in an intensive, small-scale setting but is also, at UCV's own admission, still volatile and prone to change as UCV is still very much in a stage of development and growth.

In their recruitment strategy, UCM, UCV and MSP aim for a balance between educational experience and expertise in one of the core disciplines of their respective course offerings. In addition, attention is paid to the diversity of staff, favouring a strong international focus to favour the creation of an international classroom in more ways than only by diversifying the student intake. MSoLAS also strongly favours the (further) professionalization of its staff. All core staff members have a teaching qualification (UTQ) or are in the process of obtaining one. To retain staff, MSoLAS has created an attractive career model that also bears fruit: the panel met during the site visit a staff member who was recently appointed as professor in this career track. This career model is strongly appreciated and applauded by the panel. In this way, the programme ensures a motivated, dedicated staff team that comprises both educational specialists and active researchers.

Staff members at the bachelor's programme LAS feel supported in their further development and indicated that they enjoy teaching at UCM, UCV, and MSP. They all feel like active stakeholders in their respective programme and feel valued and trusted by their colleagues and management. They



also strongly support the didactic approach within MSoLAS that favours students' autonomy and self-reliance, which they see put into practice by the students in their classrooms. Staff members praised UCM, UCV and MSP students for their independent attitude to learning, for their enthusiasm and broader perspective to the subjects covered in the modules and for their active contribution to creating an engaging, interactive and international classroom. Students praised their staff members for their dedication, for their willingness to guide and support them through their modules and for the continuous, often informal, feedback received.

### *Facilities*

During the site visit, the programme visited the facilities of UCV in the city and at the Brightlands Campus Greenport in Venlo, UCM in Maastricht and MSP in Maastricht and at the Brightlands Chemelot Campus in Geleen. All facilities were adequate and sufficiently tailored to the needs of the specific course offerings. Although MSoLAS does not have its own art facilities, the panel heard during its tour of UCM's premises that students could use the art studios of the Maastricht Academy of Fine Arts and Design of Hogeschool Zuyd, which functions adequately according to staff and students. The panel noted in Venlo that UCV should closely monitor its health and safety measures at the laboratories for students in place at the Brightlands Campus Greenport Venlo, as the current set-up seems very dependent on its very small-scale and close personal relations between staff and students. This is currently sufficient, but needs to be closely reviewed in the light of growth. Students at MSP felt very privileged with their facilities at the Brightlands Chemelot Campus. They work here with equipment for research in biology, chemistry and physics. In particular, the research facilities for research in biology and chemistry are considered state-of-the art by the panel.

The panel compliments MSP on its excellent training of staff, who closely supervise and monitor students at these laboratories while giving students the impression of working independently and freely. This creates a challenging and inspiring yet safe work environment, in which students take full responsibility for their research and projects. The good work ethics and practices are also reflected in the meticulous upkeep of laboratory logbooks, as noted by the panel during the tour.

### **Considerations**

The panel encountered at the bachelor's programme LAS MSoLAS three stimulating curricula for UCM, UCV and MSP that all ensure a challenging and intensive teaching-learning environment for the MSoLAS students of good standard. Academic advising at the bachelor's programme LAS is extensive, well-monitored and of high quality. Students feel sufficiently supported and prepared for the choices they face and feel that they are heard and respected. Staff members are, according to students, approachable and reliable and offer good support and feedback throughout their studies.

At UCM, UCV, and MSP, the programme is taught by highly motivated and well-qualified staff members, who fully adhere to the didactical concept underpinning the MSoLAS programme. The faculty exists of both core staff members, who create a clearly recognisable community, and staff members from other UM-faculties, who bring specific expertise to the programme. The panel appreciates this combination, which is well-monitored. Staff members employed at UCM, UCV and MSP are explicitly prepared for teaching using the PBL method and trained in the demands of an open curriculum and small-scale, intensive and international classroom. MSoLAS has a sound career advancement policy in place that ensure stability and a good mix of teaching and research expertise available within UCM, UCV and MSP.

The curriculum at UCM is very strong, with a breadth of courses that are both interdisciplinary and of good disciplinary standard. The panel was impressed with the options for UCM students for undergraduate research that was often conducted in collaboration with well-vetted and interesting partner organisations and clients. Students are engaged and reflective. They feel in charge of their learning process and take responsibility for their own curriculum and training. UCM students also take active part in the further development of UCM. An excellent example of their involvement is students' contribution to the development of the Recommender System, which will in the near future be implemented at UCM. This system will help students to track their skills sets and could, therefore,



support students even further in their career planning. Another example is the way in which students now organise peer advising in addition to the existing advisory system. Also, the panel compliments on UCM's initiatives to create a safe and healthy study environment, exemplified by the attention paid to the study-life balance and the good support system available for students.

The MSP curriculum is of good quality, it is challenging and has a strong research-based and research-led orientation, supported by good skill courses and research projects that allow for plenty of independent initiatives by students and complemented by excellent laboratory facilities. The panel appreciates that the MSP curriculum pays explicit attention to the LAS approach, but challenges the programme to seek together for further connections to bring MSP's curriculum more in line with the ideas underlying a LAS programme. The panel also suggests paying more attention with the current module offering to the role of ethics within science. In line with the panel's observations regarding MSP's profile and the suggestion to rethink MSP's current positioning within MSoLAS, the panel feels that any repositioning of MSP would naturally also be reflected in the module choices for students. Based on discussions during the site visit, the panel trusts MSP and MSoLAS to face this challenge in the coming years. Students at MSP are highly appreciative of the programme, the opportunities offered and the research options and facilities at the Brightlands Chemelot Campus. Students consider their preparation for further careers as one of the biggest assets of the programme and are highly confident regarding advancement. Also, the panel wants to compliment MSP on the way in which the staff fosters students research skills in a safe and challenging environment that creates a great sense of self-directedness and research responsibility in MSP students.

UCV is in its fourth year of development and as such still very much in the development stage of its programme. The panel ascertained that UCV established a promising curriculum, with a clear spread of courses within the remits of its thematic focus. The panel also appreciates UCV's research possibilities for students, the interdisciplinary take of the UCV capstone project, and the practice of peer advising and the manifold presentation opportunities available for students at UCV. The panel explicitly explored the ways in which feedback translates into change at UCV. The panel also discussed potential opportunities to further develop the current module offering, including the provision of courses on logistics and basic statistics and the need for the development of UCV-specific courses on food technology and plant biology. The panel feels assured that UCV is responsive to suggestions and aware of development needs and encourages UCV to reflect, in this process, on the way its curriculum connects to the LAS philosophy underpinning the MSoLAS programme. In the panel's view, points of particular attention are the effects of growth on the programmes current infrastructure and facilities, including a close monitoring of health and safety measures and requirements for students at the Brightlands Campus Greenport Venlo. In addition, the panel agrees with UCV students that psychological support needs to be available in Venlo.

The panel concludes that at the bachelor's programme LAS at MSoLAS ensures a challenging and inspiring teaching-learning environment of good quality, with many excellent features and some challenges. The MSoLAS deans are well-aware of these challenges and are committed to face these in the coming years.

## Conclusion

*Bachelor's programme Liberal Arts and Sciences:* the panel assesses Standard 2 as 'good'.

### Standard 3: Student assessment

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

## Findings

### *Board of Examiners*

The BoE is responsible for the execution of the regulations of the Bachelor's Examination and its components at UCM, MSP and UCV. For each of the three curricula, a separate chamber of the BoE



oversees the quality assurance of assessments and periodically checks the ways in which modules intended learning outcomes match the intended learning outcomes specific for UCM, UCV or MSP. The chambers also oversee whether the assessments are adequately designed, whether exams and tests are of good quality and monitors exam and test results. The three chambers represent UCM, UCV and MSP in the MSoLAS BoE. The MSoLAS BoE convenes on a regular basis (6-8 times per year), together with an external member and headed by its chair. The MSoLAS BoE is supported by a legal advisor and a secretary who prepare decisions regarding student requests and, when necessary, other cases (fraud, plagiarism).

The MSoLAS BoE actively tracks the level of achievement of students who follow courses outside UCM, MSP and UCV. Proactively, the BoE recently looked into the high Grade Point Average (GPAs) of students, and found them justified. The BoE checks the quality of the theses by different means, including the monitoring of the ethical component of UCV capstone theses, and provides requirements and recommendations when necessary. For the tracking of whether students adhered to the achievement of the intended learning outcomes, the BoE is highly dependent on the Academic Advisors at the programme and on the module examiners, whose appointments it monitors. In reaction to panel questions regarding a need for further track systems to oversee students' progress, the BoE indicated to have been closely involved with the design of a new system that may help students to keep track of their skills. This system will also further advance the transparency of their achievements, feeding into the BoE's control. The BoE also responded in a strong way to recommendations in the 2015 review regarding the transparency of assessment. For example, it introduced a double-blind marking procedure at UCM, strengthened the assessment of the bachelor thesis research at MSP and improved the existing assessment forms using rubrics.

#### *Assessment policy*

Student assessment at the MSoLAS programme is based on an assessment policy and an assessment plan, based on alignment between the assessment and the intended learning outcomes of the programme. The programme's assessment policy is based three guiding principles: 1) *assessment of learning*, determining whether students achieve a certain competency level; 2) *assessment for learning*, providing information to inform the development of competencies; and 3) *assessment as learning*, based on alignment between assessment and instructional design (in terms of content, form and cognitive complexity). In order to achieve these objectives, modules use continuous assessment. Each course must have at least two assessment moments, where each provides an opportunity for feedback. Lecturers are encouraged to use different methods of assessment, in order to assess a greater variety of skills and knowledge per module and to stimulate deep-learning strategies and the active application of knowledge and critical thinking. The panel verified that examples of course assessment reflected these principles at UCM, UCV and MSP. The programme's educational philosophy also assures student engagement in learning and assessment via problem-based and research-based learning. Also, meetings with Academic Advisors, inspection hours for exams, and the design of the assessments feed into an environment in which students are actively engaged.

All module coordinators are required to design and submit an assessment plan to the Board of Examiners (BoE), in which is set out how the assessment is related to the programme's ILOs. The assessment plan also serves as basis for the course manuals. The BoE appoints examiners and examinations are peer-reviewed before they are administered. MSoLAS examiners have a wide variety of backgrounds, in terms of discipline, faculty and international experience and are given considerable freedom in designing the correct forms of assessment for individual modules based on (inter)disciplinary requirements and learning needs. They set grading criteria and communicate with students regarding the modes of assessment and used norms. They carry out the grading or supervise individual tutors in this process and communicate the results. Hereby they are supported by a solid framework of policies, rules and regulations designed by the programme and upheld by a proactive BoE. In the panel's view, MSoLAS's assessment practices result in valid, transparent and reliable tests of good quality.

### *Assessments*

A variety of assessment methods is used to assess the learning outcomes, such as written exams, essays, (individual and group) presentations and assignments, literature reviews and project deliverables. During the site visit, the panel has studied a number of tests and assignments, including their assessment and feedback. The panel confirms that the documentation is generally clear and comprehensive. The panel studied some exams during the site visit at all three locations and confirms that the exams are solid and the answer models are of good quality.

Students found information on assessment easily accessible. At UCV in particular, students complimented their staff members on their personal and individualised feedback and on the return rates of exams, tests and feedback. MSP students considered their feedback reliable and helpful. UCM students indicated that they would appreciate more written feedback, next to the currently received oral feedback. They feel that more extended individual written feedback is essential to further advance their critical thinking and analytical reasoning. Although written feedback may be helpful, the panel also stressed the limitations of individualised written feedback, which could be easily misinterpreted and is hard to standardise. The panel suggests that the Educational Programme Committee could step in and mediate a solution with the management. Options may include a more effective organisation of the current consultation hours, for example by organising plenary sessions on 'common mistakes', and/or training sessions at the student writing centre.

Students of the programme considered the assessment fair and sufficiently challenging. MSP students commended their teaching staff and the innovative design of assessment, which often not only tested their content knowledge but also furthered their own personal and academic development by a strong focus on skills testing and analytical approaches. UCV students enjoy the freedom of topic choice they experienced and the opportunity offered to practice public speaking as part of tests and exams. They feel that the teaching staff encourages creative thinking and exploring innovative fields of research as part of the assessments. With respect to assessment within the curriculum, UCV students mentioned that they would welcome more assessment moments than now is the case in some modules. The panel gives this point into consideration with the management, but is aware that striking a balance in a model of continuous assessment is always a challenge. The panel is impressed by the students' reflective attitude towards the way in which assessment contributes to their continuous learning experience and compliments the MSoLAS programme on its way in which it communicates its assessment strategy to students.

Students of the bachelor's programme LAS at MSoLAS conclude their studies with a final project, called capstone at UCM and UCV and bachelor thesis research at MSP, which serves as proof-of-capability and demonstrates the academic achievement level of the programmes graduates. At the programme LAS, all students are required to present their capstone or thesis. The panel considers this good practice and an excellent opportunity for students to demonstrate their communication and presentation skills. The panel studied some examples of students' final work, as discussed below under Standard 4, and agreed in general with the evaluation and grading of the final works. The panel noted in the studied assessment forms that the provision of feedback was, however, not consistent in both quantity and quality amongst UCM, UCV and MSP within the LAS-programme. The BoE agreed with the panel in this matter and indicated to have already discussed its own findings with the Bachelor Thesis Advisor and Capstone Advisors.

At UCM, UCV and MSP, a coordinator oversees the process and safeguards the overall quality of the projects; this coordinator is always a core staff member to safeguard the specific profile of the course offerings at UCM, UCV and MSP. Many UCM and UCV students are supervised by staff members from other UM faculties. To strengthen the validity and reliability of thesis assessments, each UCM and UCV capstone is graded by at least two graders, who score the capstone independently. One of these assessors is the student's supervisor and the second is an independent assessor. They assess through a double-blind process to enhance the objectivity of assessment. This is considered an example of best practice by the panel. This second assessor is always a member of the core staff of UCM, UCV or MSP. In certain cases, a third assessor is asked to step in – for example when student work is



marked with the highest available score, when independent assessors disagree strongly on the assigned score, when a second assessor feel inadequate to rule on a specific subject or when one of the assessors fails a student. Assessors use a good and transparent assessment form, which lists clearly the various criteria for assessment and also provides ample space for a further motivation of the reasoning behind a certain score. The panel is pleased to note that the programme introduced a second assessor to further secure the reliability of the thesis assessments and approves of the current procedures.

At MSP, grading and supervision practices slightly differ. The supervisor is always a core staff member, seconded by a research supervisor who is often based outside of the programme at another faculty, another university or at a research institute or laboratory. The Bachelor Thesis Coordinator keeps a close eye on the grading; (s)he assures that research supervisors follow all MSP requirements and also serves as the module examiner as only the coordinator is involved as second pair of eyes of the practical research work (50% of the final grade), which is scored first by the research supervisor. Both internal and research supervisor mark the proposal (15% of the final grade) and the thesis (25% of the final grade). The presentation (10% of the final grade) is assessed by a thesis panel, in which the internal supervisor partakes. In this way, the multiple-eyes principle is assured at every stage of the process. Assessors make use of grading sheets that clearly list the various criteria and offer ample opportunity to motivate grades. The panel discussed these procedures during the site visit and was impressed with the amount of control the Bachelor Thesis Coordinator exercised. The panel is enthusiastic about the new grading regime. The full bachelor thesis research project is 30 EC, of which 10 EC is reserved for the written thesis. The panel only wonders whether the final written thesis as part of the bachelor thesis research should not be assigned more ECs than currently is the case to do justice to the amount of work involved of writing up a final written thesis

Nevertheless, the panel feels that the bachelor's programme LAS at MSoLAS would benefit from some additional standardisation to further assure a level grading field within the bachelor's programme. For example, at UCM, support from core staff members is available for students next to advice from supervisors in well-organised and compulsory capstone skills modules. This may be incredibly helpful for UCM students, but also may cause friction amongst the students enrolled in the MSoLAS programme as it could be considered 'additional help' not automatically given to at MSP and UCV and which may not be acknowledged in the grading practices. Further standardisation would address potential concerns and also enhance the transparency of grading practices for external staff members involved in supervision in more than one of the course trajectories within the bachelor's programme at MSoLAS. Also, the panel feels that UCM, UCV and MSP could learn from each other's good practices. For example, the panel is impressed by the way in which the interdisciplinary element in the capstone at UCV is designed and assessed and encourages UCM and MSP to take note. It observed excellent feedback practices on the assessment forms of the capstone at UCM that could be instructive for UCV and MSP. MSP close control of the grading practices may, in turn, be informative for UCM and UCV.

### **Considerations**

The panel confirmed that the assessment and evaluation system at the bachelor's programme LAS at MSoLAS functions at a high level. Exams and tests are well-designed and of good quality, continuous feedback and assessment drive student learning, a variety of assessment methods assure the training of various skills and the attainment of the intended learning outcomes. MSoLAS has a clear assessment policy and an assessment plan. Criteria and modes of assessment are sufficiently communicated. The quality assurance of this systems functions well.

The panel acknowledges that the BoE has been very active over the period of review and successfully professionalised assessment practices at the MSoLAS programme. The BoE responded in a strong way to recommendations in the 2015 review regarding the transparency of assessment. It introduced a double-blind marking procedure and improved the existing assessment forms using rubrics. It also proactively researched the programmes' high GPAs, responded to the need for ethical requirements for components at UCV and is a driving force in setting up a new system that will enlarge the

transparency of achieved skills for students and the programme alike. It created a system of assessment of good quality in three learning trajectories that differ in infrastructure and that are at various development stages, which is commendable in the panel's view.

The panel compliments MSoLAS on the ways in which it enhanced the transparency of assessment over the period under review. It advises the programme to make good use of the examples of good practice at UCM, UCV and MSP. In particular, the panel wants to acknowledge the good feedback practices on the capstone at UCM, the excellent control of the Bachelor Thesis Coordinator on the thesis assessment at MSP, and the design of the interdisciplinary element and its assessment of the capstone at UCV. These examples of good practice demonstrate the varied, reflective and innovative ways in which the bachelor's programme LAS at MSoLAS designs and monitors its assessment practices and therefore confirm the panel's favourable impression of the assessment practices at MSoLAS.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences*: the panel assesses Standard 3 as 'good'.

#### **Standard 4: Achieved learning outcomes**

The programme demonstrates that the intended learning outcomes are achieved.

### Findings

#### *Achievement level*

Students achieve the intended learning outcomes in individual courses throughout their studies, through personal development and by the research skills and analytical skills demonstrated in their final works. The curriculum and the way in which it is structured allow for broad academic development, and highly-developed academic, professional and personal skills. Graduates also acquire in-depth academic expertise in a number of related fields and discipline by focusing on a concentration of clustered modules and by progressing from introductory to advanced skills. In this way, the general aims of the MSoLAS programme are met.

The final works demonstrate the achieved academic level. At UCM and UCV, these are called 'capstone' and at MSP, 'bachelor thesis research'. Prior to the site visit, the panel studied 35 final works from the 2017-2018 graduation cohort as well as the assessment forms completed by the supervisors. For UCM and MSP, the panel looked at 15 capstones out of 161 and 15 bachelor theses out of 68 respectively. The panel studied 5 capstones for UCV, which as a relatively new programme only had 10 graduates at the time of the site visit.

At UCM and MSP, the average achievement level was high; at UCM, students were awarded with a capstone grade 8,0 and with a GPA of 7.7 on average, at MSP with a thesis grade of 8,2 and a GPA of 7.6 on average. The panel examined several capstones and theses awarded a high grade and concluded that the grading was justified. The capstones and theses were well-constructed and demonstrated a high level of in-depth knowledge of the respective topics. During the site visit, the panel learnt that some of the capstones and theses had already resulted in publications in peer-reviewed journals and that graduates had presented at (inter)national conferences based on their capstone or thesis research. Also, students had been invited to continue research on the topic of their bachelor's capstone or thesis in (post)graduate programmes at master's and doctoral level. The panel is impressed by the level realised and the high quality of the work at UCM and MSP and considers their graduates well prepared for further studies.

At UCV, the average score awarded to the capstone is 7,8; students graduated with a GPA of 7.5. The panel considers these result as of good level for a first cohort. The reviewed work demonstrated a variety in approaches to capstone research and also included a clearly recognisable interdisciplinary element, which was highly appreciated. This broadening of interests clearly reflect the





interdisciplinary aims and broadening of interests as set out in UCV's ILOs and is considered an example of good practice in this respect by the panel. In the panel's view, these findings are indicative of bachelor research of good quality. Although the current sample is rather small, the panel trusts UCV to build on its promising first results.

