Mission & Vision Statement

July 2015
Science in Amsterdam

Collaboration between Amsterdam’s two universities, University of Amsterdam (UvA) and VU University Amsterdam (VU) in the field of Science can best be described as a ‘work in progress’. Over the years, researchers from both universities have sought contact with colleagues from the other institution where this was beneficial to their scientific work. Similarly, students have participated in courses of their interest at the other institution if they were seeking to broaden and deepen their study programmes.

This collaboration between the three faculties concerned – Faculty of Science (UvA), Faculty of Sciences and Faculty of Earth and Life Sciences (both VU) – has intensified in recent years. Joint action has been taken in both research and teaching fields. Joint teaching strengthens collaboration in research and simultaneously brings out the best in both these two fields.

Various Bachelor’s and Master’s programmes are, for example, now offered as joint degrees. This increasing collaboration requires a joint vision on teaching and learning, not only due to these joint degree programmes, but also specifically in order to be able to expand the collaboration in the future and develop new programmes, with the objective being to be able to offer a broad range of high-quality science study programmes.

Science programmes are currently taught at two locations in Amsterdam: the Amsterdam Science Park campus in the Watergraafsmeer district and the VU campus in the Zuidas district.

A joint vision on teaching and learning is required:
1. Because several programmes will be offered as “joint degrees”.
2. To offer guidelines for the development of a joint educational portfolio in the future.

1 Our mission in education

Our aim is to provide our students with scientific knowledge and technical expertise, to teach them academic skills and attitude, to enhance their abilities so that they can excel both as individuals and in a group. In this way, our graduates will be well prepared for their careers afterwards: within or outside academia, as researchers and lecturers or, for example, as entrepreneurs, teachers, journalists or politicians.

The aim of our mission is to increase:
1. knowledge, insight and experimental skills;
2. general academic skills;
3. personal development;

2 Our vision on education

There are six basic assumptions in our vision upon which all our study programmes are based.

Our education:
- is knowledge-based and research-based;
- includes academic skills, thus preparing students for ‘society’;
- aims to achieve excellent results and high student engagement;
- is internationally orientated;
• is small-scale and intensive;
• is focused on quality rather than quantity.

2.1 Knowledge-based and research-based study programmes
All our study programmes are knowledge-based and research-based. This means that the lecturers have a solid scientific background and, as researchers, form part of a research group. In this way, they are capable of sharing their knowledge of a particular scientific field, including the relevant research, with students and training them to become critical thinkers.

All science study programmes:
• are based on strong academic knowledge;
• are based on strong research groups;
• teach research skills relevant to the particular fields;
• aim to strengthen curiosity and critical thinking.

2.2 Academic skills
Apart from a solid basis of scientific knowledge and insights, students will also be taught the necessary academic skills. It is important that they learn how to collaborate and communicate, how they can gather knowledge from the literature or the internet and analyse this critically. Analytical thinking, as well as problem solving ability, are important skills. Finally, they must also become creative thinkers and be able to look beyond the borders of their discipline. They are, after all, the innovators of the future.

All study programmes work on improving the following academic skills:
• Collaboration and communication;
• Finding and evaluating information;
• Analytical thinking and problem solving;
• Self-reflection and ethics;
• Creativity and innovation.

2.3 Excellent results and high student engagement
The student should not been seen as a client, but as a partner in education. The challenge is to learn actively, not passively. This means that we have high expectations of our students. We want them to be fully engaged in their programme and in their studies. They should be dedicated to learning and take responsibility for their own studies. They should try to achieve the best possible results, irrespective of their limitations. In order to achieve this, we want our students to be full-time members of our academic community.

We expect our students:
• to be dedicated to their studies;
• to make optimal use of educational activities;
• to be in control of their own learning;
• to maximise their learning and aim for excellent results;
• to be open minded;
• to participate in the academic community.
A similarly active and dedicated effort is also expected of the lecturers. We expect our lecturers:

- to be dedicated to their courses and research;
- to make optimal use of teaching facilities;
- to be well-trained in teaching (complying to University Teaching Qualification);
- to aim for excellent results;
- to be open minded and reflective;
- to promote and share their academic environment.