#### *Performance of graduates*

Graduates of MSP and UCM are readily accepted in a wide variety of graduate programmes at master's level at universities of good (inter)national standing and reputation, amongst which prestigious and highly competitive programmes at Harvard University, Oxford University, ETH Zürich and Sciences PO Paris. At MSP, 2% of all graduates are even directly enrolled in a PhD after finishing their bachelor's degree programme, acknowledging the high quality of scientific research training at MSP. Alumni of both UCM and MSP confirmed to have easily gained admittance to disciplinary degree programmes and felt well-prepared for their further studies. They specifically acknowledged the benefits of interdisciplinary research skills and training for the development of their career and personal growth. They felt that they were more prone to try out a myriad of approaches to solve problems in comparison to their peers with a disciplinary background.

As UCV only had 10 graduates at the time of the site visit, the panel did not speak to UCV alumni separately as information would not necessarily be representative for the, now larger and more diverse, student population. The panel noted with appreciation, however, that some of UCV's earliest graduates were present at the tour of the facilities and presentation in Venlo. The panel values these clear signs of alumni engagement and encourages UCV to build on this emerging network, in particular for the development of their connections with the professional field. Most graduates of the programme continued their education in the Netherlands. This is in line with the panel's expectations for a first cohort of graduates. Also, the panel takes into consideration that Dutch universities are internationally considered as of high standard. The specific Dutch universities of choice, Maastricht University and Wageningen University & Research, have a strong international reputation and also guarantee an international study experience for its students. Naturally, the panel hopes that UCV students will also opt to move abroad in the future.

#### **Considerations**

Based on the overall level of the final works and the performance of graduates and studied materials during the site visit, the panel ascertained that MSoLAS graduates achieve the ILOs as formulated for UCM, MSP and UCV at a good level. The high average scores, the variety of disciplines to which the graduates gravitate, the publications based on undergraduate research and the acceptance of UCM and MSP graduates in master programmes at universities of good international standing and reputation are all clear evidence of the high level realised. Alumni of UCM and MSP look back on their bachelor's degree with appreciation and enthusiasm and consider it a very good basis for their further careers. The panel acknowledges the promising results of UCV first cohort of graduates, who performed well. The panel trusts UCV to make good use of the knowledge and experience available within the MSoLAS programme to build on these initial results.

#### **Conclusion**

*Bachelor's programme Liberal Arts and Sciences:* the panel assesses Standard 4 as 'good'.

## GENERAL CONCLUSION

The panel established that MSoLAS has an interesting bachelor's programme LAS with three attractive learning paths at UCM, UCV and MSP with interesting and varied profiles for ambitious students. The Intended Learning Outcomes (ILOs) of UCM, UCV and MSP together match the national requirements formulated in the domain-specific framework of reference for a LAS education in the Netherlands, and offer unique study trajectories for students aiming to cross disciplinary boundaries. They are also in line with international requirements regarding the degree level, such as the Dublin descriptors, and aim at a good degree level. The panel formulated recommendations regarding the

ILOs' (re)formulation and programme's profiling and considers the ILOs of the bachelor's programme LAS at MSoLAS currently of satisfactory level (Standard 1).

The panel encountered at MSoLAS a good bachelor's programme with three stimulating curricula for UCM, UCV, and MSP that all ensure a challenging and intensive teaching-learning environment for their respective students. Academic advising at the bachelor's programme LAS at MSoLAS is extensive, well-monitored and of high quality. Facilities at all three programmes are of good quality. Students feel sufficiently supported and prepared for the choices they face and feel that they are heard and respected. They are motivated and enthusiastic. Staff members are, according to students, approachable and reliable and offer good support and feedback throughout their studies. They are also well-qualified to teach in a small-scale and intensive learning environment according to the Problem-Based/Research-Based Learning method. MSoLAS also has a sound career advancement policy in place that ensure stability and a good mix of teaching and research expertise available within UCM, UCV and MSP. The curriculum structure at the programme is conducive to obtaining the intended learning objectives. The panel was impressed with the options for MSoLAS students to participate in undergraduate research. The panel formulated some recommendations regarding the module offering at MSP and UCV and recommends exploring connections between the three curricula. The panel considers the current teaching-learning environment at MSoLAS currently of good level (Standard 2).

The panel confirmed that the assessment and evaluation system at the bachelor's programme LAS at MSoLAS functions at a high level. Exams and tests are well-designed and of good quality, continuous feedback and assessment drive student learning, and a variety of assessment methods assure the training of various skills and the attainment of the intended learning outcomes. MSoLAS has a clear assessment policy and an assessment plan. Criteria and modes of assessment are sufficiently communicated. The quality assurance of this systems functions well. The Board of Examiners fulfils its legal tasks, actively monitors grades, proactively reacts to occurring needs and also works towards the further professionalization of assessment in three learning paths that differ in infrastructure and that are at various development stages, which is commendable in the panel's view. The panel compliments the bachelor's programme LAS at MSoLAS on the ways in which it enhanced the transparency of assessment over the period under review and assesses the programme's assessment as of good level (Standard 3).

Based on the overall level of the final works and the performance of graduates and studied materials during the site visit, the panel ascertained that MSoLAS graduates achieve the intended learning as formulated for UCM, MSP and UCV at a good level. The high average scores, the variety of disciplines to which the graduates gravitate, the publications based on undergraduate research and the acceptance of UCM and MSP graduates in master programmes at universities of good international standing and reputation are all clear evidence of the high level realised within UCM and MSP. Alumni of UCM and MSP look back on their bachelor's degree with appreciation and enthusiasm and consider it a very good basis for their further careers. The panel acknowledges the promising results of UCV first cohort of graduates, who performed well. The panel assesses the achieved learning outcomes of the bachelor's programme LAS at MSoLAS as of good level (Standard 4).

The panel assessed standard 1 as 'satisfactory' and standard 2, 3 and 4 as 'good'. Based on the NVAO decision rules regarding Limited Programme Assessments 2016, the panel therefore assesses the programme as 'good'.

### **Conclusion**

The panel assesses the *bachelor's programme Liberal Arts and Sciences* as 'good'.







## DESCRIPTION OF THE STANDARDS FROM THE ASSESSMENT FRAMEWORK FOR THE DISTINCTIVE FEATURE OF SMALL-SCALE AND INTENSIVE EDUCATION - UNIVERSITY COLLEGE MAASTRICHT

This part of the report takes the NVAO's Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (November 2011) as a starting point.

### Introduction

University College Maastricht (UCM) is one of three course offerings of the bachelor's programme Liberal Arts and Sciences (LAS) at the Maastricht School of Liberal Arts and Sciences (MSoLAS). Its sister routes within the bachelor's programme LAS at MSoLAS are the Maastricht Science Programme (MSP) and University College Venlo (UCV). Graduates of UCM receive a degree as Bachelor of Arts (BA) or Bachelor of Science (BSc), depending on the composition of the individual programme. MSoLAS is part of the Faculty of Science and Engineering (FSE) of Maastricht University (UM).

UCM was founded in 2002 and comprises a community of about 600-650 students and a core teaching staff of 38.69 FTE (2017) and support staff of 5.36 FTE (2017). UCM is based in its own dedicated premises in the city centre of Maastricht. UM recently appointed the first professor of Liberal Arts and Sciences Education in the Netherlands, who is based at UCM.

Given the prominence of its educational approach, UCM was awarded the Distinctive Feature Small-scale and Intensive Education in 2014. In addition to the regular NVAO Limited Programme Assessment of the bachelor's programme Liberal Arts and Sciences (LAS) at the MSoLAS, the panel performed a practice-based assessment at UCM to verify whether the distinctive small-scale and intensive character of this particular college can be reaffirmed. The practice-based assessment of UCM took place in combination with the Limited Programme Assessment. Two panel members were specifically trained and appointed by the NVAO to lead the assessment of this Distinctive Feature at UCM according to the NVAO's Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (November 2011).

For this practice-based assessment, the following aspects were considered as improvement areas, based on the review of 2014:

- Attention to the multi- and interdisciplinary nature of the programme as formulated in the Intended Learning Outcomes through reformulation (ILOs);
- The incorporation of the science-component of the curriculum and the methods used to teach these within the UCM educational philosophy;
- Graduation rates in combination with study duration;

These improvement areas will be discussed under Standard A, C and H. The incorporation of the science-component of the curriculum has also been assessed as part of the NVAO Limited Programme Assessment of the bachelor's programme LAS at MSoLAS, to which the panel will refer in this respect. For the practice-based assessment, success rates will be compared to other UM programmes, as no comparable degree to Liberal Arts and Sciences exists and as every student graduates on an individual curriculum, which is interdisciplinary.

#### **A. Intended learning outcomes**

The intended learning outcomes are not only aimed at achieving a high level in the relevant academic discipline and/or professional practice, but also have a broader aim: to train socially skilled and initiative-rich scholars and/or professionals with a wide interest in social developments and issues within a multidisciplinary and/or interdisciplinary context.



## Findings

The intended learning outcomes (ILOs) of UCM are embedded in MSoLAS' educational philosophy, which is rooted in the Liberal Arts tradition. MSoLAS' bachelor's programme LAS is modelled on the open curriculum model; students are offered a wide range of courses and modules to choose from and can all individually design their own programme. MSoLAS has set four aims, which are shared as a basis for the ILOs at UCM, UCV and MSP.

Graduates are expected to have:

1. A broad academic development – a breadth of academic knowledge;
2. in-depth academic expertise in a number of related academic fields and disciplines;
3. highly-developed academic and professional skills; and
4. highly-developed personal and social skills.

In UCM's ILOs, the broad academic development is defined as achieving knowledge of the social sciences, the humanities and the (life) sciences. The panel is pleased about the inclusion of the life sciences, indicating a clear scientific societal interest, and increasing the multi- and interdisciplinary nature of UCM's programme. UCM also aims to give students a sound basis in the three main domains of human inquiry and gives students the opportunity to cross all disciplinary boundaries (ILO 1.1), again pointing towards the multi- and interdisciplinary nature of the programme. Graduates will have knowledge of recent historical developments, of fundamental concepts for understanding politics, of the epistemology of scientific inquiry and of the role of theoretical modelling in understanding the world (ILO 1.2). These aims clearly relate to the wish to develop students' interest in social developments. Also, attention is paid to the application of inter- and multidisciplinary skills within a wider academic or societal context (ILO 2.2 and 2.3).

The aims that graduates be able to identify the disciplines involved in understanding complex problems, select research methods for studying different aspects of such problems and develop an integrated viewpoint incorporating the relevant disciplines (ILO 2.3) are indicative of the high level of programme expectations. Skills-training is defined at a challenging level, including many skills that could be seen as aimed at training students to become critical thinkers. For example, there is the inclusion of problem-solving skills, critical thinking skills (ILO 3.1 and 3.2). Also included is training to encourage taking initiative and making decisions, including leadership skills (ILO 4.3) and to deliver socially apt graduates with attention for ethics and intercultural skills (ILO 4.1 and 4.5).

## Considerations

The panel considers the ILOs for UCM to be formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary academic and societal context. The programme is interdisciplinary in its focus and aims at a broad academic development in a wide spectrum of disciplines of the humanities, social sciences and (life) sciences. Skills-training aims for a high level, including problem-solving, critical thinking and decision-making. The panel also appreciates the attention paid to ethics in UCM's ILOs. The formulated ILOs aim for students to become socially apt, critical and initiative-rich scholars and professionals, with a wide interest in a variety of disciplinary fields and with attention for the societal context.

## Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard A as 'meets the standard'.

### **B. Relationship between the goals and content of the programme**

The content of the programme is inseparably connected to relevant extra-curricular activities, which ensures a high level and broadening of interests as set down in the intended learning outcomes.

## Findings

Several initiatives are set up that connect UCM's curriculum contents to relevant extra-curricular activities, which foster the skills learnt and offer opportunities to students to take initiatives. During the site visit, the panel was introduced to many impressive examples of these, which clearly underlined the broadening of interests as set down in the intended learning outcomes. It also heard from students that staff members often participated and, if asked, were always happy to lend a hand or to give their expertise if required.

UCM offers a place for many events to explore artistic talents. There is an active Theatre Society and Musical Society, a choir and an orchestra. Open mic evenings, in which both staff and students participate, are attended by many. On a regular basis art exhibitions of student work are organised in the common room and common spaces of UCM. There are dedicated book clubs, both attuned to certain academic topics as well as to reading literature for pleasure and themed film nights (for example: 'Politics in film') with added discussion. Also, a student group organises lunch discussions, focussing on political issues with global impact, such as Brexit and its implications, globalisation and its implications on the environment or Trump's Korean politics.

A particularly impressive example of the way in which students broaden their own learning experience is the PINE initiative. PINE UCM is a student-driven initiative that wants to foster debate about pluralist economics and improve the economics curriculum in order to include a plurality of perspectives that are not necessary discussed as part of the standard curriculum in economics. As part of this initiative, students organise extra-curricular discussion groups, a reading group in which additional material or specific economic takes and/or perspectives are studied to increase knowledge and foster debate, for example the ways in which totalitarian regimes manipulate education in economics or the ideas of Habermas and their influence on economic thought. PINE UCM also invites lecturers and organises an annual conference.

Many initiatives are also directed towards the improvement of the UCM community, in terms of health and its impact on society. Students are involved in the annual organisation of the UCM 'Health week'. In this week, UCM students are challenged to focus on the attitudes necessary for creating a healthy study-life balance. UCM organises together with its students plenary and extra-curricular events to discuss mental and physical health and offers information on the available support networks in order to raise awareness. Students also organise mediation classes to help each other deal with stress and pressure. UCM alumni are invited back to UCM to speak about 'life after the bubble', offering in this way career advice to current students and helping them in setting their goals for life after UCM. GECCO, again a student group, works towards a greener and more sustainable UCM. At the UCM Writing Centre, students – and on invitation lecturers – help their peers to develop their writing skills. Prospective students are invited into the community before even arriving at UCM; they may ask questions to current students and are offered help to find living quarters.

Also, project work – as part of the curriculum – demands that students on a regular basis step out of the academic world and explore talents and develop interests that may otherwise have remained underdeveloped. For some of the research projects presented during the site visit, students had to interact and work for organisations such as the United Nations and heritage institutions, for example the Bonnefantenmuseum. Students had to take initiative for these projects and learn new skills but also were actively encouraged to go beyond the remits of their specific project, resulting in extra-curricular involvement. In addition to these challenges, UCM also introduced a double degree programme with the University of Freiburg since the previous assessment as another challenging option to broaden students' perspectives and interests.

Some of UCM's extra-curricular initiatives are also open to the wider community. For instance, students organise talks on gender issues, open to the wider community, focussing on feminist perspectives, masculinity in the modern age and the need to address transgender perspectives. On a regular basis, cycling dinners are organised, in which students interact with refugees and cycle together in Maastricht and its surroundings. This is commendable in the panel's view and an excellent



example of how UCM creates an atmosphere of initiative with also an eye for the societal context in which we live. The panel also thinks that it could be very interesting for MSoLAS students to organise events together as each of the student bodies bring their own niche, in orientation but also in perspective.

### Considerations

The panel considers the way in which extracurricular activities inform and complement UCM's learning content convincingly proven. Students are intrinsically motivated to explore topics and interest related to the curriculum also in their extra-curricular activities. Many of these activities, for example the PINE UCM initiative and reading groups discussing topics on gender and politics, are inextricably connected to the curriculum, just as volunteer activities and interests pursued after project work in their studies. Other initiatives clearly favour the execution of skills-learning and often go beyond what is expected and defined in UCM's intended learning outcomes. Artistic talent and intellectual curiosity are cherished and reinforced through extra-curricular activities. The panel is particularly pleased to note that many of the initiatives are aimed at supporting others within the community, for example peer support and meditation classes, and that some UCM initiatives reach out to to vulnerable groups within society, as testified in the cycling with refugees project.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard B as 'meets the standard'.

#### C. Structure and didactic concept

The concept of the programme is aimed at creating an academic and/or professional community. Key terms are small-scale and intensively organised education, leading to a high number of hours of face-to-face teaching, close involvement between students and teachers and between students among themselves and socially relevant extra-curricular activities.

### Findings

MSoLas has implemented at the bachelor's programme LAS the principles of an open curriculum, offering students a clear opportunity to direct their studies in a way that they meet their needs and requirements. Combined with multi- and interdisciplinary approaches, this open curriculum is indebted to principles deriving from the LAS philosophy. Often conducted in a strong international context, LAS programmes promote intercultural understanding, abilities and societal engagement.

In Maastricht, education is based on the Problem-Based Learning (PBL) method, which is based on guiding the learning process of the student by problems or case studies. Students meet once or twice weekly in small groups, discussing specific problems in depth. These problems or cases are formulated in such a way that students are led to pose all types of explanatory questions. Based on this discussion, students formulate the subject matter to be studied. The PBL approach and group discussions stimulate students to acquire relevant knowledge, insight and skills relatively independently. This emphasis on self-motivation is a core feature of PBL. After individually acquiring the relevant knowledge, it is shared with the other group members and discussed. MSoLAS's educational philosophy naturally results in a student-led curriculum and student-centred classroom at UCM, the panel concluded. Every course is supported by a PBL tutorial group with a maximum class size of 14 students. If a specific course is in high demand, UCM offers more PBL tutorial groups. In this way, a place in the course of first choice is guaranteed for all students, which is praiseworthy.

PBL tutorials are mandatory and offer an interactive, intensive and active educational experience to those partaking, leading to a high number of hours of face-to-face learning experiences, both between students and staff members and between students themselves. The tutorials also result in concrete tasks and goals for all group members to efficiently plan and direct the necessary hours of self-study. Many tasks resulting from tutorials are then undertaken in peer groups, also resulting in many hours of collaborative learning. On average, students have 12-14 hours of face-to face teaching

a week next to 34 hours of self-study, of which many will be collaboratively undertaken. The panel finds this distribution of study hours in line with UCM's didactic approach and amply intensive.

The panel also appreciates the flexible way in which PBL is implemented at UCM. PBL is used in combination with more traditional methods such as lectures, tutorials, interactive seminars, workshops and, when appropriate, Research-Based Learning (RBL). RBL take scientific and socio-political problems as a starting point, asking students to carry out research to answer these problems. Examples of RBL teaching approaches at UCM includes the Maastricht Research Based Learning-project (MaRBL), the Applied Research Internships (ARI) and Thinktank-projects. The panel also appreciated the presented initiatives in which students clearly applied quantitative, qualitative and artistic research methods in the Documentary Project and the Ethnography and Qualitative Interviewing Project. All these projects exemplify the way in which students learn in an environment that is clearly initiative-driven, intensive and exercised in a small-scale setting conducive to the learning needs of the various modules.

Both academic advising from staff members and peer advising by students amongst themselves, also add to this intensive and self-directed learning experience. During the site visit, students described the effect of the (peer) advice 'a learning experience, with as most important lesson: to study smart, not hard – although often our curiosity and ambition drives us to study smart *and* hard'. For the panel, this is evidence of the driven and intensive study culture at UCM that, importantly, is also safe for students. The panel appreciates that UCM clearly pays attention to the students' mental well-being as part of its small-scale and intensive nature, often organised in combination with students themselves. Examples are the annual well-being week, the student-led meditation classes and the fact that UCM created space in its schedule for reflection weeks after exam weeks in the periods 1, 2, 4 and 5. These reflection weeks are highly appreciated by the students and panel alike, as it allows for a moment to internalise what has been learnt and what may lay ahead, in the end intensifying the learning benefits.

In addition, UCM clearly offers a defined, safe and very active community. UCM is housed in dedicated facilities with room for interaction in an academic and social setting. A very active student body organises a myriad of extra-curricular activities that both feed in the curriculum contents and simultaneously strengthen the social community that is UCM. These activities also encourage further contact between students and staff and students amongst themselves. Students and staff also both clearly feel at ease at UCM and within its community and identify with it as its intellectual home.

Noteworthy is also that UCM students indicated to the panel that they often chose for UCM over other university colleges as it does not offer residential living. Students felt that the lack of housing was actual an advantage, as they are naturally forced out of the bubble from time to time in this way; in this way they escape the UCM pressure cooker of ambitious, driven and motivated students that UCM also represents next to a happy and safe environment in which they thrive. They feel that it helped them to actually strike a balance between UCM and the outer world and that it also helped them to connect UCM to the outer world.

### **Considerations**

The panel ascertained that UCM offers a programme that is organised in a small-scale setting. It appreciates in particular that UCM seems to be able to create an environment that both caters to an intensive learning experience while simultaneously offering a safe and healthy study environment, in which students are encouraged to reflect on their education. The panel considers the number of hours of face-to-face teaching appropriate for UCM's small-scale setting and its highly student-centred didactic approach, with takes into account students' learning needs. Students and staff regularly interact and form a close-knit community of learners, also beyond the classroom.

### **Conclusion**

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard C as 'meets the standard'.





**D. Intake**

The programme has a sound selection procedure in place, aimed at admitting motivated and academically and/or professionally talented students.

**Findings**

UCM has an extensive admission procedure in line with the policy of MSoLAS. It is aimed at finding the right match between applicants' interests and abilities to what the programme has to offer in terms of the academic level, the course catalogue, the open curriculum, the nature of PBL and the collegiate academic community. Three elements are taken into account: academic achievement, English proficiency and a candidate's motivation.

Currently, UCM has two entry moments: one in September, one in February. Both entry moments follow the same admission procedures. Applicants send in a motivation letter and a supporting file. Complete applications are checked for formal eligibility based on a diploma evaluation. If a candidate is eligible, the supporting materials are reviewed and assessed to see whether an applicant is a potential match. Accordingly, unsuccessful applicants are informed and promising candidates are invited for an interview with two members of staff. After the interview, a report is comprised by the interviewers reflecting on an applicant's suitability. On the basis of the combined application file and the interview report, the Board of Admissions of UCM takes a decision. Applicants then receive a formal rejection letter or an official invitation offer for enrolment.

During the site visit, the panel discussed interview procedures with students. They indicated that they felt sufficiently informed and prepared in advance. They related that the interview was truly aimed at reviewing a candidate's intentions and ambitions. Students found it at the time both stressful and encouraging, as they took it as a sign that the interviewers and the programme cared about creating a good match between the programme and the applicant. The self-evaluation report also shows that dropout rates after year 1 tend to be significantly lower (c. 11%) than in other UM-programmes (c. 23%). This is further proof of a sound selection procedure.

The panel also studied the application and admission numbers for the period 2012-2018. The selectivity rate ranges in the period under consideration between 25-48% for both intake moments, and is on average 36%. Applicants also take up their offers. The resulting yield ranges between 54-85%, and is on average 65%. The management explained that many candidates, in particular international applicants, often applied for several ambitious and high-ranking programmes. Some would prefer other programmes over UCM, which the management considers as being unavoidable yet an indication of the quality of their applicants. The panel agrees and also realises that students that come to UCM are thus motivated to contribute and participate. In the panel's view, these rates indicate that the programme is truly selective and attractive for prospective students with a good entry level and motivation to the UCM's didactic concept and philosophy.

Typically, about 30% of each class has a Dutch nationality. The majority of international students come from EU countries (60-65%) and the remainder coming from outside the EU. UCM aims to increase the number of non-EU students to increase diversity. It offers five full international scholarships to international students demonstrating both merit and need. UCM agrees with the panel that this is only the tip of the iceberg and would like to provide additional funding, but acquiring the necessary financial means has proven difficult. UCM is also aware of a current gender imbalance at UCM; the majority of applicants are female, resulting in a higher number of female enrolments. The panel encourages UCM to think of active ways to address this imbalance. For example, training sessions for staff members could raise awareness of staff's own 'hidden' preconceptions and prejudices with regards to gender and their own 'silent' expectations regarding candidates' performances. By raising awareness of these judgements based on preconceptions, unintended gender bias in interviews may be further limited. Nevertheless, the panel agrees that gender imbalance within the Liberal Arts and Sciences is not uncommon.

### Considerations

The panel concludes that UCM has a sound selection procedure in place that is regularly reviewed and refined. The panel appreciates UCM's efforts to increase the diversity of its student population by actively reaching out with scholarships to non-EU students demonstrating need and merit. The panel encourages UCM to actively seek ways to address the current gender imbalance, for example by reviewing its current interview practices.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard D as 'meets the standard'.

#### E. Quality of staff

The teachers have high-quality knowledge of the relevant subject and feel involved in the distinctive nature of the programme.

### Findings

UCM staff consists of core staff, employed by UCM (c. 40%), and hires staff members from other UM-faculties (60%) to teach modules in a wide range of disciplines. The panel approves of this set up, which allows for the existence of a small-scale LAS community at UCM while also creating flexibility and breadth of options.

Hired staff members from other faculties are selected by the UCM management for their motivation and the ways in which their expertise and research strengthen UCM's curriculum. During the site visit, the panel also met some of these externally hired staff members from other faculties. These staff member indicated that many of them already taught for years at UCM; they feel connected to UCM and its teaching philosophy and they also felt valued as members of the UCM community. They also claimed to have been sufficiently trained for the different student needs at UCM when they were hired; they received training on the LAS principle, the role of academic advice in an open curriculum setting, and were sufficiently trained for the small-scale teaching setting with its high demands for interactive teaching methods. The panel considers the expressed commitment and adequate training indicative of the good fit that UCM aims for in its hiring policy.

All staff members at UCM have a relevant academic qualification and are intensively trained by UM on the didactic needs of the problem-based learning method. Lectures and seminars, including course coordinating and course planning, are taught by lecturers and professors holding a doctorate. Tutorials in a PBL setting, in turn, are often provided by junior teaching fellows. These tutors act as facilitators under supervision of a course coordinator. Often, tutors are graduates of the programme who after finishing a master's degree return for some time to UCM. The panel ascertained that tutors are well trained and sufficiently monitored. Students were enthusiastic about their tutors. Core staff members are required to have a teaching qualification (University Teaching Qualification; UTQ), or are in the process of obtaining one. All staff members regularly attend teaching workshops to further develop their teaching practice. The panel considers the chair in Liberal Arts and Sciences, recently established at UCM, an excellent example of the dedication of UM and MSoLAS to the educational philosophy of LAS.

The panel also verified that UCM has an ambitious recruiting strategy that aims for a more diverse staff team. UCM attracted over the last year some staff members from a non-Western background. This is highly appreciated, by students and the panel alike. To retain staff, an attractive career model has been implemented at UCM, based on MSoLAS models. Core staff can advance from one function to another within UCM based on an individualised career plan, which can both be research- and/or teaching-oriented. The panel considers the staffing policy of MSoLAS an excellent practice, which should be considered a national example within LAS. The model is tailored towards the needs and wishes of staff, who could either progress based on a teaching career or who are rewarded and encouraged to combine a teaching career with a research career within UCM. In this way, the



programme ensures a motivated, dedicated staff team that comprises both educational specialists and active researchers. The combined and balanced expertise feed into inspired, interactive and research-based and research-led modules within MSoLAS.

UCM staff reflected positively on their position at UCM in discussion with the panel. They felt that they worked hard, but were also valued for their efforts by the management and students. Staff members felt that they had sufficient opportunities to dedicate time to innovative teaching and for developing research careers, if desired. They felt that teaching at UCM is more intensive, in hours and in the commitment of students to discussion, but also more rewarding and fulfilling. They appreciated that UCM had managed to seriously reduce the hours of bureaucracy surrounding teaching, which made teaching at UCM more enjoyable.

### Considerations

The panel ascertained that teaching staff at UCM have the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Teaching staff is extremely motivated. Staff members speak favourably of the management, they praise their autonomy and flexibility in organising their teaching and enjoy interaction with their students at UCM.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard E as 'meets the standard'.

### F. Number of staff

There is sufficient staff available to provide small-scale and intensive education and to ensure and develop individual contact between teachers and students.

### Findings

The current ratio is approximately 17 students per staff member. This number has slightly fluctuated over the years, but has never been higher than 20 students per staff member. Support staff numbers are also at an adequate level to provide support for the UCM community. Students mentioned during the site visit that staff and services are readily available.

The panel also verified that UCM reacts to changes in the population size; recently, a number of junior teaching fellows have been employed in anticipation of expected growth. Also, a second student counsellor was appointed.

### Considerations

The panel considers the staff to student ratio of 1:17 sufficient to provide an education in a small-scale and intensive setting, with opportunities for individual contact.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard F as 'meets the standard'.

### G. Available facilities

The programme has its own infrastructure with facilities for small-scale and intensive education and common extra-curricular social activities.

### Findings

UCM has a dedicated, monumental building at the heart of the Maastricht city centre. The college building is accessible for UCM students from 8:00 to midnight on weekdays and on weekends before the exam periods. The building houses plenty of study spaces and ample social space next to tutorial rooms, lecture halls and UCM core staff offices. All teaching rooms are sufficiently equipped for



providing small-scale and intensive teaching methods. UCM also has one large lecture hall, in a former chapel. Study spaces offer both facilities for quiet study and group work. Reading materials are readily accessible at both UCM's reading room and the nearby university library. For scientific research and laboratory facilities, UCM students use the relevant UM-facilities at the various departments. Art studios are available through a collaboration with the Maastricht Academy of Fine Arts and Design of Hogeschool Zuyd.

A central common room at the heart of the building allows for social interaction in a relaxing atmosphere, including a piano which is regularly used, and which also serves as exhibition space for student art. Notice boards inform students regarding relevant social and extra-curricular activities. Couches provide comfortable seating for private reading or quiet discussion. UCM also has a student-led writing centre, at which students provide peer support. Mental and psychological support is readily available at UCM. Two dedicated UCM counsellors, have twice-weekly office hours at the Office of Academic Advice. Students also may use the lecture hall to organise extra-curricular lectures and talks. UCM's facilities are considered well-suited for pursuing a small-scale and intensive education by the panel.

UCM deliberately does not offer its own housing facilities, as it feels that students also need to be embedded within the wider UM student community. Students enrolled at UCM indicated to consider this actually a positive, as it helps them to step out of the UCM environment. Although finding accommodation may sometimes be tough at the start of their studies, students felt that UCM provided ample information to support students in their search for suitable housing. Also, an extensive peer support network is opened up to prospective students as soon as they are accepted within the programme. The panel approves of this setup which allows students to step out of the UCM bubble, if wanted, while simultaneously offering a support network for new students.

### Considerations

The panel considers UCM's facilities excellent and well-tailored to the demands of the didactical concept underpinning the programme. The college building offers students a safe environment, which is clearly extensively lived in and worked in by both staff and student members.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard G as 'meets the standard'.

#### H. Level realised

The content and the level of the final projects are in line with the level and the broadening of interests as set down in the intended learning outcomes. Graduates are admitted to prestigious postgraduate programmes and/or jobs. The success rates are substantially higher than those of other relevant programmes.

### Findings

#### *Achievement level*

Students achieve the intended learning outcomes in individual courses throughout their studies and by the research skills and analytical skills demonstrated in their final capstone theses. Prior to the site visit, the panel studied 15 theses from the 2017-2018 graduation cohort as well as the assessment forms completed by the supervisors.

The average achievement at UCM level was high; students graduated with grade of 8,0 and a GPA of 7.7 on average. The panel examined several theses awarded a high grade and concluded that the grading was justified. The capstones were well-written and organised, with clarity of purpose, demonstrating a good command of knowledge of the respective topics. Research questions were to the point and relevant. The panel learnt that some bachelor work, both capstones and outcomes of



research projects undertaken during their studies as part of students' course work, had resulted in further research and publications. The projects and theses also reflect the benefits of a broader interdisciplinary approach in the students' training, in the way in which students approach problems and define questions. This is in line with the broadening of interests as set down in the intended learning outcomes. The panel would welcome a defined interdisciplinary element in the bachelor theses to bring this aspect further to the forefront.

Alumni clearly saw the benefits over their peers in master programmes. In a meeting with the panel, they mentioned that their knowledge base is far more flexible, which helped them in formulating research questions and looking for alternative and more creative solutions to problems in their master studies. They also really appreciated the didactic approach at UCM. They considered their critical thinking capability the most important ability taken away from their time at UCM. They also noted that PBL had trained them well for problem-solving and helped them to set tasks and schedule their time. In addition, the open curriculum structure resulted in firmly taking their learning trajectory in control during their further studies, whereas they saw their peers struggle from time to time with the more autonomous demands of a master's programme.

#### *Performance of graduates*

UCM graduates perform well. The panel studied information in the SER based on the results of an alumni survey from the fall of 2017, in which 556 respondents participated. More than 30% of alumni who pursued are currently engaged in graduate education did or do so at one of the top 100-universities in the world, as ranked by the Times Higher Education ranking of universities. 17% of all graduates even did so at one of the top 25 universities. This includes graduates who received a degree from Harvard University, Oxford University, Cambridge University, ETH Zürich, Sciences Po Paris, Cornell University, Columbia University, University College London and the London School of Economics. 73% of all students were accepted at their first programme of choice. Also, the vast majority of students (93%) felt adequately prepared for their further studies and most of them (92%) would again choose to study at UCM for their bachelor's degree. The panel considers these examples ample proof of UCM's ability to prepare students for entering highly-competitive degree programmes upon graduation.

Graduates are also successful in entering the job market, either after finishing their degree at UCM or after finishing a master's programme. Currently, alumni work for prestigious employers such as the United Nations, European institutions, ministries and parliaments in the Netherlands and abroad and for NGO's such as Human Rights Watch. Additionally, companies are well-represented, for example Google, Pfizer, McKinsey and Goldman Sachs employ former UCM graduates. Graduates added during the site visit that graduates now also opted for setting up their own, innovative start-up companies, often drawing on the combined expertise of several UCM graduates who all explored their own niches during their master studies to bundle their strengths and knowledge in a professional manner.

#### *Success rates*

UCM's success rates are also well-reflected in its quantitative data. The SER shows that dropout rates tend to be significantly lower (about 10% after year 1) than in other UM-programmes (c. 20% after year 1). The programme considers this a reflection of its good matching of students and expectations through its selection procedure, but also indicates that the benefits of an open curriculum are at play. In an open curriculum, students have relative freedom to explore their interests and may move into other areas than first foreseen. UCM allows them to explore their initial ideas, while also offering freedom to move away from these while keeping them in the programme. At the moment, 57% of UCM students graduated on average in three years, compared to 46% of students in other UM programmes. For four years, the UCM graduation rates also compare favourable to other UM programmes: 83% to 63%.

Notably, UCM's success rates have been steadily on the rise over the period under consideration; for 3 years, it progressed for example from 53% for 2012-2013 to 66% for 2014-2015, the last year

that offers complete statistics. The management indicated that this rising trend is also confidently expected to manifest itself in the numbers for 2015-2016, as soon as the February intake of that year is added to the current numbers for the September intake. The panel is pleased with this rising trend, which demonstrate that the measures taken by UCM to tackle students' study duration (more access to personal advice, closer monitoring of progress, stepping in when necessary) are paying off. The panel considers these success rates to be good and is pleased by the rising trend observed.

### Considerations

According to the panel, graduate success of UCM is evident. Graduates perform well, both professionally and academically and enrol in excellent, often highly selective, master programmes (and beyond) in both the Netherlands and abroad. Capstone theses are aimed at the right bachelor level, are of good quality and reflect the benefits of students' broadened interdisciplinary training in its creativity of approach and in the way research questions are formulated. It considers the broadening of interests sufficiently proven. The panel encourages UCM to bring this interdisciplinary advantage more to the forefront by introducing a specific element showcasing the students' abilities in this respect. Success and graduation rates are significantly higher than those at other UM programmes. The panel also noted a positive trend with respect to the study duration: students tend to graduate more quickly than in the past. It trusts UCM to build on this trend and believes that success rates will improve even further in the near future.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Maastricht):* the panel assesses Standard H as 'meets the standard'.

## GENERAL CONCLUSION

The panel considers the formulated ILOs for UCM attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for excellence and broad academic development in a multidisciplinary academic and societal context. Skills-training aims for a high level of competence and includes problem-solving, critical thinking and decision-making (Standard A).

The panel considers the way in which extracurricular activities inform and complement UCM's learning content convincingly proven. Students are intrinsically motivated to explore topics and interests related to the curriculum in their extra-curricular activities. Many of these activities are inseparably connected to the curriculum. Other initiatives clearly favour the execution of skills-learning and often go beyond what is expected and defined in UCM's intended learning outcomes. Artistic talent and intellectual curiosity are cherished and reinforced through extra-curricular activities. The panel is also pleased to note that many of the initiatives are aimed at supporting others within the community, and that some UCM initiatives reach out to vulnerable groups within society (Standard B).

The panel ascertains that UCM offers a programme that is organised in a small-scale setting. It appreciates in particular that UCM creates an environment that both caters towards an intensive learning experience while simultaneously offering a safe and healthy study environment. The panel considers the amount of hours of face-to-face teaching appropriate for UCM's small-scale setting and its highly student-centred didactic approach. Students and staff closely interact and form a close-knit community of learners, also beyond the classroom (Standard C).

The panel concludes that UCM has a sound selection procedure in place that is regularly reviewed and refined. The panel appreciates UCM's efforts to increase the diversity of its student population by actively reaching out with scholarships to non-EU students demonstrating need and merit. The panel encourages UCM to actively seek ways to address the current gender imbalance (Standard D).

The panel ascertains that the teaching staff at UCM has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Staff members speak favourably



of the management, praise their autonomy and flexibility in organising their teaching and enjoy interaction with their students at UCM (Standard E).

The panel considers the staff to student ratio of 1:17 sufficient to provide an education in a small-scale and intensive setting, with opportunities for individual contact (Standard F).

The panel considers UCM's facilities excellent and well-tailored to the demands of the didactical concept underpinning the programme for both staff and students (Standard G).

According to the panel, graduate success of UCM is evident. Graduates perform well, both professionally and academically, and enrol in excellent, often highly selective, master programmes in the Netherlands and abroad. The panel considers the broadening of interests sufficiently proven. Capstone theses are of good quality and reflect the benefits of students' broadened interdisciplinary training. Success and graduation rates are significantly higher than those at other Maastricht University (UM) programmes. The panel also noted a positive trend with respect to the study duration: students tend to graduate more quickly at UCM than at other UM programme (Standard H).

#### *Practice-based assessment*

With regard to the Distinctive Feature Small-scale and Intensive Education, the panel has verified that UCM meets all standards. In its assessment under Standard H, the panel also paid specific attention to the quality of the theses, the achievement level in general and the broadening of themes as set out in the intended learning outcomes. All were considered favourably for the programme in comparison to other relevant programmes.

For this practice-based assessment, the following aspects were considered as areas for improvement, based on the review of 2014:

- Attention to the multi- and interdisciplinary nature of the programme as formulated in the Intended Learning Outcomes through reformulation (ILOs);
- The incorporation of the science-component of the curriculum and the methods used to teach these within the UCM educational philosophy;
- Graduation rates in combination with study duration;

The panel noted under Standard A that attention for the multi- and interdisciplinary nature of the programme has now been clearly motivated in the ILOs. The panel is thus satisfied that UCM gravitated towards improvement in this respect. It also concluded that further honing of the ILOs is desirable to make the goals aimed for to be more measurable, but it trusts UCM to react to this suggestion adequately. Under Standard C, the panel concluded that UCM's curriculum structure and its didactic approach creates a student-centred classroom, catering towards an intensive learning experience. The panel also noted that teaching methods are used in a flexible way, always allowing for a good match between learning needs and UCM's educational philosophy. Under Standard H, the panel noted that UCM's graduation rates are good in comparison to other relevant UM programmes and that students increasingly graduate more quickly than used to be the case. Measures to bring down students' study duration bear fruit. Again, UCM favourably compares to other relevant programmes in this respect and the panel is therefore satisfied regarding UCM's progress.

The panel that visited UCM in 2014 was not convinced that UCM's science component was sufficiently balanced within the curriculum's offering. As part of the assessment of Standard 2 of the NVAO Limited Programme Assessment of the bachelor's programme LAS at MSoLas, the panel also looked at this aspect of UCM's curriculum. It noted that students can choose out of 39 humanities courses, 32 sciences courses and 63 social science courses. Science modules focus on biomedical sciences, applied mathematics, information sciences, cognitive sciences and some courses in sustainability science. The panel considers this quantity of modules sufficient in terms of range and scope and sees a clear strengthening of UCM's scientific orientation. This also follows from UCM's reformulation of the ILOs, which now more explicitly emphasise UCM's goal to obtain knowledge in the humanities,

social sciences and (life) sciences. The panel observed that UCM often uses Research-Based Learning methods next to Problem-Based Learning methods in science modules and that staff designs UCM's modules taking learners' needs into account. The didactic approach is therefore used in an appropriate way and conducive to students' learning needs, also with respect to scientific learning.

These combined findings result in a positive assessment of the Distinctive Feature by the panel, and also in a positive advice regarding the practice-based assessment.

**Conclusion**

The panel assesses the *bachelor's programme Liberal Arts and Sciences (University College Maastricht)* as 'positive'.