We have a 'partnership approach' with regard to our students. This entails that input from student and alumni evaluations is always taken seriously to improve quality, and that student unions play a key role in student engagement by means of:

- introduction programmes for all first-year students run by students,
- social activities,
- study-related activities (study trips, lectures, career-related activities);

Student councils should play a key role in communication and decision-making regarding all aspects of the study programmes and the educational portfolio.

2.4 Internationally orientated

Amsterdam is an international city. Our student population is also diverse and internationally orientated. In order to strengthen this further, we want to emphasise our position in Europe and the world by attracting international students and staff. We welcome students from abroad, as well as encouraging our own students to study abroad, and we want to contribute to international educational activities by making use of new technologies.

Our portfolio and programmes are internationally orientated in the following ways:

- Students are stimulated to study abroad;
- Students from abroad are welcomed;
- There is a focus on internationalisation (exchange programmes);
- All Master's programmes are in English;

2.5 Small-scale and intensive education

It is very important that students feel that they are acknowledged and personally stimulated by our staff and our programmes. Real and deep learning occurs through learning in communities and through giving students feedback on their accomplishments in their studies on all possible levels, thus receiving feedback on the learning outcomes, as well as feedback on the way they have learned.

To accomplish this we make use of a variety of teaching methods including collaborative learning in practical classes, projects and workgroups.

We organise our programmes, where possible, along principles of collaborative learning so:

- teachers can give optimal feedback to individual students;
- students feel acknowledged and stimulated;
- students and academic staff function as learning communities.
2.6 Quality first

Quality teaching is our priority. In order to ensure this, the internal quality assurance needs to be excellent and is evaluated annually. The educational objectives for each study programme are clear and well defined. The monitoring and supervision of this quality assurance takes place on a regular basis. The role of expert examination boards and programme committees is of great importance in this regard.

Our educational programmes:
- have a strong internal quality assurance system;
- are focused on achieving the set learning outcomes;
- are supported by a strong Examinations Board.

Our education is underpinned by 'state-of-the-art' educational services. Good academic education must also be well organised. All programmes and courses make use of the same educational service systems from start to finish.

To ensure an influx of talented student, we are collaborating in a joint outreach programme, informing future students in secondary school about our science programmes and encouraging them to consider a study career in science. In this outreach programme, we focus on local secondary schools and their teachers.

The science faculties run a joint outreach programme:
- focusing on attracting students fit to our programmes;
- collaborating in Bètapartners, a network of four higher educational institutions that aims to make science subjects more attractive to secondary school students, and Its Academy, which hosts all related activities.

3 Our vision on our portfolio of educational programmes

The first key strength of the Science in Amsterdam collaboration is a broad, comprehensive and diverse portfolio of study programmes for our students. Working together as two universities, we offer broad range of science programmes, which stand out in the Netherlands, Europe and the world.

Our programmes can be categorised in three fields: fundamental natural and life sciences, application-orientated sciences and programmes focused on social and societal challenges of science.

<table>
<thead>
<tr>
<th>Category</th>
<th>focused on:</th>
<th>context:</th>
<th>drivers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical Sciences</td>
<td>new fundamental insights</td>
<td>expanding the knowledge database</td>
<td>understand and explain</td>
</tr>
<tr>
<td>Application-orientated</td>
<td>solutions</td>
<td>conceptual context</td>
<td>design and create</td>
</tr>
<tr>
<td>Societal challenges</td>
<td>system thinking, scenario building</td>
<td>societal context</td>
<td>predict and change</td>
</tr>
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In the coming years, we will further develop our science portfolio. Similar educational programmes offered by both universities can merge into joint programmes and joint degrees. Other educational programmes can be profiled in one of the three orientations to contribute to the broad joint portfolio.
The combined portfolio will consist of UvA programmes, VU programmes and joint programmes. Students will, therefore, benefit from 'the best of two worlds', enabling them to make the most of their studies. In addition, the staff will teach within programmes related to their research areas.