## DESCRIPTION OF THE STANDARDS FROM THE ASSESSMENT FRAMEWORK FOR THE DISTINCTIVE FEATURE OF SMALL-SCALE AND INTENSIVE EDUCATION - UNIVERSITY COLLEGE VENLO

This part of the report takes the NVAO's Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018) as a starting point.

### Introduction

University College Venlo (UCV) is one of three course offerings of bachelor's programme Liberal Arts and Sciences (LAS) the Maastricht School of Liberal Arts and Sciences (MSoLAS). Its sister routes within the bachelor's programme LAS at MSoLAS are the Maastricht Science Programme (MSP) and University College Maastricht (UCM). Graduates of UCV receive a degree as Bachelor of Science (BSc) or Bachelor of Arts (BA), depending on their study programme. MSoLAS is part of the Faculty of Science and Engineering (FSE) of Maastricht University (UM).

UCV was founded in 2015 and comprises a community of c. 70 students (2017-2018) and a core teaching staff of 6.79 FTE (2017-2018) and support staff of 0.61 FTE (2017-2018). It is located at Campus Venlo, around 80 kilometres away from Maastricht. Its facilities include a home building in the city centre of Venlo and dedicated laboratory space at the Brightlands Campus Greenport Venlo, on the outskirts of the city of Venlo. UCV is currently only in its fourth year of existence and only has one cohort of graduates to date.

Given the uniqueness of its educational approach, UCV applies for the Distinctive Feature Small-scale and Intensive Education. In addition to the regular NVAO Limited Programme Assessment of the bachelor's programme Liberal Arts and Sciences (LAS) at the MSoLAS, the panel performed an initial assessment according to the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education 2018 at UCV to verify whether the distinctive small-scale and intensive character of this particular college is confirmed by its assessment. The initial assessment of UCV took place in combination with the Limited Programme Assessment. Two panel members were specifically trained and appointed by the NVAO to lead the assessment of this Distinctive Feature at UCV.

### A. Intended learning outcomes

The objectives and intended learning outcomes are aimed at achieving an above-average level in one or more academic disciplines and/or professional practices in the domain concerned. In addition, the programme focuses on the broadening and development of related personal attitudes and skills.

### Findings

The intended learning outcomes (ILOs) of UCV are embedded in MSoLAS' educational philosophy, which is rooted in the Liberal Arts tradition. MSoLAS' bachelor's programme LAS is modelled on the open curriculum model; students are offered a wide range of courses and modules to choose from and can all individually design their own programme. MSoLAS has set four aims, which are shared as a basis for the ILOs at UCM, UCV, and MSP.

Graduates are expected to have:

1. A broad academic development – a breadth of academic knowledge;
2. in-depth academic expertise in a number of related academic fields and disciplines;
3. highly-developed academic and professional skills; and
4. highly-developed personal and social skills.



In UCV's ILOs, the broad academic development is defined as achieving knowledge of laws, theories, central concepts and methods in at least one academic discipline or field in both the social sciences and the (life) sciences (ILO 1.1). UCV does so, in accordance with its thematic focus on 'Food Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. Students are further expected to achieve knowledge of the epistemology of scientific inquiry, of the role of theoretical modelling in understanding the world, of human behaviour in relation to culture, and in recent political ideas in relation to globalisation and sustainability (ILO 1.2). The intended outcome that graduates be able to identify the disciplines involved in understanding complex problems, select research methods for studying different aspects of such problems and develop an integrated viewpoint incorporating the relevant disciplines (ILO 2.3) are indicative of the high level of programme expectations.

Also, UCV aims at broadening personal attitudes and skills at a challenging level, including many skills that could be seen as aimed at training students to become critical thinkers, such as the inclusion of problem-solving skills, critical thinking skills (ILO 3.1 and 3.2). Also included is training to encourage taking initiative and making decisions, including leadership skills (ILO 4.3) and to deliver socially apt graduates with attention for ethics and intercultural skills (ILO 4.1 and 4.5). Also, explicit attention is paid to the development of the attitude and skills required for life-long learning, professional growth and professional responsibility (ILO 3.5).

The panel noted that the ILOs of UCV reflect an interdisciplinary degree in, mainly, the (life) sciences. In the panel's view, a broad multidisciplinary programme focussing on food, nutrition and economics could benefit from historical and moral concepts underpinning human behaviour and technology, without losing its attractiveness for students interested in UCV's unique thematic focus. Additionally, the panel considers it important to make clear in the ILOs and profiling how UCV's two focus areas fit together and how these two areas combined deepen the students' learning experience.

### Considerations

The panel considers the formulated ILOs for UCV formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary academic and societal context. The programme offers a broad academic development in the social sciences and (life) sciences. UCV clearly focuses on the broadening and development of related personal attitudes and skills in its ILOs. The formulated aim is for students to become socially apt, critical and initiative-rich scholars and professionals, with a wide interest in a variety of disciplinary fields and with attention for the societal context. Skills-training is geared to achievement at a high level, including problem-solving, critical thinking, decision-making and intercultural skills. The panel appreciates the attention paid to ethics and life-long learning skills in UCV's ILOs. In the panel's view, the broadening of interests could be enriched by including an aim dedicated to inclusion of the historical and moral concepts underpinning human behaviour and technology. The panel also asks UCV to reflect on the additional value of the combined study of the two themes that inform the UCV's curriculum in its profiling and its ILOs..

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard A as 'meets the standard'.

#### **B. Curriculum: contents**

The curriculum and the extracurricular activities are inextricably bound. Their contents tie in with the intended level and the broadening as formulated in the intended learning outcomes. Students and staff share responsibility for the organisation of the extracurricular activities.

### Findings

UCV is at a challenging phase of its development. Its core curriculum is, after four years, taking shape and its student community is growing. With growth, other aspects of its collegiate setting now are an area of attention for the management. As discussed below, UCV's facilities became crammed owing to the influx of students. Management and students have together sought for a solution,

especially as its current facilities also became too small for the organisation of relevant extra-curricular activities. The panel is pleased that UCV reacts aptly in this respect.

The UCV course catalogue offers 56 courses for 2017-2018. The core courses provide knowledge and skills all UCV graduates must have, paying attention to the philosophy of science, the politics and economics of globalisation, the modelling of nature and offering an introduction to cultural studies. Students may further choose out of 8 projects, 15 skills courses as well as their own undergraduate research projects. To stimulate all students to broaden their horizon, UCV has a general education requirement: all students have to take some courses outside their concentration on either 'Food, Nutrition and Health' or 'Business, Logistics and Entrepreneurship' to encourage students to broaden their interests. There are 21 courses in (Life) Sciences, 23 in Social Sciences and 8 that can be clustered under each of the two concentrations. Research skills, in addition, are applied throughout the project work students undertake.

Across both concentrations, UCV modules focus on current topics in 'Food, Nutrition and Health' and 'Business, Logistics and Entrepreneurship'. The first theme is found, amongst other options, in modules on food law, the psychology of eating and macrosociology, gut biology, public health and sustainable food production in the sciences concentration. The second theme can be studied through modules on entrepreneurship and micro- and macroeconomics, next to modules on game theory, marketing and statistics. After studying the available options, the panel agreed that UCV offers a fairly unique programme with an interesting variety of courses. The contents of curriculum match the orientation of the curriculum offering and the broadening of interests as defined in the UCV-specific ILOs. The panel would, however, advise UCV to strengthen its curriculum with further modules focusing on logistics in the coming years, especially as UCV aims for direct valorisation in the region of Venlo, which has a large concentration of logistics-related businesses. The management indicated during the site visit to be aware of the potential benefits.

The panel noted some areas in which the UCV curriculum could be further strengthened in the coming years. UCV may want to consider incorporating some perspectives taken from the humanities in its curriculum to further strengthen the curriculum's diversity, either by adding a course to the core curriculum discussing the principles of Liberal Arts and Sciences or by setting a requirement for students to follow a relevant course at, for example, UCM. The panel also learnt that the management is researching how to implement statistical training more structurally in the curriculum. Additionally, the panel considers it necessary to create UCV-specific modules on plant biology and food technology. With UCV staff members, the panel also discussed the option of introducing a project-based capstone for UCV. The panel appreciated the staff's enthusiastic and open response to this suggestion, demonstrating an entrepreneurial and development-oriented spirit that will result in further fine-tuning of the existing curriculum. The panel also verified that students' feedback regarding the curriculum was taken seriously and also resulted in change and adjustment.

From the SER, the panel learnt that Campus Venlo offers every Wednesday a curriculum of extra-curricular workshops in which both students from UCV and the two master programmes at Campus Venlo actively participate. These Wednesday Workshops have a varied character and are organised in collaboration between student representatives of the Educational Programme Committee, student representatives of UCV's study association BEET and those responsible for UCV's curriculum. This combination of joint forces offers a chance to both tailor the workshops towards the content of UCV's curriculum and to additional interests and demands sprouting from the student population. Examples of Wednesday Workshops are the organisation of additional lectures, for instance on Humanitarian Law, and workshops addressing additional knowledge and skills, for example a workshop on Blockchain. The Wednesday Workshops tie in with the curriculum and seek to actively broaden students' knowledge and interests. The panel commends this set up.

BEET itself is also an example of how students actively shape their own learning environment; it is a bottom up initiative. Students established BEET in 2018 as they realised they needed a more formalised setting for the organisation of events and a place and space to develop further initiatives,



now the college was growing. This helps UCV students to structure their events, while simultaneously allowing them to practice and develop many of the professional and academic skills aimed for in their course work.

The panel recognises that Venlo student life is much more small-scale than in other student cities. It is therefore pleased to note that students and staff also actively participate in the development of student life. UCV sends representatives to the local student council, a taskforce in which the city of Venlo together with students from Campus Venlo and students from the two universities of applied sciences (Fontys and HAS) collaborate. This resulted in the organisation and participation of UCV students in local sporting events, co-ordinating the 'Venlo Introduction Days' and their active involvement in 'Check Venlo', a website supported by an app that brings together events and opportunities for students in Venlo.

These activities also neatly connect to students' course work in some cases. For example, students studied and monitored marathon runners in the latest Venloop as an extra-curricular project. Also, UCV participates in TEDX Venlo, hosts an annual pitch night and encourages students to attend. During the site visit, the panel understood that some students tutor children on a voluntary basis and that others give workshops on healthy eating and sports at local secondary schools. A student started his own start-up company inspired by a course he took. Also, some students learn Dutch and/or German in their free time with help from the College to be able to connect more easily to local life. The panel sees in these examples evidence of students' social drive and ambition and is pleased that students also are concerned with outreach. It hopes that students will continue to grasp and create these kinds of opportunities and that, with growth, these initiatives become more structurally embedded in the college life. The panel also thinks that it could be very interesting for MSOLAS students to organise events together as each of the student bodies bring their own niche and unique take, in orientation but also in perspective.

Staff and management mentioned to the panel that there were plenty of opportunities at the UCV laboratory facilities to interact with local companies. Students, however, thought that these connections had not yet really taken off. The panel encourages UCV staff to look with students in the coming years how to develop these connections in a meaningful way, as it also may up further extra-curricular opportunities for UCV students that are really link to the curriculum, obtained skills and modules.

### **Considerations**

UCV is currently in its fourth year of existence and at a vital stage of its development. UCV's core curriculum is taking shape and its contents match the orientation of the curriculum offering and the intended broadening of interests as defined in the UCV-specific ILOs. The panel encourages UCV to continue strengthening its curriculum by offering more modules on logistics and to explore the ways in which perspectives from the humanities may offer useful insights to enrich the curriculum contents. In this way, the broadening of interests as mentioned in UCV' ILOs will be further enhanced and the programme's profile further diversified. Based on its findings during the site visit, the panel concludes that curriculum development is taken seriously at UCV and student feedback is hereby taken into account.

The panel notes that UCV, both staff and students, have been investing in the creation of extra-curricular activities that add in a meaningful way to the existing curriculum. Successful examples of ways in which the curriculum and extra-curricular activities are inextricably bound are: the Wednesday Workshops, the realisation of an active collaboration between the city of Venlo and the UCV student body to explore further opportunities, the creation of study association BEET, which creates an active platform for further initiative, and the extra-curricular research participation in the Venloop. Also, the panel takes into account that students contribute to the local community through voluntary work that is often informed by their knowledge base acquired in course work. Many promising seeds for further development have been planted. With the students and staff, the panel feels that many opportunities for strengthening the current offer will come to fruition with the further

growth of UCV. The panel recommends to first look for ways to interact with the local enterprises at the Brightlands Campus Greenport Venlo in a meaningful way; these companies offer an excellent opportunity for a shared student-staff initiative that also contributes to the contents of UCV's curriculum.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard B as 'meets the standard'.

### C. Curriculum: learning environment

The teaching concept is based on a challenging learning environment, education substantiated in a small-scale and intensive manner, and a learning community of students and staff. The small-scale and intense nature of the education is demonstrated by the level of participation and preparation that is expected from students. The curriculum is structured in such a manner as to ensure nominal study progress by the students, including extracurricular activities.

### Findings

MSoLas has implemented the principles of an open curriculum at the three course offerings at UCM, UCV and MSP, offering students a clear opportunity to direct their studies in a way that they meet their needs and requirements. Combined with multi- and interdisciplinary approaches, this open curriculum is indebted to principles deriving from the LAS philosophy. Often conducted in a strong international context, LAS programmes promote intercultural understanding, abilities and societal engagement.

At UM, education is based on the Problem-Based Learning (PBL) method, which is built on guiding the learning process of the student by problems or case studies. Students meet once or twice weekly in small groups, discussing specific problems in depth. These problems or cases are formulated in such a way that students are led to pose all types of explanatory questions. Based on this discussion, students formulate the subject matter to be studied. The PBL approach and group discussions stimulate students to acquire relevant knowledge, insight and skills relatively independently. This emphasis on self-motivation is a core feature of PBL. After individually acquiring the relevant knowledge, it is shared with the other group members and discussed. MSoLAS's educational philosophy naturally results in a student-led curriculum and student-centred classroom at UCV, the panel concluded. Every course is supported by a PBL tutorial group with a maximum class size of 14 students.

Over the period under consideration, these groups were often smaller as UCV is still growing. Students did not consider this a point of concern as tutors always actively encouraged participation. Staff mentioned to enjoy the small-scale of UCV in every respect; they felt truly engaged with their students in tutorials and lectures. Students were active participants, enthusiastic and well-prepared. Students freely offered their opinions and perspectives, opening up new avenues of thinking. Staff felt that they often felt part of a learning experience themselves: they learnt alongside their students and felt highly motivated by their enthusiasm.

PBL tutorials are mandatory and offer an interactive, intensive and active educational experience to those partaking, leading to a high number of hours of face-to-face learning experiences, both between students and staff members and between students themselves. The tutorials also result in concrete tasks and goals for all group members to efficiently plan and direct the necessary hours of self-study. Many tasks resulting from tutorials are then undertaken in peer groups, also resulting in many hours of collaborative learning. Advising, both academic advising from staff members and peer advising by students amongst themselves, also adds to this intensive and self-directed learning experience. The panel finds this set up in line with the didactic approach and is satisfied that the resulting study experience is amply intensive.





The panel also appreciates the flexible way in which PBL is implemented at UCV. PBL is used in combination with more traditional methods such as lectures, tutorials, interactive seminars, workshops and, when appropriate, Research-Based Learning Learning (RBL). Students participate in research-based learning in their projects starting with their first undergraduate project 'The Applied Researcher'. In it, students conduct original research on a research question that they formulate based on a pre-determined framework. They also present their results in a poster presentation at the annual UCV Conference. In the panel's view it is commendable that UCV throws students in 'the deep end' at the start of their studies, while also ensuring a safe environment for doing so.

The panel is also enthusiastic about the so-called 'Thinktank-project' that allows UCV students to work on a problem for local businesses. Students called this project challenging, a pressure cooker project, in which they work out a solution to the problem and a presentation in only four weeks. The panel noted that the course materials for this curriculum part were very well-designed and also liked the way in which UCV ensured that the selected partners offered a problem of sufficient academic quality. It considers this project an example of valorisation done well.

The panel also looked at the way in which UCV's curriculum is structured. MSOLAS offers a full-time English-language programme of 180 ECTS in three course offerings, taught over six semesters. Each semester consists of three periods: two eight week periods, in which students take two courses and one skills module, and one four-week period in which students do a full-time project. At UCV, students also have a reflection week after exam periods, which is highly appreciated by the students and panel as it allows for a moment to internalise what has been learnt and what may lay ahead.

Students design their own curriculum from the range of modules offered in the course catalogue. All MSOLAS modules are open to all MSOLAS students, although they are tailored to the specific profiles of UCM, UCV and MSP. Students are coached and, when necessary, guided by personal academic advisors to ensure that all the specific aims for UCM, UCV or MSP are met. Attention is paid to the level of chosen courses. Modules are taught at three levels: introductory 1000-level, the intermediate 2000-level and the advanced 3000-level. Students may only choose a limited number of introductory modules and have to take a certain number of advanced level modules.

The UCV curriculum encompasses six required components. First, students complete a mandatory set of modules: the core curriculum. Second, they choose from a broad array of subjects that correspond to the MSOLAS aim of a broad academic development. In this way, students gain a breadth of academic and intellectual knowledge across disciplinary boundaries. Third, students meet conditions regarding academic depth; focus is acquired by choosing a set of related courses out of the course catalogue, in which students progress from the introductory level to the advanced level. Fourth, students follow a wide range of skills modules in which their research and professional skills are advanced. Fifth, students complete five projects. The projects have a strong collaborative element and stimulate students to draw on their individual academic profile. And finally, sixth, all students complete a final project – called 'capstone' at UCV.

The UCV course catalogue offers 56 courses for 2017-2018. The core courses provide knowledge and skills all UCV graduates must have, paying attention to the philosophy of science, the politics and economics of globalisation, the modelling of nature and offering an introduction to cultural studies. Students may further choose out of 8 projects, 15 skills courses as well as their own undergraduate research projects. To stimulate all students to broaden their horizon UCV has a general education requirement: all students have to take some courses outside their concentration to encourage students to broaden their interests. There are 21 courses in (Life) Sciences, 23 in Social Sciences and 8 that can be clustered under each of the two concentrations.

The panel considers the way in which UCV's curriculum is structured of good quality. Student progress is made attainable by the progression of course levels from an introductory to advanced level, skill courses are built in on a regular basis and reflection weeks allow students to internalise their learning while also 'room to breathe' after exam weeks. Nominal study progress is therefore ensured. During



the site visit, students noted that they considered their study load considerable, yet doable. At some point, for example during project weeks, they really felt tested and sometimes stressed. These very intensive weeks were, however, also balanced with less intensive weeks, allowing for time to recuperate and to participate in extra-curricular activities. With respect to assessment within the curriculum, students mentioned that they would welcome more assessment moments. The panel gives this point into consideration with UCV's management, but is aware that striking a balance in a model of continuous assessment is always a challenge.

### Considerations

The panel concludes that UCV's combination of an open curriculum and the PBL/RBL method creates a dynamic, challenging and intrinsically student-led learning environment. Students and staff members form together a learning community that benefits from UCV's small-scale organisation and its collegiate setting that allows for both formal and informal interaction. Students are active stakeholders in designing their own learning experience, which is intensive due to the nature of their interdisciplinary curriculum and due to the number of hours of active participation and preparation expected by students. The curriculum is structured in such a manner as to ensure nominal study progress, including extracurricular activities. The panel appreciates in particular that students also have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard C as 'meets the standard'.

#### D. Intake

The programme has a sound selection procedure in place, aimed at admitting motivated and academically and/or professionally talented students, in which the criteria include suitability for and interest in the small-scale and intensive educational concept, in combination with extracurricular activities.

### Findings

UCV has an extensive admission procedure in line with the policy of MSoLAS. It is aimed at finding the right match between applicants' interests and abilities and to what the programme has to offer in terms of the academic level, the course catalogue, the open curriculum, the nature of PBL and the collegiate academic community. Three elements are taken into account: academic achievement, English proficiency and candidates' motivation.

Currently, UCV has two entry moments: one in September, one in February. Both entry moments follow the same admission procedures. Applicants send in a motivation letter and a supporting file. Complete applications are checked for formal eligibility based on a diploma evaluation. If a candidate is eligible, the supporting materials are reviewed and assessed to see whether an applicant is a potential match. Accordingly, unsuccessful applicants are informed and promising candidates are invited for an interview with two members of staff. After the interview, a report is comprised by the interviewers reflecting on an applicant's suitability. On the basis of the combined application file and the interview report, the Board of Admissions of UCV takes a decision. Applicants then receive a formal rejection letter or an official invitation offer for enrolment.

During the site visit, students confirmed that the admission interviews targeted their motivation for entering this specific programme. They also mentioned that they were questioned about their interest in the LAS-principles underlying UCV and their attitude towards the responsibility that came hand in hand with the abundance of choice in an open curriculum structure. For many, UCV was their first choice at the time of their application. Many students of the first cohorts came to UCV after being disappointed in other programmes. UCV's interdisciplinary range of courses and the option to combine interests was usually decisive for their decision to apply for this relatively new programme.



The panel also studied the application and admission numbers for the period 2015-2018. Since the start of UCV in 2015, application numbers have increased from 60 in September 2015 and 18 in February 2016 to 92 in September 2017 and 32 in February 2018. The selectivity rate ranges in the period under consideration is between 33-59% for both intake moments, and is on average 49%. In the panel's view, these rates indicate that UCV as a new programme is sufficiently selective and has found a balance between the need to grow and the need to attract the right kind of applicants. Applicants also take up their offers. The resulting yield ranges between 50-74%, and is on average 58%. The panel also noted that the overall yield is consistently increasing, which it considers proof of UCV's increasing attractiveness for applicants. The self-evaluation report also shows that dropout rates after year 1 tend to be significantly lower (c. 13%) than in other UM-programmes (c. 23%). These numbers have also improved over the years.

UCV attracts both Dutch and international students. Over the complete period under consideration, 23 out of 83 admitted students were Dutch (28%), 51 out of 83 were EU-nationals (61%) and 9 out of 83 (11%) were from other countries. Also, the number of admitted Dutch nationals has never been higher than 50%, which means that UCV has always guaranteed a fully international classroom for its applicants. This is commendable for a new programme. UCV would like to increase its social diversity, but first focuses on the necessary growth.

The panel also noted a rather skewed gender imbalance; female students outweigh male students two to one. The panel understands that UCV is not yet in a position to address this imbalance too severely as the college needs to grow. Nevertheless, the panel encourages UCV to tackle this problem head on as it also may influence UCV's attractiveness for male and female applicants alike. Although a gender imbalance is not rare within the Liberal Arts and Sciences, UCV is in the panel's view less resilient to the potential disadvantages. This is mainly the result of the UCV's situation: Venlo as a student city is less diverse than Maastricht and a gender imbalance at UCV may as a result impact more on the student population. Students were aware of this aspect, although it was not (yet) considered a concern by them.

### Considerations

The panel concluded that UCV has a sound selection procedure in place that successfully balances the need to grow and the need to be selective. The panel is pleased that UCV has been able to attract a high number of international students and has always been able to ensure an international classroom. With the management, the panel shares the urge to increase the social diversity of the current intake. The panel encourages UCV to actively seek ways to address head on the current gender imbalance to avoid any negative consequences on the attractiveness of UCV for prospective applicants. It is, however, aware that a gender imbalance is not uncommon at LAS programmes and that the need to grow currently prevails.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard D as 'meets the standard'.

#### E. Staff

The number of staff is sufficient in terms of providing small-scale and intensive education, substantiating close contact between staff and students, and providing individual counselling to students outside the educational context. The staff demonstrably command the specific expertise and skills required to achieve the objectives of small-scale and intensive education. The programme actively monitors that teachers hold the required qualifications and, if necessary, ensures that teachers are trained in these aspects.

### Findings

UCV's current student to teaching staff ratio of 9 to 1 is highly favourable for close interaction in an intensive, small-scale setting allowing for individual contact. This number is expected to rise in the

coming years as UCV is still very much in a stage of development and growth. Support staff is also readily available, although the panel wants to improve UCV students' access to psychological support services for students, as discussed below under standard F.

Core staff members form 40% of UCV's teaching force. Next to staff members of other faculties (59% of the total), UCV also hires some external (1%) staff members from Fontys University of Applied Science (Fontys) and HAS University of Applied Science (HAS) for expertise not available within UM. These Fontys and HAS teachers teach courses for UCV on plant biology and on food technology. The UCV management verified that these specific teachers have an academic teaching qualification (University Teaching Qualification; UTQ). UCV agreed with the panel that the content of these courses, and the teaching approach adopted in these courses, still need to be further refined to be more in line with UCV's didactical approach.

The panel in general is appreciative of the employment of core staff members next to hired staff from other UM-faculties, as it combines the benefits of a small-scale UCV community setting with the advantages of being part of a large research university. This creates flexibility and a breadth of module options for students to choose from. Staff members from other faculties are usually experienced researchers and teachers, with the required academic and teaching qualifications. Although staff members based outside UCV usually have their offices in Maastricht rather than Venlo, the panel did not encounter any complaints from students regarding the availability of these 'external' staff members. Both students and staff members indicated that they could easily travel between the two cities if necessary and that email response rates were good. Also, core staff members based at Venlo were always prepared to look for a solution to accommodate student needs, if necessary.

UCV staff members are sufficiently trained by UM on the didactic needs of the problem-based learning method and on research-based learning strategies. Core staff members are required to have a teaching qualification (UTQ), or are in the process of obtaining one. All staff members regularly attend teaching workshops to further develop their teaching practice. Lectures and seminars, including course coordinating and course planning, are taught by lecturers and professors holding a doctorate. Tutorials in a PBL setting are facilitated by UCV's core staff members, just as academic advising. UCV staff was also informed upon hiring on the LAS principle, the role of academic advice in an open curriculum setting and was sufficiently prepared for the small-scale teaching setting with its high demands for interactive teaching methods. The panel considers the expressed commitment and adequate training indicative of the good fit that UCV aims for in its hiring policy.

To retain staff, an attractive career model has been implemented at UCV, based on MSoLAS models. Core staff can advance from one function to another within UCV based on an individualised career plan, which can both be research- and/or teaching-oriented. The panel considers the staffing policy of MSoLAS an excellent practice, which should be considered a national example within LAS. The model is tailored towards the needs and wishes of staff, who could either progress based on a teaching career or who are rewarded and encouraged to combine a teaching career with a research career within MSP. In this way, the programme ensures a motivated, dedicated staff team that comprises both educational specialists and active researchers. The combined and balanced expertise feed into inspired, interactive and research-based and research-less modules within MSoLAS.

UCV is currently still building its community. The panel was pleased to hear from staff members who worked at UCV as core staff and as hired staff from other UM-faculties, that they feel warmly welcomed in the growing UCV community of students and staff. They indicated that staff members lunch together on a daily basis and that they regularly come together in staff meetings, in which all are invited to offer their views on the further strengthening of UCV's profile, curriculum and teaching opportunities.

### **Considerations**

The panel met a young community of dedicated and enthusiastic staff members at UCV, who are committed to further development of UCV. The panel ascertained that the teaching staff at UCV in



general has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Students feel that they have sufficient access to UCV staff members. The teaching staff to student ratio of 1:9 also favours an intensive, small-scale educational setting.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard E as 'meets the standard'.

### F. Facilities

The programme has its own infrastructure with facilities for small-scale and intensive education and common extra-curricular social activities.

### Findings

UCV is based at Campus Venlo, 80 km to the north of Maastricht. Maastricht can be reached by a direct train. Next to UCV, two UM-master programmes are housed here: 'Global Supply Chain Management & Change' and 'Health Food Innovation Management', allowing for the exchange of ideas. These three programmes currently share a main building in the inner city of Venlo, with opening hours for students from 8:00-20:00, and research facilities at the Brightlands Campus Greenport Venlo, on the outskirts of Venlo. Both facilities have access to a fast internet connection and are fully integrated in UM's IT-facilities.

In the city centre of Venlo, UCV can now be found at the Deken van Oppensingel. Here, tutorial rooms and a lecture theatre for 60 students is located as along with staff offices. Also, a reading room is located here at which all necessary reading materials are accessible for students and which allows for quiet study. When not reserved, students are welcome to use the other tutorial rooms for private studying or group work. Staff and students use both a shared common room at the heart of the building, which allows for close interaction and is essential for the creation of the UCV community. As students indicated that the current building was quickly getting too small, UCV recently hired additional space for students in the old museum-building opposite of its main city base. Here students have a bright and open-plan space that they can freely use for quiet study and social activities.

Nonetheless, the inner city Venlo Campus needs to be extended as all involved are acutely aware. The university recently acquired a new building in close proximity of its current assets. This new building will be equipped in the coming year for UCV. Next to additional study and social space, this building will also incorporate housing opportunities for incoming international students. This is considered an adequate response by the panel to the expected growth. Students added during the site visit that they see quick improvements in reaction to earlier complaints, and that facilities are catching up to the desired standard. The panel is considerate regarding the challenges a developing programme faces and considers UCV's response adequate.

The panel also toured the facilities at the Brightlands Campus Greenport Venlo, which specialises in healthy nutrition and offers space to research facilities, start-ups and local enterprises. The panel visited UCV's laboratory facilities for *in vitro* research, a ML-1 laboratory for microbiological research, a psycho-sensory lab, and a human *in vivo* laboratory, in which students can research behaviour and observe and research human interventions under close supervision. Also, the facilities include a dedicated student laboratory, equipped for chemical analytical research and offering cell culture facilities. Support and staff members are always on site, supporting and supervising students where necessary. Health and safety measures seem currently in order, but the panel noted that these are highly dependent on the close personal interaction of students and staff members. As UCV is growing, a new approach seems desirable to ensure student safety in the future.

The panel also discussed Venlo's suitability for hosting an international university campus, as students indicated that international students found it sometimes hard to find their way in Venlo. In particular language barriers could be a specific challenge with respect to finding paid work next to

their studies, student housing and for participating in and setting up local initiatives within Venlo. Venlo's situation as logistics hub and its local entrepreneurial activities are attractive. Nevertheless, if the city's facilities do not tailor to international students' needs, UCV may fail to attract the high potential students from all the corners of the world that it needs to reach its full potential. The panel was pleased to hear that UCV is aware of this issue. The UCV management has created a taskforce to address these challenges together with the City of Venlo and the university is investing in student housing in Venlo. The management also encourages international students to partake in free Dutch classes as part of their extra-curricular activities, and in some local extra-curricular events in Venlo. These measures are considered adequate by the panel, yet need to be sustained in the years.

In addition, the panel feels that UCV with its mixed and international student population acutely needs facilities to support students psychologically. Currently, these facilities are offered in Maastricht, which is considered by the panel at too far a distance, both physically and mentally. UCV needs in-house psychological support familiar with UCV's ambitious goals, its infrastructure, its challenges and its specific student population. This could, for instance, be created by offering office hours for UCV students with student psychologists, who are regularly in Venlo.

### Considerations

The panel verified that UCV currently has suitable facilities for offering small-scale and intensive learning opportunities. The Venlo city campus, albeit rather small and clearly in need of further advancement, offers sufficient space for interaction between students and staff – both academically and socially. The facilities at the Brightlands Campus Greenport Venlo are adequately equipped and provide sufficient space for the UCV population. Again, the panel emphasises the need for anticipation of further growth, not only in the availability of these facilities but also in way in which health and safety measures are implemented and secured to guarantee a safe research environment for students. The efforts by UCV and the City of Venlo to also create a suitable living situation for international students in Venlo are, in the panel's view, of vital importance for the development and long-term success of UCV.

The panel is acutely aware that UCV is very much still in development and considers all measures taken and challenges faced part of this development. UCV responded adequately to feedback by students regarding its facilities and seems to have a robust plan in place for further development in anticipation of growth. All facilities at UCV currently meet the standard with one exception, namely UCV students' access to psychological support. Although students may have access to the central university facilities in Maastricht, this is considered by the panel insufficient. It urges UCV to address this issue as soon as possible. As this just one aspect out of many, this finding does not result in a negative assessment.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard F as 'meets the standard'.

#### G. Achieved learning outcomes

The content and the level of the tests and final projects are in line with the level and the broadening as set down in the intended learning outcomes. Graduates are admitted to demanding postgraduate programmes and/or jobs.

The success rates are substantially higher than those of other relevant programmes that do not carry the distinctive feature, and are at least on a par with other relevant programmes that have been granted this distinctive feature.

### Findings





*Achievement level*

Prior to the site visit, the panel studied five capstones for UCV, which as a relatively new programme only had 10 graduates at the time of the site visit. A total of 63% of the first cohort graduated nominally in three years. The average score awarded to the capstone at UCV is 7,8; students graduated with a GPA of 7.5. This is comparable to the rates achieved at UCM and MSP. The panel considers these results a good level for a first cohort. The reviewed work demonstrated a variety in approaches to capstone research and also included a clearly recognisable interdisciplinary element, which was highly appreciated. In the panel's view, these findings are indicative of bachelor research of good quality and in line with the broadening of interests as formulated in UCV's intended learning outcomes. Although the current sample is rather small, the panel trusts UCV to build on these promising first results.

*Graduate performance*

As UCV only had 10 graduates at the time of the site visit, the panel did not speak to UCV alumni separately as information would not necessarily be representative for the, now larger and more diverse, student population. The panel noted, however, with appreciation that some of UCV earliest graduates were present at the tour of the facilities and presentation in Venlo. The panel values these clear signs of alumni engagement and encourages UCV to build on this emerging network, in particular for the development of their connections with the professional field. No hard data is yet available for graduates' success in obtaining access to demanding postgraduate programmes of first choice and/or jobs. Of UCV's current ten graduates, the majority opted to continue their studies at Maastricht University (UM), while others opted for a master's programme at Wageningen University & Research (WUR) or were still in the process of deciding where to go next. This is in line with the panel's expectations for a first cohort of graduates. Dutch universities are internationally seen as of high standard and UM and WUR have an excellent reputation; both universities also guarantee an international study experience for its students. Naturally, the panel hopes that UCV students will also opt to move abroad in the future.

*Success rates*

The panel studied UCV's current success rates and noted that the UCV managed well to fall in line with those of its sister routes within the bachelor's programme LAS at MSoLAS, UCM and MSP. At UCV, dropout rates have fallen from being nearly on par with those of other UM-programmes (but still better), to significantly better numbers. The dropout rate for 2017-2018 was c. 9%, which sits comfortably between those of MSP (c. 8%) and UCM (c. 13%) for the same year and compares positively to other UM programmes (c. 22%). Of its first cohort, 63% students graduated nominally, thus within 3 years. Again, these numbers are on an equal level with UCM and MSP. The panel acknowledges that UCV's results are, naturally, still limited. But these numbers further their confidence in UCV which positions itself to be 'right on track'. The panel considers UCV's potential sufficiently proven, in particular taking into account that its success rates have been significantly better than those of other UM programmes, right from its first year onwards.

**Considerations**

UCV only just delivered its first cohort of graduates. Although the current sample is rather small, the panel trusts UCV to build on its first results. These are promising. The GPA results are high and comparable to the results at UCV's sister routes UCM and MSP within the bachelor's programme LAS at MSoLAS. The reviewed capstones reflect the broadening of interests as formulated in UCV's intended learning outcomes and contain a recognisable interdisciplinary element. Success rates are good, although based on limited numbers. Most graduates of the programme continued their education in the Netherlands. This is in line with the panel's expectations for a first cohort of graduates. The panel also takes into consideration that Dutch universities are internationally seen as of high standard. The specific Dutch universities of choice, Maastricht University and Wageningen University & Research, have a strong international reputation and also guarantee an international study experience for its students.



## Conclusion

*Bachelor's programme Liberal Arts and Sciences (University College Venlo):* the panel assesses Standard G as 'meets the standard'.

## GENERAL CONCLUSION

The panel considers the existing ILOs for UCV formulated at an ambitious level for a bachelor's programme, aiming for excellence in a multidisciplinary academic and societal context. The programme offers a broad academic development in the social sciences and (life) sciences in line with the required broadening of interests. Skills-training is geared to reaching a high level, including problem-solving, critical thinking and decision-making skills. The panel asks UCV to reflect on the additional value of the combined study of the two themes that inform UCV's curriculum in its profiling and its ILOs (Standard A).

UCV is currently in its fourth year of development. UCV's core curriculum is taking shape and its contents match the orientation of the curriculum offering and the intended broadening of interests as defined in the UCV-specific ILOs. The panel encourages UCV to continue strengthening its curriculum and offered some suggestions. UCV has been investing in the creation of extra-curricular activities that add in a meaningful way to the existing curriculum. With the students and staff, the panel feels that many opportunities for strengthening the current offer in extracurricular activities will come to fruition in the coming years with the further growth of UCV (Standard B).

The panel concludes that UCV's combination of an open curriculum and the PBL/RBL method creates a dynamic, challenging and intrinsically student-led learning environment. Students and staff members form together a learning community that benefits from UCV's small-scale organisation and its collegiate setting that allows for both formal and informal interaction. Students are active stakeholders in designing their own learning experience, which is intensive due to the nature of their interdisciplinary curriculum and due to the number of hours of active participation and preparation expected by students. The curriculum is structured in such a manner as to ensure nominal study progress, including extracurricular activities. The panel appreciates in particular that students also have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure (Standard C).

The panel concluded that UCV has a sound selection procedure in place that successfully balances the need to grow and the need to be selective. The panel is pleased that UCV has been able to attract a high number of international students and has always been able to ensure an international classroom (Standard D).

The panel ascertained that the teaching staff at UCV has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. The teaching staff to student ratio of 1:9 also favours an intensive, small-scale educational setting (Standard E).

The panel verified that UCV currently has suitable facilities for offering small-scale and intensive learning opportunities. Again, the panel emphasises the need for anticipation of further growth, not only in the availability of facilities but also in way in which health and safety measures are implemented and secured to guarantee a safe research environment for students. Although students may have access to the central university facilities in Maastricht, this is considered by the panel insufficient considering UCV's unique student population. Psychological support should be easily available for students in Venlo through UCV. The efforts by UCV and the City of Venlo to create also a suitable living situation for international students in Venlo are, in the panel's view, of vital importance for the development and success of UCV (Standard F).

UCV delivered its first cohort of graduates. Success rates are good, although based on limited numbers. The reviewed capstones reflect the broadening of interests as formulated in UCV's intended learning outcomes and contain a recognisable interdisciplinary element. Most graduates of the



programme continued their education in the Netherlands. This is in line with the panel's expectations for a first cohort of graduates (Standard E).

All standards of the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018) currently meet the standard. These combined findings result in a positive assessment of the Distinctive Feature by the panel and it advises to grant UCV the Distinctive Feature of Small-scale and Intensive Education.

For a practice-based assessment, the panel advises considering:

- The way in which UCV responds to the recommendations regarding the added value of the combined thematic approach in UCV's curriculum, profile and ILOs;
- The further advancement of structural, extracurricular activities related to UCV's curriculum and aims;
- The way in which UCV's approaches curriculum development;
- The way in which UCV reacts to further growth, including safe access to laboratory facilities, the availability of psychological support in Venlo and sufficient study and social space for students at Campus Venlo.

### **Conclusion**

The panel assesses the *bachelor's programme Liberal Arts and Sciences (University College Venlo)* as 'positive'.

## DESCRIPTION OF THE STANDARDS FROM THE ASSESSMENT FRAMEWORK FOR THE DISTINCTIVE FEATURE OF SMALL-SCALE AND INTENSIVE EDUCATION - MAASTRICHT SCIENCE PROGRAMME

This part of the report takes the NVAO's Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018) as a starting point.

### Introduction

The Maastricht Science Programme (MSP) is one of three course offerings of the bachelor's programme Liberal Arts and Sciences (LAS) at the Maastricht School of Liberal Arts and Sciences (MSoLAS). Its sister routes within the bachelor's programme LAS at MSoLAS are: University College Venlo (UCV) and University College Maastricht (UCM). Graduates of MSP receive a degree as Bachelor of Science (BSc). MSoLAS is part of the Faculty of Science and Engineering (FSE) of Maastricht University (UM).

MSP was founded in 2010 and comprises a community of c. 350 students and a core teaching staff of 23.4 FTE (2017) and support staff of 1.4 FTE (2017). It is located at the city centre of Maastricht and has dedicated laboratory facilities at the Brightlands Chemelot Campus in Geleen, c. 20 kilometres away from Maastricht.

Given the uniqueness and prominence of its educational approach, MSP applies for the Distinctive Feature Small-scale and Intensive Education. In addition to the regular NVAO Limited Programme Assessment of the bachelor's programme Liberal Arts and Sciences (LAS) at the MSoLAS, the panel performed an initial assessment according to the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education 2018 at MSP to verify whether the distinctive small-scale and intensive character of this particular is confirmed by its assessment. MSP opted to combine its initial assessment with a practice-based assessment, based on its already substantial graduation cohorts. The practice-based assessment of MSP took place in combination with the Limited Programme Assessment. Two panel members were specifically trained and appointed by the NVAO to lead the assessment.