The combined portfolio thus consists of:

- UvA programmes;
- VU programmes;
- Joint programmes
- Joint degree programmes

In a joint degree programme students are registered at both universities and receive a diploma form both. This is the highest level of collaboration, formalized in an agreement on the level of the university board, and accredited by the Netherlands-Flamish Accreditation Organization NVAO.

The objective of this is to have:
- one educational environment on two campuses.

4 Science in Amsterdam – uniqueness
The first and most eye-catching feature of our collaboration is the broad and diverse portfolio of BSc and MSc programmes. These are all strong disciplinary research-based programmes, taught by top researchers, as well as a broad range of interdisciplinary programmes, which are all unique in their combination of disciplines and applications. This is unique in the Netherlands. No other university offers such a broad and diverse range of science programmes. In Europe, we are in competition with the major science universities.

Some of the top research institutions are based at Amsterdam Science Park, including a number of institutions affiliated with the Netherlands Organisation for Scientific Research (NWO): FOM/Amolf, SRON, NIKHEF, CWI and ASML. We profit from the strong collaboration with the two academic medical centres VUMc and AMC and we also participate in the Amsterdam Economic Board to strengthen the collaboration between the Amsterdam universities and companies and industries.

Key strengths of our unique broad portfolio:
- Strong disciplinary programmes;
- Interesting and unique interdisciplinary programmes.

Key strengths of the city of Amsterdam:
- Modern multicultural society;
- 'Research-dense': many research institutes;
- Two academic medical centres: AMC, VUMc;
- Modern metropolis with high living standards.

5 Work in progress
In 2003, we started to combine five Master's programmes into joint programmes. In 2009, we applied for funding from the Sector plan Physics and Chemistry (SNS), a government-funded
programme for both research and education in the fields of physics and chemistry. As of that year, we started the preparations to merge the two Bachelor programmes of these departments.

This year 2015, the joint degrees for the Bachelor’s programmes in Chemistry and Physics & Astronomy and the joint Master’s programmes in Chemistry, Physics & Astronomy and Computational Science have been accredited by NVAO. These programmes have been taught by lecturers from both the UvA and VU for several years now. Simultaneously the Master’s programmes Computational Science and Computer Science. We also have joint Master’s programmes in Information Science/Studies, Bioinformatics/Systems Biology and Earth Sciences. In this way we are gradually extending our joint Master’s portfolio.

5.1 Making this mission and vision
It is clear from the paragraph above that there has been growing educational collaboration in the last decade. During this period, the principles formulated in this document have been gradually established. In September 2012, a large group of educational directors met to have discussions on portfolio, curriculum design, quality control, student success, examination policies and outreach. In December 2013, the main outlines were discussed between the four directors of education. Their ideas were pitched with groups of students, staff and educational directors in the 2014. A final round of feedback was collected in 2015 and the document was translated in English.

Our students emphasised:
- collaborative learning throughout whole curriculum;
- the importance student unions;
- the need to be in charge of their own learning (active learning);
- student success being more important than retention rates.

Our teaching staff emphasised:
- international orientation;
- quality above quantity;
- the need for students to be responsible for own learning;
- good educational support/services.

Our educational directors emphasised:
- the importance of academic skills in all programmes.

5.2 Follow-up
This document will be used for two purposes:
1. Advertisement of our joint mission and vision on education.
2. Further elaborate on the vision with regard to policies and decisions, which will include:
   - creating a strategic portfolio;
   - setting guidelines for all (new) programmes;
   - establishing specifications for Master’s programmes;
   - educational governance and support;
   - professionalization of our teaching staff;
   - intake & matching; selecting students.
This document was jointly drawn up by the directors of education from the three faculties concerned of the VU and the UvA as part of 'Science in Amsterdam':
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