MSP has been assessed in 2014 under the NVAO Limited Programme Assessment of the bachelor's programme LAS at the MSoLAS. Then, recommendations regarding its teaching-learning environment and assessment were included and a final assessment of both standards withheld, as MSP was still very much in an early stage of its development. Since then, a panel has confirmed that all standards were met in 2015. The current panel considers the teaching-learning environment and assessment standards at MSP of good quality in its Limited Programme Assessment. The panel has no specific areas of improvement to explicitly address in its practice-based assessment apart from MSP's success rates and the performance of its graduates. These will be addressed under standard G, below.

#### **A. Intended learning outcomes**

The objectives and intended learning outcomes are aimed at achieving an above-average level in one or more academic disciplines and/or professional practices in the domain concerned. In addition, the programme focuses on the broadening and development of related personal attitudes and skills.

### Findings

The intended learning outcomes (ILOs) of MSP are embedded in MSoLAS' educational philosophy, which is rooted in the Liberal Arts tradition. MSoLAS' bachelor's programme LAS is modelled on the open curriculum model; students are offered a wide range of courses and modules to choose from



and can all individually design their own programme. MSoLAS has set four aims, which are shared as a basis for the ILOs at UCM, UCV and MSP.

Graduates are expected to have:

1. A broad academic development – a breadth of academic knowledge;
2. in-depth academic expertise in a number of related academic fields and disciplines;
3. highly-developed academic and professional skills; and
4. highly-developed personal and social skills.

In MSP's ILOs, the broad academic development is defined as having a broad perspective and a high level of academic and intellectual development in the sciences (ILO 1.1). Graduates have knowledge of biology, chemistry, physics and the most relevant tools in mathematics at an elementary level (ILO 1.2). In-depth knowledge of laws, theories, central concepts, seminal issues and methods in a number of related fields or disciplines in the sciences is also aimed for (ILO 2.1), and students are expected to put their specialised knowledge in a broader academic or societal context. These goals clearly demonstrate the high achievement level aimed for. Clearly indicating above-average level of expertise, the panel considers the aim that graduates can translate concepts from one discipline of the natural sciences into other disciplines of the natural sciences (ILO 2.3).

Also, MSP aims at broadening personal attitudes and skills at a challenging level, including many skills that could be seen as aimed at training students to become critical thinkers, such as the inclusion of problem-solving skills, critical thinking skills (ILO 3.1 and 3.2). Also included is training to encourage taking initiative and making decisions, including leadership skills (ILO 4.3) and to deliver socially apt graduates with attention for ethics and intercultural skills (ILO 4.1 and 4.5). Also, explicit attention is paid to the development of the attitude and skills required for life-long learning, professional growth and professional responsibility (ILO 3.5). For example, there is the inclusion of problem-solving skills, critical thinking skills (ILO 3.1 and 3.2).

MSP offers an attractive and interdisciplinary degree in the sciences that broadens students' perspectives and prospects. The panel noted that personal communication skills and development of an independent research attitude are not clearly expressed in MSP's ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. The panel thus recommends explicitly incorporating these specific skills in MSP's ILOs.

### Considerations

The panel considers the ILOs for MSP attainable for students and they are formulated at an ambitious level for a bachelor's programme, aiming for above-average level. The programme is geared towards broad academic development in the natural sciences, paying attention to the fields of biology, physics, chemistry and the most relevant tools in mathematics and interdisciplinary combinations of these fields. This widening of perspectives is considered valuable by the panel for a student with an interest in the natural sciences. Skills-training is geared towards achieving a high level, including problem-solving, critical thinking and decision-making skills. The panel also appreciates the attention paid to ethics and life-long learning skills in MSP's ILOs. The formulated ILOs should train students to become socially apt, critical and initiative-rich scholars and professionals, with a wide interest in a variety of disciplinary fields and with attention for the societal context. The panel noted that personal communication skills and development of an independent research attitude are not clearly expressed in its ILOs, whereas MSP students and graduates clearly demonstrated having achieved these implicit programme aims. It thus recommends incorporating these specific skills in MSP's ILOs.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme):* the panel assesses Standard A as 'meets the standard'.

**B. Curriculum: contents**

The curriculum and the extracurricular activities are inextricably bound. Their contents tie in with the intended level and the broadening as formulated in the intended learning outcomes. Students and staff share responsibility for the organisation of the extracurricular activities.

**Findings**

The core of MSP's curriculum encompasses four core courses ('Biology', 'Chemistry', 'The mathematical foundations of Physics' and 'Liberal Arts and Sciences'), two core skills ('Research methods' and 'Research, data analysis and presentation academic skills') and one mandatory project ('Philosophy of Science'). The course catalogue shows a wide array of courses within the fields of Biology, Chemistry, Physics and Neurosciences next to courses in Mathematics and a good set of interdisciplinary courses drawing on several disciplines of the natural sciences and searching for cross-overs. In total, students could choose out of 75 courses and 34 skills modules for 2017-2018. The various disciplines of the natural sciences are well-represented and the interdisciplinary courses bring MSP's strength and added value to the forefront. Some of these interdisciplinary courses were offered twice a year, to allow students maximal flexibility. Next to these modules, the students reflect on the interdisciplinarity of the sciences in their research projects. In 2017-2018, a total of 78 research projects were offered. Uniquely for MSP, these research projects are not only initiated by staff members but also by students and businesses. Research projects are commonly exercised in a laboratory setting at the Brightlands Chemelot Campus or, in some cases, at other faculties of UM, in the field or at companies.

After having studied the curriculum, the panel feels that MSP offers an interesting and challenging curriculum. The contents of MSP's curriculum tie in with the intended level and the broadening of interests as formulated in the MSP-specific ILOs. The panel appreciates the fact that MSP has one core course explicitly addressing the Liberal Arts and Sciences and that the mandatory project 'Philosophy of Science' aims to address MSP scientific orientation within a broader context drawing from ideas of the humanities, and sometimes the social sciences. Students explained during the site visit that their research projects could be art-based, for instance art restoration, and that recently a project was introduced researching how scientific facts could be presented to the general public. They felt that the balance in the course offering at MSP was right, in particular as MSP's focus and MSP-specific ILOs are explicitly directed towards the natural sciences. The panel appreciates these students' insights. It feels, however, that the intended broadening of interest as defined in MSP's ILOs could be further strengthened in the curriculum, for example by introducing more modules that pay attention to the role of ethics within science and with regards to the importance of the ways in which the sciences, social sciences and humanities mutually relate.

Students and staff work together to build a thriving academic community at MSP that goes beyond attending academic modules and acquiring grades. For ambitious students, MSP offers an extra-curricular Honours Research Programme in which students can focus on research at an early stage during their studies. The SER reflects on these activities and concludes that these fall naturally into two main communities: a scientific and professional community.

MSP's scientific community is based at its home base in Maastricht city centre. Staff organise here together with MSP's study association Aperture lectures, exploring further scientific perspectives. Aperture, and some individual lecturers in specific modules, also organise field trips to projects at other laboratories, research institutes or universities – for example to CERN - to broaden students' perspectives and connect them to the wider, international scientific community. These activities are considered inextricably bound to elements of MSP's curriculum by the panel and, according to students and staff, well-attended. In addition to these activities within the scientific community, MSP also organises extra-curricular events at its premises at the Brightlands Chemelot Campus. These are more professional in orientation and include career events, at which graduates of MSP share their experiences with current students, lectures exploring professional career options, an annual alumni conference and social activities.



Furthermore, Aperture organises extra-curricular social events that cement the MSP community of students and staff together, for example through film nights and karaoke. Students and staff feel involved with the MSP community and each other. Both spoke about the 'MSP family feel' to the panel and complimented each other for their involvement and commitment to MSP. The panel also heard of activities in which students reach out to the wider community. Students participate, for example, in charity events and work together with secondary school students and refugees in the Tapijntuin, a community-based garden in the city centre. Plans are currently developed for MSP's move to their new premises, which lie near the Tapijntuin at the Tapijn Campus. The management hopes for a successful collaboration with secondary schools in the greenhouse belonging to their new premises, which would open up further opportunities for social outreach.

The panel strongly supports a broadening of this kind of initiatives as it believes that interdisciplinary scientists are well-placed for opening up the sciences to the wider community. This type of activities would also further connect the curriculum to extra-curricular activities. The panel also thinks that it could be very interesting for MSoLAS students to organise events together as each of the student bodies bring their own unique take, in orientation but also in perspective.

### Considerations

MSP offers a strong, science-based curriculum that meets the intended broadening of interests as set down in MSP's ILOs. The panel concludes that the broadening of interest as defined in MSP's ILOs is sufficiently reflected in MSP's curriculum but could be further enriched in the following years, for example by introducing more modules that pay attention to the role of ethics within science and courses with regards to the importance of the ways in which the sciences, social sciences and humanities mutually relate. As currently the MSP curriculum fit the MSP ILOs, these observations do not influence the panel's positive assessment of this standard.

Based on the examples studied prior to and during the site visit, the panel concludes that MSP offers extra-curricular opportunities for students to deepen and broaden their interests, some of which are clearly inextricably bound with the curriculum contents, such as extra-curricular lectures, field trips and career events organised in collaboration with alumni. The panel also sees opportunities to strengthen the current offering in the near future. It therefore encourages staff and students to take MSP's move to the Tapijn Campus as an incentive to rethink its current offering in extra-curricular activities and expand upon it. The panel would welcome in particular events that link MSP's multidisciplinary approach of the sciences to events that open up the sciences for a wider audience. These events may also bring the advantages of a multidisciplinary approaches to the. This could help students to articulate the value of their unique take on the sciences, while opening up new perspectives on the ways in which they can connect their learning to the world beyond the laboratory.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme):* the panel assesses Standard B as 'meets the standard'.

### C. Curriculum: learning environment

The teaching concept is based on a challenging learning environment, education substantiated in a small-scale and intensive manner, and a learning community of students and staff. The small-scale and intense nature of the education is demonstrated by the level of participation and preparation that is expected from students. The curriculum is structured in such a manner as to ensure nominal study progress by the students, including extracurricular activities.

### Findings

MSoLas has implemented the principles of an open curriculum at the bachelor's programme LAS, offering students a clear opportunity to direct their studies in a way that they meet their needs and requirements. Combined with multi- and interdisciplinary approaches, this open curriculum is



indebted to principles deriving from the LAS philosophy. Often conducted in a strong international context, LAS programmes promote intercultural understanding, abilities and societal engagement.

At UM, education is based on the Problem-Based Learning (PBL) method, which is built on guiding the learning process of the student by problems or case studies. Students meet once or twice weekly in small groups, discussing specific problems and cases in depth. These problems and cases are formulated in such a way that students are led to pose all types of explanatory questions. Based on this discussion, students formulate the subject matter to be studied. The PBL approach and group discussions stimulate students to acquire relevant knowledge, insight and skills relatively independently. This emphasis on self-motivation is a core feature of PBL. After individually acquiring the relevant knowledge, it is shared with the other group members and discussed. MSoLAS's educational philosophy naturally results in a student-led curriculum and student-centred classroom at MSP, the panel concluded. Every course is supported by a PBL tutorial group with a maximum class size of 14 students.

The panel also appreciates the flexible way in which PBL is implemented at MSP. At MSP, Research-Based Learning (RBL) is the main pedagogical approach in combination with more traditional methods such as lectures, tutorials, interactive seminars and workshops. RBL results in a high number of contact face-to-face hours for skills courses and asks students to prepare intensively before attending tutorials. During its laboratory tour, the panel verified with members of staff and students that students put in the necessary preparatory efforts. Staff members explained that they often set pre-lab quizzes to test students' knowledge of the required security measures. Laboratory reports are graded, encouraging students to fill these in meticulously. Students indicated to often follow preparatory lectures before entering into experiments; they felt well-prepared and confident. According to the panel, this is all excellent practice and also testify to the intensive nature of the programme.

The tutorials also result in concrete tasks and goals for all group members to efficiently plan and direct the necessary hours of self-study. Many tasks resulting from tutorials are then researched and undertaken in peer groups, also resulting in many hours of collaborative learning. Advising, both academic advising from staff members and peer advising by students amongst themselves, also add to this intensive and self-directed learning experience. Students commonly follow on average 20 hours contact time and 26 hours of self-study per week. The panel discussed this number with students during the site visit, as it considers 46 hours quite intensive. Students indicated that they considered their workload challenging, yet doable. The panel concludes that the amount of hours reflects the intensive nature of MSP's programme, but does not impede on students' ability to finish their studies in three years.

Students and staff praised the collaborative atmosphere at MSP. Both feel that they benefit from each other's knowledge and experiences. Student-research also feed into staff's research projects. The panel was given multiple examples of published research in which both staff and student participated. It also was impressed to hear that MSP managed to attract some NWO-funding based on students' research. These examples are clearly indicative of a thriving academic community in which both students and staff enthusiastically embrace the opportunities offered.

The panel also looked at the MSP curriculum structure, which shares common elements with UCM and UCV as all are part of the bachelor's programme LAS. MSoLas offers a full-time English-language programme of 180 ECTS in three course offerings, taught over six semesters. Each semester consists of three periods: two eight week periods, in which students take two courses and one skills module, and one four-week period in which students do a full-time project. At MSP, students also have a reflection week after exam periods, which is highly appreciated by the students and panel as it allows for a moment to reflect upon and digest what they have learnt and what may lay ahead. The principles of the open curriculum are fully embraced. Students design their own curriculum from the range of modules offered in the course catalogue. Students are coached and, when necessary, guided by personal academic advisors to ensure that all the MSP-specific aims are met. Attention is paid to





the level of chosen courses. Modules are taught at three levels: introductory 1000-level, the intermediate 2000-level and the advanced 3000-level. Students may only choose a limited amount of introductory modules and have to take a certain amount of advanced level modules.

The MSP programme exists of six required components. First, students complete a mandatory set of modules: the core curriculum. At MSP this comprises 5 core courses, 2 skills courses and a project. Second, they choose from a broad array of subjects that correspond to the MSoLAS aim of a broad academic development. In this way, students gain a breadth of academic and intellectual knowledges across disciplinary boundaries. Third, students meet conditions regarding academic depth; focus is acquired by choosing a set of related courses out of the course catalogue, in which students' progress from the introductory level to the advanced level. Fourth, students follow a wide range of skills modules in which their research and professional skills are advanced. Fifth, students complete five projects. The projects have a strong collaborative element and stimulate students to draw on their individual academic profile. And finally, sixth, all students complete a final project – called 'bachelor thesis' at MSP.

The course catalogue shows a wide array of courses within the fields of Biology, Chemistry, Physics and Neurosciences next to courses in Mathematics and a good set of interdisciplinary courses drawing on several disciplines of the natural sciences and searching for cross-overs. In total, student could choose from 75 courses and 34 skills modules for 2017-2018. Next to these modules, the students reflect on the interdisciplinarity of the sciences in their research projects. In 2017-2018, a total of 78 research projects were offered. Uniquely for MSP, these research projects are not only initiated by staff members, but also by students and businesses. Research projects are commonly exercised in a laboratory setting at the Brightlands Chemelot Campus or, in some cases, at other faculties of UM, in the field or at companies. The panel verified that MSP assured that students always work under qualified supervision and that all necessary safety regulations were closely followed. It is for the panel another example of the advantages of a truly student-centred approach to teaching, resulting in good variation of research options across the spectrum of the sciences.

The panel considers the way in which MSP's curriculum is structured of good quality. Student progress is made attainable by the progression of course levels from an introductory to advanced level, skill courses are built in on a regular basis and reflection weeks allow students to internalise their learning while also 'room to breathe' after exam weeks. MSP students also monitor their workload themselves. They recently held student-led surveys in exam weeks to monitor stress levels. When these proved worrisome, they reported back to the management and discussed ways about how to avoid this situation in the future. This is considered commendable by the panel. Students also indicated that they felt comfortable to report on stress levels, issues, concerns and problems to their teachers, and that they felt confident that these would be acted upon if required. These findings witness, again, the small-scale setting of the programme next to indicating good communications between students and staff regarding the intensive workload of students. Nominal study progress is therefore ensured, in the panel's view.

### **Considerations**

At MSP, the panel encountered a thriving community of learners in which both staff members and students reap the benefits from the programme's small-scale, intensive setting. MSP's didactic take, a combination of the RBL/PBL-approach, and the principles of an open curriculum create a dynamic, student-centred classroom in which students are active stake-holders in designing their own learning trajectory. The didactic principles both structure their preparation and self-study hours while also ensuring a good numbers of hours filled with face-to-face teaching. The curriculum is structured in such a manner as to ensure nominal study progress, including extracurricular activities. The panel appreciates in particular that students have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure.

## Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme)*: the panel assesses Standard C as 'meets the standard'.

### D. Intake

The programme has a sound selection procedure in place, aimed at admitting motivated and academically and/or professionally talented students, in which the criteria include suitability for and interest in the small-scale and intensive educational concept, in combination with extracurricular activities.

## Findings

MSP has an extensive admission procedure in line with the policy of MSoLAS. It is aimed at finding the right match between applicants interests and abilities and to what the programme has to offer in terms of the academic level, the course catalogue, the open curriculum, the nature of PBL and the collegiate academic community. Three elements are taken into account: academic achievement, English proficiency and a candidate's motivation.

Currently, MSP has two entry moments: one in September, one in February. Both entry moments follow the same admission procedures. Applicants send in a motivation letter and a supporting file. Complete applications are checked for formal eligibility based on a diploma evaluation. If a candidate is eligible, the supporting materials are reviewed and assessed to see whether an applicant is a potential match. Accordingly, unsuccessful applicants are informed and promising candidates are invited for an interview with two members of staff. After the interview, a report is comprised by the interviewers reflecting on an applicant's suitability. On the basis of the combined application file and the interview report, the Board of Admissions of MSP takes a decision. Applicants then receive a formal rejection letter or an official invitation offer for enrolment.

During the site visit, students confirmed that the admission interviews targeted their motivation for entering this specific programme. They felt vetted for their drive, discussed MSP distinctive profile and were also sincerely questioned on their scientific interests and goals. In their eyes, the interview was a two-way process and conducted in a professional yet constructive way. The interview truly aimed at exploring the potential match between MSP and the applicant, and vice versa. Students also praised their interviewers for creating a safe environment that helped them to make up their mind. Some also knew of rejected applicants, usually on grades. Staff members stressed that they considered the interview process of extreme importance as it allows them to select motivated and very good students, who also have a quite diverse background. They consider this beneficial for the creation of the MSP community.

The panel also studied the application and admission numbers for the period 2012-2018. MSP attracts a unique group of students interested in the natural sciences, with an interest in the structure and open curriculum of a LAS programme. The number of applicants, interviews and admitted students have been steadily growing. The selectivity rate ranges in the period under consideration is between 19-47% for both intake moments, and is on average 39%. Applicants also take up their offers. The resulting yield ranges between 53-90%, and is on average 69%. In the panel's view, these rates indicate that MSP is selective and attractive for prospective students with a good entry level and motivation for MSP's didactic concept and philosophy. The self-evaluation report also shows that dropout rates after year 1 tend to be significantly lower (c. 10%) than in other UM-programmes (c. 23%). This is further proof of a sound selection procedure.

MSP attracts both Dutch and international students and is able to guarantee an international classroom. In 2017-2018, the percentage of total Dutch students of the MSP population is 21%, of EU-national 65% (excluding the Netherlands), and of other international countries 14%. Also, MSP has a relatively equal gender balance: 53% of its total student population is female and 47% is male



in 2017-2018. The panel is pleased with these rates and considers MSP uniquely diverse in terms of gender and nationality.

### Considerations

The panel concludes that MSP attracts diverse, motivated and able applicants who are familiarised in the application process with MSP specific structure and unique profile. MSP guarantees an international classroom which also is diverse in terms of gender. The panel notes that the interview process is highly valued by students and functions as a two-way selection process that allow applicants to weigh their interest in MSP as well allowing the MSP to weigh candidate's suitability and motivation for its curriculum offering. Also, dropout rates at MSP are significantly lower than at other UM-programmes, which is considered further proof of the successful match realised between MSP and its students.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme):* the panel assesses Standard D as 'meets the standard'.

#### E. Staff

The number of staff is sufficient in terms of providing small-scale and intensive education, substantiating close contact between staff and students, and providing individual counselling to students outside the educational context. The staff demonstrably command the specific expertise and skills required to achieve the objectives of small-scale and intensive education. The programme actively monitors that teachers hold the required qualifications and, if necessary, ensures that teachers are trained in these aspects.

### Findings

Half of the MSP modules are currently coordinated by core staff and half by other academic staff, hired from other UM-faculties. The panel approves of this set up, which allows for the existence of a small-scale MSP community while also creating flexibility and a breadth of module options for students to choose from. The current student to teaching staff ratio of approximately 14 to 1 allows for a small-scale, interactive classroom with a lot of face-to-face time for individualised attention to students' learning process. Over the period under consideration, this ratio has always been favourable for teaching in a small-scale and intensive education setting. Support staff numbers are also at an adequate level to provide support for the MSP community. Students mentioned during the site visit that staff and services are readily available.

Hired staff members from other faculties are selected by the MSP management for their motivation and the ways in which their expertise and research strengthen MSP's curriculum; they aim to hire only non-core staff with a doctorate and an established research position as this result in research-based and research-led teaching for MSP students. An added benefit of the hiring of these 'external' staff members is that they secure access for MSP students to high-end research laboratories and their facilities, amongst which AMIBM (Aachen-Maastricht Institute of Biobased Materials), M4I (Maastricht MultiModal Molecular Imaging Institute) and MERLN (Institute for Technology-Inspired Regenerative Medicine) for example. Students valued the various research opportunities ensured by the diversity of MSP's staff.

MSP staff members are sufficiently trained by UM on the didactic needs of the problem-based learning method and on research-based learning strategies. Core staff members are required to have a teaching qualification (University Teaching Qualification; UTQ), or are in the process of obtaining one. All staff members regularly attend teaching workshops to further develop their teaching practice. Lectures and seminars, including course coordinating and course planning, are taught by lecturers and professors holding a doctorate. Tutorials in a PBL setting are sometimes provided by PhD students. These tutors act as facilitators under supervision of a course coordinator. The panel ascertained that tutors are well trained and sufficiently monitored. Students were enthusiastic about

their tutors. MSP also employs some lab assistants at the Brightlands Chemelot Campus, who are adequately prepared for their task.

In recruiting new staff, MSP aims to create a balance between educational experience and expertise in one of the core disciplines and an international focus for the staff. To retain staff, an attractive career model has been implemented at MSP, based on MSoLAS models. Core staff can advance from one function to another within MSP based on an individualised career plan, which can both be research- and/or teaching-oriented. The panel considers the staffing policy of MSoLAS an excellent practice, which should be considered a national example within LAS. The model is tailored towards the needs and wishes of staff, who could either progress based on a teaching career or who are rewarded and encouraged to combine a teaching career with a research career within MSP. MSP staff on teaching contracts feel confident that the research-led teaching also feeds into their own research. In this way, the programme ensures a motivated, dedicated staff team that comprises both educational specialists and active researchers. The combined and balanced expertise feed into inspired, interactive and research-based and research-led modules within MSoLAS.

During the site visit, MSP staff was enthusiastic about the programme and their teaching duties. They considered teaching at MSP a privilege and praised their students, who they considered hard-working and ambitious. They felt engaged in the programme and valued by the management. Students considered the MSP staff very approachable and helpful, and also felt that they had sufficient attention for student needs. The panel noted during the tour of the Brightlands Chemelot Campus that students have a lot of responsibility and access to design their own research here, but that staff is always around in the background to assure that all security measures are taken into account. The panel considers this commendable, as it creates a challenging yet secure learning environment for students.

### Considerations

The panel concludes that the teaching staff at MSP has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Teaching staff at MSP, both core staff members and hired staff members from other faculties, is dedicated to the programme and committed to their students. Students also speak highly of their teachers and feel that they have sufficient access to staff members. The teaching staff to student ratio of 1:14 also favours an intensive, small-scale teaching setting.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme):* the panel assesses Standard E as 'meets the standard'.

### F. Facilities

The programme has its own infrastructure with facilities for small-scale and intensive education and common extra-curricular social activities.

### Findings

MSP is based at two locations: in Maastricht city centre with a basis at the Kapoenstraat, also the faculty building of the Faculty of Science and Engineering, and in Geleen at the Brightlands Chemelot Campus. At the Kapoenstraat, the MSP common room is located. Aperture, MSP's student association, also houses at the Kapoenstraat, just as all MSP staff offices, lecture facilities, a large study room and tutorial rooms. MSP students have generous access hours to this building, ranging from 8:00-23:00. At two other inner city locations, additional tutorial rooms can be found.

As MSP is still very much growing in its student numbers, the current facilities at the Kapoenstraat are quickly becoming too small. UM responded to this expected growth by choosing a new home for MSP. A monumental historic building at the Tapijn Campus is currently restored and prepared for MSP. Here, offices, social, lecture and tutorial rooms will be brought all under one roof from



September 2019 onwards, providing the necessary additional space. Also, in the new building students will have plenty of social space compared to relatively packed common room at the Kapoenstraat, that is currently also the home of Aperture. The panel is pleased to hear this, as this will also make it easier for students to organise extra-curricular activities outside of office hours and allows for further social initiatives.

MSP's second base, a 'home away from home', is the Brightlands Chemelot Campus in Geleen. Located at the Centre Court building, MSP offers students over 1000m<sup>2</sup> laboratory space for skills training and research projects in chemistry, biology and physics. Transport to the Brightlands Chemelot Campus is organised by UM; the university has entered into an agreement with a local transport company, who now provides transport free of charge for MSP students on the regular bus serving the public between the Brightlands Chemelot Campus and Maastricht.

The panel toured the premises at Geleen and was very impressed by the available facilities. It noted a physics lab, a laboratory equipped for both biosafety level 1 and 2, a dark room, glove boxes in which research can take place in a secured environment, and various equipment for analytical research. The panel considers the Brightlands Chemelot Campus facilities state-of-the-art for undergraduate research in biology and chemistry and of sufficient level for physics research. These facilities allow for collaborative and interdisciplinary research in the natural sciences and enhance MSP students' identity as part of a scientific research-based community. The panel also learned that MSP hopes to strengthen their equipment for physics research in the coming years, of which it naturally approves.

Students explained during the tour that they felt privileged and spoilt with their access to the Brightlands Chemelot Campus. They have a lot of responsibility here and direct access to equipment, while technicians and laboratory assistant help them with the machines when necessary. During the week, staff members supervise students who work at the Brightlands Chemelot Campus. The panel was also pleased to see that safety instructions were well communicated. During its tour, the panel met enthusiastic and very able students who worked on their projects, and it observed some excellent examples of well-maintained lab books.

### Considerations

The panel concludes that MSP has its own infrastructure, including very good facilities for undergraduate research. It considers the biology and chemistry facilities at the Brightlands Chemelot Campus state-of-the-art and the physics equipment of satisfactory level to exercise undergraduate research in an interactive, collaborative, and interdisciplinary setting. The panel noticed during the site visit that the current facilities at the Kapoenstraat are rather cramped and, although access to the building is generous, does not allow students sufficient space for initiating many new social initiatives and extra-curricular activities next to the existing ones. It is therefore pleased that these concerns are already taken up by the university and that MSP will soon be rehoused to a new dedicated building at the Tapijn Campus, with plenty of social space for students.

### Conclusion

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme)*: the panel assesses Standard F as 'meets the standard'.

#### G. Achieved learning outcomes

The content and the level of the tests and final projects are in line with the level and the broadening as set down in the intended learning outcomes. Graduates are admitted to demanding postgraduate programmes and/or jobs.

The success rates are substantially higher than those of other relevant programmes that do not carry the distinctive feature, and are at least on a par with other relevant programmes that have been granted this distinctive feature.



## Findings

### *Achievement level*

Students achieve the final learning outcomes in individual courses throughout their studies, through personal development and by the research skills and analytical skills demonstrated in their final bachelor theses. Prior to the site visit, the panel studied 15 theses from the 2017-2018 graduation cohort as well as the assessment forms completed by the supervisors.

The average achievement at MSP level was high; students graduated with grade of 8,2 and a GPA of 7.6 on average. The panel examined several theses awarded a high grade and concluded that the grading was justified. The theses were well-constructed and demonstrated a high level of in-depth knowledge of the respective topics. The research underpinning the results was solid and often of high quality. The projects and theses also reflect the benefits of a broader interdisciplinary approach in the students training, in the way in which students approach problems and define questions. This is in line with the broadening of interests as set down in the intended learning outcomes. The panel supports reflecting on incorporating a defined interdisciplinary element in the bachelor theses to bring this aspect further to the forefront.

In the panel's view, MSP graduates are able to compete with disciplined natural sciences students which is considered a further illustration of the high level achieved. During the site visit, the panel learnt that some of the theses had already resulted in publications in peer-reviewed journals and that graduates had presented at (inter)national conferences based on their bachelor thesis research, both at monodisciplinary and interdisciplinary platforms. This helps graduates to progress quickly into a scientific career. Also, the panel heard during the site visit that MSP managed to put forward a successful application for a NWO grant based on student work. This is considered impressive by the panel. These examples are in line with the panel's observation regarding the quality of the work and the observed breadth of interests.

Alumni of specifically acknowledged the benefits of interdisciplinary research skills and training for the development of their career and personal growth. They felt that they were more prone to try out a myriad of approaches to solve problems in comparison to their peers with a disciplinary background. Also they emphasised that they are very comfortable in a laboratory setting and having the advantage of already having designed their own research projects at several occasions during their studies. This made them, in their own eyes, relatively independent compared to graduates from other scientific programmes.

### *Performance of graduates*

MSP currently has 259 graduates. An alumni survey indicated that 93% respondents would have chosen MSP again for their bachelor's degree, pointing towards great student satisfaction with the way in which the programme prepared them for their further career. Graduates of MSP are readily accepted in a wide variety of graduate programmes at master's level at universities of good (inter)national standing and reputation, amongst which prestigious and highly competitive programmes at Oxford University, University of Bonn, ETH Zürich and University College London. Many opted for further studies in the Netherlands (40%), but also the United Kingdom (15%) and Germany (14%) were popular, whereas around 30% of all graduates moved to universities in other parts of the world. The high quality of scientific research training at MSP is further testified by the fact that 2% of all graduates are directly enrolled in PhD programmes. Alumni explained that it was, naturally, also possible to enter a professional career after finishing MSP; they all knew of some former graduates moving directly into consulting. Many of these graduates, however, would return to education at a later stage according to the testimonies of their peers. This is in line with what the panel would expect and in line with the numbers presented in the SER: 87% of alumni enter into further education according to the alumni survey.





### *Success rates*

Study success at MSP is manifest in various ways. From studying the provided tables in the SER, the panel learnt that dropout rates are relatively low; they are c. 13% on average for MSP over the period under consideration, which is equal to the rates at UCM and clearly better than those at other UM-programmes (23%). The programme considers this a reflection of its good matching of students and expectations through its selection procedure, but also indicates that the benefits of an open curriculum are at play. In an open curriculum, students have relative freedom to explore their interests and may move into other areas than first foreseen. MSP allows them to explore their initial ideas, while also offering freedom to move away from these while keeping them in the programme.

MSP graduation rates also compare favourably to those of other relevant programmes. At the moment, 55% of MSP students graduate on average in three years, again comparable to those at UCM (58%) and attainably better compared to the graduation rates in other UM programmes (46%). These numbers are also clearly improving, advancing from 50% for 2012-2013 to 63% for 2014-2015, the last year for which the numbers on the graduation rates are complete. For four years, these numbers are favourable for MSP (73% on average) compared to other UM programmes (63% on average). UCM is currently doing better than MSP after four years (with a graduation rate of 85% on average). The panel acknowledges, however, that MSP has been quickly improving its graduation rates; in 2014-2015 it was already 78%. MSP is, all in all, younger than UCM and in this sense less established, and it seems to be catching up with its older twin. The panel trusts, with the lessons learnt and good supervision practices in place, that this improvement will last. This trust is supported by the panel's findings in the Limited Programme Assessment of the bachelor's degree LAS at MSoLAS, which took place alongside the assessment of the Special Feature. In the Limited Programme Assessment, the panel noted a very positive improvement of the bachelor thesis trajectory at MSP and very good supervision and advisory practices, which also feed into the rising graduation rates observed in this assessment. The panel considers these success rates to be adequate and in line with what could be expected for a small-scale intensive interdisciplinary programme in the natural sciences that now exists for eight years.

### **Considerations**

The panel ascertains that the bachelor theses are aimed at the right bachelor level and are of good quality. The theses demonstrate the benefits of students' broadened interdisciplinary training in their creativity of approach and in the way research questions are formulated. The panel encourages MSP to bring this more to the forefront by introducing a specific interdisciplinary element in the theses yet considers the broadening of interest as formulated in the intended learning outcomes sufficiently proven. Study success at MSP is manifest in its significant lower dropout rates and higher graduation rates compared to other UM programmes. MSP is also catching up with its older twin UCM at MSoLAS with respect to its graduation rates and demonstrated clear improvement on this point during the years of its existence. The panel trusts that this positive trend will continue. Graduates of the programme are admitted to prestigious universities, both in the Netherlands and abroad. They also can directly enter the job market, although most MSP graduates continue their studies.

### **Conclusion**

*Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme):* the panel assesses Standard G as 'meets the standard'.

## GENERAL CONCLUSION

The panel considers the intended learning outcomes (ILOs) for MSP attainable for students and formulated at an ambitious level for a bachelor's programme, aiming for above-average degree level. The programme is geared towards broad academic development in the natural sciences, paying attention to the fields of biology, physics, chemistry and the most relevant tools in mathematics and interdisciplinary combinations of these fields. This widening of perspectives is considered valuable for students with an interest in the natural sciences. Skills-training is geared towards achieving a

high level, including problem-solving, critical thinking and decision-making skills. The panel offered some suggestions regarding the inclusion of personal communication skills and development of an independent research (Standard A).

MSP offers a strong, science-based curriculum that meets the intended broadening of interests as set down in MSP's ILOs. Modules on the role of ethics within science and courses with regards to the importance of the ways in which the sciences, social sciences and humanities mutually relate would be welcomed by the panel to further enrich the current curriculum offering. MSP has a range of extra-curricular opportunities for students to deepen and broaden their interests, some of which are clearly inextricably bound to the curriculum such as extra-curricular lectures, field trips and career events organised in collaboration with alumni. The panel encourages staff and students to take MSP's move to the Tapijn Campus as an incentive to rethink its current offering of extra-curricular activities and expand upon it (Standard B).

At MSP, the panel encountered a thriving community of learners in which both staff members and students reap the benefits from the programme's small-scale, intensive setting. MSP's didactic take, a combination of the RBL/PBL-approach and the principles of an open curriculum, create a dynamic, student-centred classroom. The didactic principles both structure their preparation and self-study hours while also ensuring a good numbers of hours filled with face-to-face teaching. The curriculum is structured in such a manner as to ensure nominal study progress by the students, including extracurricular activities. The panel appreciates in particular that students also have time to reflect and recuperate in the reflection weeks that form part of the curriculum structure (Standard C).

MSP attracts diverse, motivated and able applicants who are familiarised with MSP's specific structure and unique profile. The application process including its interviews is highly valued by students and functions as a two-way selection process that allow applicants to weight their interest in MSP as well allowing MSP to weigh candidate's suitability and motivation for its curriculum offering. MSP guarantees an international classroom which also is diverse in terms of gender. This is considered a positive for a programme dedicated to the natural sciences. Dropout rates at MSP are significantly lower than at other Maastricht University programmes, which is considered further proof of the successful match realised between MSP and its students (Standard D).

The panel concludes that the teaching staff at MSP has the required academic knowledge and didactic skills to teach in a small-scale, intensive educational programme. Teaching staff at MSP is dedicated to the programme and committed to their students. The teaching staff to student ratio of approximately 1:14 also favours an intensive, small-scale teaching setting (Standard E).

The panel concludes that MSP has its own infrastructure, including very good facilities for undergraduate research. It considers the biology and chemistry facilities at the Brightlands Chemelot Campus state-of-the-art and the physics equipment of satisfactory level to exercise undergraduate research in an interactive, collaborative and interdisciplinary setting (Standard F).

The panel ascertains that the bachelor theses are aimed at the right bachelor level and are of good quality. The theses demonstrate the benefits of students' broadened interdisciplinary training in its creativity of approach and in the way research questions are formulated. The panel encourages MSP to bring this element more to the forefront by introducing a specific interdisciplinary element in the theses. Nevertheless, the panel considers the broadening of interest as formulated in the intended learning outcomes sufficiently proven. Study success at MSP is manifest in its significant lower dropout rates and higher graduation rates compared to other UM programmes. MSP also demonstrated clear improvement on this point during the years of its existence. The panel trusts that this positive trend will continue. Graduates of the programme are admitted to prestigious universities, both in the Netherlands and abroad. They also can directly enter the job market, although most MSP graduates continue their studies (Standard H).



*Practice-based assessment*

With regard to the Distinctive Feature Small-scale and Intensive Education, the panel verified that MSP meets all standards. In its assessment under Standard H, the panel also paid specific attention to the quality of the theses, the achievement level in general and the broadening of themes as set out in the intended learning outcomes. All were considered favourably for the programme in comparison to other relevant programmes. Study success at MSP is manifest in its significant lower dropout rates and higher graduation rates. MSP is already on par in its dropout rates to its twin UCM at MSoLAS and its success rates are quickly following suit. The panel trusts this positive trend to continue, also taking into account the favourable changes to the bachelor thesis practices and the good, personal direction and supervision as observed under the Limited Programme Assessment of LAS at MSoLAS that took place alongside this practice-based assessment. Graduates of the programme are admitted to prestigious universities, both in the Netherlands and abroad. They also can directly enter the job market, although most MSP graduates continue their studies.

All standards of the Assessment Framework for the Distinctive Feature of Small-scale and Intensive Education (January 2018) currently meet the standard. These combined findings result in a positive assessment of the Distinctive Feature by the panel and it advises to grant MSP the Distinctive Feature of Small-scale and Intensive Education with a successfully completed practice-based assessment.

**Conclusion**

The panel assesses the *bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme)* as 'positive'.

## APPENDICES



## APPENDIX 1: DOMAIN-SPECIFIC FRAMEWORK OF REFERENCE

This reference framework is intended for the Liberal Arts and Sciences (LAS) programs in the Netherlands. This includes selective University Colleges as well as non-selective LAS programs situated within a university. These programmes are a constituent part of Dutch “scientific” or “scholarly” education (wetenschappelijk onderwijs). The LAS education framework articulated here distinguishes itself from (emerging) broad programs through its proximity to academic inquiry and research and through its commitment to wide-ranging intellectual formation not chiefly aimed at preparing students for particular professions.

As this accreditation process is reviewing an ever more diverse range of programs, this framework of reference is short rather than extensive. Rather, it is a reference framework that reflects shared educational aims with each of the programs under review.

Liberal arts and Sciences emphasises intellectual growth through both broad and deep learning as the foundation of the curriculum. Standing in the liberal arts tradition that seeks to free the individual through intellectual and ethical engagement, LAS encourages inquiry through profoundly open curricula that allows students to explore a diversity of academic fields from the Humanities, Social Sciences and Natural Sciences. This enables them to attain depth in disciplinary, multidisciplinary or interdisciplinary concentration areas of their own choosing. By combining the disciplinary depth and multi- or interdisciplinary learning with undergraduate research and communication skills, students develop their creativity, initiative-taking, skills in working together. Often conducted in a strongly international context, LAS programs regardless of setting promote intercultural understanding abilities and societal engagement.

LAS takes place within distinct learning and social communities. The formal program and extracurricular activities are often linked and in such cases students, faculty and staff participate actively in the governance of the program and the community. Teaching and learning experiences are typically characterized by small-scale and intensive education, with a high level of interaction between students and teachers and among students themselves. Giving this emphasis on active discussion and debate, LAS programs strive for diversity in their student population in terms of nationality, ethnicity, gender and cultural and socio-economic backgrounds and offer dynamic environments that invite curricular experimentation and educational innovation and attract academics dedicated to excellence in teaching.

Liberal Arts & Sciences programs have intended learning outcomes that include:

- a. multidisciplinary familiarity in the humanities, social sciences and natural sciences combined with depth of knowledge in a chosen concentration area;
- b. ability to approach complex questions or issues in an inter- or multidisciplinary way;
- c. advanced academic skills in communication, quantitative and qualitative methods, critical thinking, research and learning;
- d. attitudes and skills for engaged citizenship, including international and intercultural understanding, social skills and a will to contribute to solving societal issues;
- e. intellectual curiosity, reflexivity, integrity and an open mind, learning skills necessary for subsequent graduate studies and the workplace.

Approved in Tilburg on October 25, 2017 by

- Dean Amsterdam University College: prof. dr. Murray Pratt
- Dean Erasmus University College: prof. dr. Maarten Frens
- Dean Leiden University College The Hague: prof. dr. Judi Mesman
- Dean University College Groningen: prof. dr. Hans van Ees
- Dean University College Maastricht: prof dr. Matthieu Zegers
- Dean University College Roosevelt: prof. dr. Bert van den Brink
- Dean University College Tilburg: prof dr. Alkeline van Lenning
- Dean University College Twente: prof. dr. Jennifer Herek





- Dean University College Utrecht: prof. dr. James Kennedy
- Director Liberal Arts and Sciences @ Utrecht University: dr. Iris van der Tuin

## APPENDIX 2: INTENDED LEARNING OUTCOMES

### **Bachelor's programme Liberal Arts and Sciences (University College Maastricht)**

#### *1. A Broad Academic Development*

Graduates have a breadth of academic knowledge.

1.1 Graduates have university-level knowledge of laws, theories, central concepts and methods in at least one academic discipline or field within each of the three main domains of scientific inquiry, i.e. the humanities, the social sciences and the natural sciences.

1.2 At an elementary academic level graduates have knowledge of recent historical developments, of fundamental concepts for understanding politics, of the epistemology of scientific inquiry and of the role of theoretical modelling in understanding the world.

#### *2. In-depth Academic Expertise*

Graduates have in-depth academic expertise in a number of related academic fields or disciplines.

2.1 Graduates have knowledge at university level of laws, prominent theories, central concepts, sub-disciplines, seminal issues and methods in a number of related academic fields or disciplines.

2.2 Graduates have advanced knowledge of (specialized) topics and developments in a number of related academic fields or disciplines which requires, as a pre-requisite, knowledge and understanding at an elementary academic level. This can entail a mix of subfields linked to advanced research techniques, a multidisciplinary approach to a particular topic, or current developments in a discipline.

2.3 Graduates can put specialized knowledge of a particular field or discipline within a wider academic or societal context. They possess inter- and multidisciplinary skills, i.e. are able to identify the disciplines involved in understanding complex problems, select research methods for studying different aspects of such problems and develop an integrated viewpoint incorporating the relevant disciplines.

2.4 Graduates have proficient academic expertise in a particular topic, issue or question and in appropriate research methods involved in studying it, pertaining to one or a number of related academic fields or disciplines.

2.5 Graduates are adequately prepared for graduate programs in the field of their expertise.

#### *3. Academic and Professional Skills*

Graduates have highly-developed academic and professional skills. These are:

3.1 Problem-Solving Skills: the ability to apply knowledge and understanding to problems within their field of expertise, to formulate solutions and sustain arguments for those solutions in a professional fashion, both independently and in a team.

3.2 Critical Thinking Skills: the ability to reach and support a conclusion in a logically structured fashion based on evidence, in an intellectually honest and reflective fashion.

3.3 Communication Skills: the ability to present information, ideas, problems and solutions in an academic, professional and social context.

3.4 Writing Skills: the ability to present information, ideas, problems, arguments and solutions effectively.

3.5 Learning Skills: the ability to determine knowledge gaps, learn new vocabularies, and use them to ask and answer new questions. They have the attitude and skills required for life-long learning, professional growth and professional responsibility.

3.6 Research Skills: the ability to formulate research questions, select appropriate methodologies, design and conduct research to gather data, interpret data, and report and reflect on findings.

#### *4. Personal and Social Skills*

Graduates have highly-developed personal and social skills. These are:

4.1 Reflective Skills: ability to reflect on their academic interests, ambitions, strengths and weaknesses, but also on their own actions and the implications of those actions on society.

4.2 Ethical skills: ability to analyse ethical issues in academic and social environments in relation to their professional activities.



4.3 Decision-making Skills: ability to make informed and considered choices and decisions concerning their academic and personal development.

4.4 Collaborative Skills: ability to effectively work in a team in solving problems and accomplishing tasks.

4.5 Intercultural skills: ability to communicate and collaborate effectively and appropriately with people from different socio-cultural and national backgrounds.

## **Bachelor's programme Liberal Arts and Sciences (University College Venlo)**

### *1. A Broad Academic Development*

Graduates have a breadth of academic knowledge.

1.1 Graduates have university-level knowledge of laws, theories, central concepts and methods in at least one academic discipline or field in both the social sciences and the (life) sciences.

1.2 At an elementary academic level graduates have knowledge of the epistemology of scientific inquiry, of the role of theoretical modelling in understanding the world, of human behaviour in relation to culture, and in recent political ideas in relation to globalization and sustainability.

### *2. In-depth Academic Expertise*

Graduates have in-depth academic expertise in a number of related academic fields or disciplines.

2.1 Graduates have knowledge at university level of laws, prominent theories, central concepts, sub-disciplines, seminal issues and methods in a number of related academic fields or disciplines in the (life) sciences and the social sciences.

2.2 Graduates have advanced knowledge of (specialized) topics and developments of several fields or disciplines in the (life) sciences/ and or social sciences. They have profound academic expertise in one or more disciplines of the (life) sciences and/or the social sciences.

2.3 Graduates can put specialized knowledge of a particular field or discipline within a wider academic or societal context. They possess inter- and multidisciplinary skills, i.e. are able to identify the disciplines involved in understanding complex problems, select research methods for studying different aspects of such problems and develop an integrated viewpoint incorporating the relevant disciplines.

2.4 Graduates have the capability to analyse a practical problem in the (life) sciences and social sciences and assess which expertise, materials, laboratory infrastructure and experiments are required to investigate this problem in an efficient manner through scientific research.

2.5 Graduates are adequately prepared for graduate programs in the field of their expertise.

### *3. Academic and Professional Skills*

Graduates have highly-developed academic and professional skills. These are:

3.1 Problem-Solving Skills: the ability to apply knowledge and understanding to problems within their field of expertise, to formulate solutions and sustain arguments for those solutions in a professional fashion, both independently and in a team.

3.2 Critical Thinking Skills: the ability to reach and support a conclusion in a logically structured fashion based on evidence, in an intellectually honest and reflective fashion.

3.3 Communication Skills: the ability to present information, ideas, problems and solutions in an academic, professional and social context.

3.4 Writing Skills: the ability to present information, ideas, problems, arguments and solutions effectively.

3.5 Learning Skills: the ability to determine knowledge gaps, learn new vocabularies, and use them to ask and answer new questions. They have the attitude and skills required for life-long learning, professional growth and professional responsibility.

3.6 Research Skills: the ability to formulate research questions, select appropriate methodologies, design and conduct research to gather data, interpret data, and report and reflect on findings.

### *4. Personal and Social Skills*

Graduates have highly-developed personal and social skills. These are:

4.1 Reflective Skills: ability to reflect on their academic interests, ambitions, strengths and weaknesses, but also on their own actions and the implications of those actions on society.

4.2 Ethical skills: ability to analyse ethical issues in academic and social environments in relation to their professional activities.

4.3 Decision-making Skills: ability to make informed and considered choices and decisions concerning their academic and personal development.

4.4 Collaborative Skills: ability to effectively work in a team in solving problems and accomplishing tasks.

4.5 Intercultural skills: ability to communicate and collaborate effectively and appropriately with people from different socio-cultural and national backgrounds.

## **Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme)**

### *1. A broad Academic Development*

Graduates have a breadth of academic knowledge.

1.1. Graduates have a broad perspective and a high level of academic and intellectual development in the sciences. They understand the nature of academic knowledge and the process of scientific development.

1.2. At an elementary academic level graduates have knowledge of biology, chemistry, physics and the most relevant tools in mathematics.

### *2. In-depth Academic Expertise*

Graduates have in-depth academic expertise in a number of related academic fields or disciplines.

2.1. Graduates have knowledge at university level of laws, theories, central concepts, seminal issues and methods in a number of related fields or disciplines in the sciences.

2.2. Graduates have advanced knowledge of (specialized) topics and developments of several fields or disciplines in the sciences. They have profound academic expertise in one or more disciplines of the natural sciences.

2.3. Graduates can put specialized knowledge of a particular field or discipline from the sciences in a broader academic or societal context. They are able to apply scientific knowledge, concepts and skills related to mathematics, physics, chemistry and/or biology to solve mono- and multidisciplinary scientific problems in the natural sciences. They can translate concepts from one discipline of the natural sciences into other disciplines of the natural sciences.

2.4. Graduates have the capability to analyse a practical problem in the natural sciences and assess which expertise, materials, laboratory infrastructure and experiments are required to investigate this problem in an efficient manner through scientific research.

2.5. Graduates are adequately prepared for graduate programs in the field of their expertise.

### *3. Academic and Professional Skills*

Graduates have highly-developed academic and professional skills. These are:

3.1. Problem-Solving Skills: the ability to apply knowledge and understanding to problems within their field of expertise, to formulate solutions and sustain arguments for those solutions in a professional fashion, both independently and in a team.

3.2. Critical Thinking Skills: the ability to reach and support a conclusion in a logically structured fashion based on evidence, in an intellectually honest and reflective fashion.

3.3. Communication Skills: the ability to present scientific concepts as well as the objectives, methods used and results of a natural science project, being able to adapt the presentation of important aspects depending on the composition of a particular audience, such as academia, industry, policy makers, the general public or students.

3.4. Writing Skills: the ability to present information, ideas, problems, arguments and solutions effectively.

3.5. Learning Skills: to quickly adapt to new emerging theories and techniques in the natural sciences as a result of the competence to increase and develop scientific knowledge through study. They have the attitude and skills required for life-long learning, professional growth and professional responsibility.

3.6. Research Skills: The competence to execute, coordinate or supervise research projects in the natural sciences and analyse and interpret the results in relation to the relevant scientific literature.



#### *4. Personal and Social Skills*

Graduates have highly-developed personal and social skills. These are:

- 4.1. Reflective Skills: ability to reflect on their academic interests, ambitions, strengths and weaknesses, but also on their own actions and the implications of those actions on society.
- 4.2. Ethical skills: ability to analyze ethical issues in academic and social environments in relation to their professional activities.
- 4.3. Decision-making Skills: ability to make informed and considered choices and decisions concerning their academic and personal development.
- 4.4. Collaborative Skills: ability to effectively work in a team in solving problems and accomplishing tasks.
- 4.5. Intercultural skills: ability to communicate and collaborate effectively and appropriately with people from different socio-cultural and national backgrounds.

## APPENDIX 3: OVERVIEW OF THE CURRICULUM

**Bachelor's programme Liberal Arts and Sciences (University College Maastricht)**

	<b>Courses (5 credits each)</b>	<b>Skills courses (2,5 credits each)</b>	<b>Projects (5 credits each)</b>	<b>Total (credits)</b>
<b>Core</b>	4 compulsory courses	max 4 introductory	max 2 introductory	<b>40</b>
<b>General education</b>	2 x 2 courses outside chosen concentration			<b>20</b>
<b>Concentration</b>	16 courses max 4 introductory min 4 advanced	6 skills courses intermediate or advanced	3 projects max 2 intermediate min 1 advanced	<b>110</b>
<b>Capstone</b>	1 advanced level last semester	Bachelor thesis		<b>10</b>
<b>Total</b>	24 courses	10 skills courses + Capstone	5 projects + Capstone	<b>180</b>

Table 5-5. UCM core modules

COR1002	Philosophy of Science	5 ECTS
COR1003	Contemporary World History	5 ECTS
COR1004	Political Philosophy	5 ECTS
COR1005	Modelling Nature	5 ECTS
SKI1008	Introduction to Academic Skills I	2.5 ECTS
SKI1009	Introduction to Academic Skills II	2.5 ECTS
SKI1004	Research Methods I	2.5 ECTS
SKI1005	Research Methods II	2.5 ECTS
PRO1010:	Introduction Academic Communication: A Writing Project	5 ECTS
PRO1011	Research Proposal Writing	5 ECTS

**Bachelor's programme Liberal Arts and Sciences (University College Venlo)**

	<b>Courses (5 credits each)</b>	<b>Skills courses (2,5 credits each)</b>	<b>Projects (5 credits each)</b>	<b>total (credits)</b>
<b>Core</b>	4 compulsory courses	max 4 introductory	max 2 introductory	<b>40</b>
<b>General education</b>	2 courses outside chosen concentration			<b>10</b>
<b>Concentration</b>	16 courses max 4 introductory min 4 advanced	6 skills courses intermediate or advanced	3 projects max 2 intermediate min 1 advanced	<b>110</b>
<b>Capstone</b>	1 Capstone			<b>20</b>
<b>Total</b>	22 courses	10 skills courses	5 projects + Capstone	<b>180</b>

Table 5-9. UCV core modules

VCO1001	Modelling Nature	5 ECTS
VCO1002	Philosophy of Science	5 ECTS
VCO1003	World Orientation: an introduction to cultural studies	5 ECTS
VCO1004	Globalisation: World politics and economics	5 ECTS
VSK1001	Introduction to Academic Skills	2.5 ECTS
VSK1002	Research Methods I	2.5 ECTS
VSK1000	The Applied Researcher I	2.5 ECTS
VSK1004	The Applied Researcher II	2.5 ECTS
VPR1003	Research Methods II or	5 credits
VPR1004	Research Methods II: Lab Skills	
VPR1002	The Applied Researcher III	5 credits





**Bachelor's programme Liberal Arts and Sciences (Maastricht Science Programme)**

	<b>Courses (5 credits each)</b>	<b>Skills courses (2,5 credits each)</b>	<b>Projects (5 credits each, BTR 30 credits)</b>	<b>Total (credits)</b>
<b>Core</b>	4 compulsory courses	2 compulsory skills courses	1 compulsory project	<b>30</b>
<b>Elective curriculum</b>	16 courses max 4 introductory min 4 advanced	8 skills courses max 2 introductory min 2 advanced	4 projects max 1 introductory min 1 advanced	<b>120</b>
<b>BTR</b>	1 Bachelor Thesis Research (BTR)			<b>30</b>
<b>Total</b>	20 courses	10 skills courses	5 projects + 1 Bachelor Thesis Research (BTR)	<b>180</b>

Table 5-7. MSP core modules

CHE1001	Introduction to Natural Sciences: Chemistry	5 ECTS
BIO1001	Introduction to Natural Sciences: Biology	5 ECTS
PHY1002	Introduction to Natural Sciences: Mathematical Foundations of Physics	5 ECTS
INT1001	Introduction to Liberal Arts and Sciences	5 ECTS
PRA1001	Research Methods	2.5 ECTS
PRA1002	Research, Data Analysis and Presentation Academic Skills	2.5 ECTS
PRO1001	Philosophy of Science	5 ECTS

## APPENDIX 4: PROGRAMME OF THE SITE VISIT

<b>Wednesday 7 November</b>	
<b>UCV</b>	
8.45 - 9.00	<i>Arrival panel/welcome</i>
9.00 - 9.30	<i>Initial panel meeting</i>
9.30 - 10.30	<i>Development dialogue UCV, UCM and MSP</i>
10.30 - 11.30	<i>Board of Examiners UCV, UCM, MSP</i>
11.30 - 12.15	<i>Initial panel meeting UCV</i>
12.15 - 12.20	<i>walk to the other side of the road</i>
12.20 - 13.00	<i>Lunch</i>
13.00 - 13.30	<i>Transport to UCV lab facilities</i>
13.30 - 14.00	<i>Programme management UCV</i>
14.00 - 15.00	<i>Tour + Treasure trove</i>
15.00 - 15.15	<i>Break</i>
15.15 - 16.00	<i>Students</i>
16.00 - 16.45	<i>Teachers and tutors</i>
16.45 - 17.45	<i>Internal panel meeting UCV</i>
17.45 - 18.00	<i>Programme management UCV</i>
18.00 - 18.15	<i>Words of thanks/Goodbye</i>
18.15 - 19.30	<i>travel from UCV lab facilities to Maastricht</i>
19.30 - 21.00	<i>Panel dinner (panel only)</i>

<b>Thursday 8 November</b>	
<b>UCM</b>	
8.45 - 9.00	<i>Arrival panel/welcome</i>
9.00 - 9.45	<i>Initial panel meeting UCM</i>
9.45 - 10.15	<i>Programme management UCM</i>
10.15 - 11.15	<i>Tour + Treasure trove</i>
11.15 - 12.00	<i>Students</i>
12.00 - 13.00	<i>Lunch</i>
13.00 - 13.45	<i>Teachers and tutors</i>
13.45 - 14.15	<i>Alumni UCM</i>
14.15 - 15.15	<i>Internal panel meeting UCM</i>
15.15 - 15.30	<i>Programme management UCM</i>
15.30 - 15.45	<i>Words of thanks/Goodbye UCM</i>
15.45 - 16.00	<i>Break/Walk to MSP</i>
16.00 - 17.00	<i>Internal panel meeting MSP</i>
17.00 - 17.30	<i>Programme management MSP</i>
17.30 - 18.00	<i>Alumni MSP</i>
18.00 - 18.30	<i>Break</i>
18.30 - 20.00	<i>Panel dinner (panel only)</i>



<b>Friday 9 November MSP</b>	
8.45 - 9.00	<i>Initial panel meeting at Hotel Beaumont</i>
9.00 - 9.45	<i>Transport to Geleen lab facilities (from hotel)</i>
9.45 - 10.00	<i>Welcome at Geleen lab facilities</i>
10.00 - 11.00	<i>Tour + treasure trove</i>
11.00 - 11.45	<i>Students</i>
11.45 - 12.30	<i>Transport to Maastricht</i>
12.30 - 13.30	<i>Lunch</i>
13.30 - 14.15	<i>Teachers and tutors</i>
14.15 - 15.15	<i>Internal panel meeting MSP</i>
15.15 - 15.30	<i>Programme management MSP</i>
15.30 - 16.30	<i>Internal panel meeting UCV, UCM, MSP</i>
16.30 - 16.45	<i>Break</i>
16.45 - 17.30	<i>Programme management UCV, UCM, MSP</i>
17.30 - 18.00	<i>Grand finale: presentation findings UCV, UCM, MSP</i>

## APPENDIX 5: THESES AND DOCUMENTS STUDIED BY THE PANEL

Prior to the site visit, the panel studied 15 capstones for UCM, 5 capstones for UCV and 15 bachelor theses for MSP. In total, the panel studied 35 final works of the bachelor's programme Liberal Arts and Sciences at MSoLAS. Information on the selected final work is available from QANU upon request.

During the site visit, the panel studied, among other things, the following documents (partly as hard copies, partly via the institute's electronic learning environment):

### *MSoLAS*

- Onderwijs- en Examenregeling;
- Assessment policy.

### *UCM:*

- Assessment matrix;
- Overview curriculum;
- Structure of the programme;
- Information on the composition of the staff and staff to student ratio 2012-2018;
- Information on application and admission numbers 2012-2018;
- Quantitative data on study success 2012-2018 for UCM and for all Maastricht University programmes;
- Quantitative data on graduation rates 2012-2018 for UCM and for all Maastricht University programmes;
- Quantitative data on graduates and their final works;
- Various modules, including its teaching materials, including assignments and examinations:
  - Urbanisation Development and Poverty
  - Cognitive Neuroscience
  - Biochemistry
  - Economics and Society
  - Argumentation I
  - Totalitarian Temptation
  - Theory Construction and Modelling Techniques
  - Think Tank

### *UCV:*

- Assessment matrix;
- Overview curriculum;
- Structure of the programme;
- Information on the composition of the staff and staff to student ratio 2015-2018;
- Information on application and admission numbers 2015-2018;
- Quantitative data on study success 2015-2018 for UCV and for all Maastricht University programmes;
- Quantitative data on graduation rates 2015-2018 for UCV and for all Maastricht University programmes;
- Quantitative data on graduates and their final works;
- Various modules, including its teaching materials, including assignments and examinations:
  - World Orientation
  - Gut Microbiology
  - Performance Psychology in Sports and Business
  - Presentation Skills
  - Psychology of Eating
  - Writing a Research Proposal
  - Think Tank



*MSP:*

- Assessment matrix;
- Overview curriculum;
- Structure of the programme;
- Information on the composition of the staff and staff to student ratio 2012-2018;
- Information on application and admission numbers 2012-2018;
- Quantitative data on study success 2012-2018 for MSP and for all Maastricht University programmes;
- Quantitative data on graduation rates 2012-2018 for MSP and for all Maastricht University programmes;
- Quantitative data on graduates and their final works;
- Various modules, including its teaching materials, including assignments and examinations:
  - Transition Metal Chemistry
  - Field Skills in Biology
  - Biochemistry
  - Evolutionary Biology
  - Mathematical Foundations of Physics
  - Science in Action
  - Theory of Relativity