



**ECONOMICS AND BUSINESS**

**TILBURG SCHOOL OF  
ECONOMICS AND  
MANAGEMENT**

**TILBURG UNIVERSITY**

BA/MA

**QANU** 

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# REPORT ON THE ACADEMIC DEGREE PROGRAMMES ECONOMICS AND BUSINESS OF TILBURG SCHOOL OF ECONOMICS AND MANAGEMENT

This report takes the NVAO's Assessment Framework for Limited Programme Assessments as a starting point (19 December 2014).

## ADMINISTRATIVE DATA REGARDING THE PROGRAMMES

### (1) Bachelor's programme Business Economics

Name of the programme:	Business Economics (Bedrijfseconomie)
CROHO number:	50750
Level of the programme:	bachelor's
Orientation of the programme:	academic
Number of credits:	180 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	Dutch
Expiration of accreditation:	01/07/2018

### (2) Bachelor's programme Econometrics and Operations Research

Name of the programme:	Econometrics and Operations Research
CROHO number:	56833
Level of the programme:	bachelor's
Orientation of the programme:	academic
Number of credits:	180 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	Dutch, English
Expiration of accreditation:	01/07/2018

### (3) Bachelor's programme Economics

Name of the programme:	Economics
CROHO number:	56401
Level of the programme:	bachelor's
Orientation of the programme:	academic
Number of credits:	180 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018



#### **(4) Bachelor's programme Economics and Business Economics**

Name of the programme: Economics and Business Economics  
CROHO number: 50950  
Level of the programme: bachelor's  
Orientation of the programme: academic  
Number of credits: 180 EC  
Specializations or tracks: -  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: Dutch  
Expiration of accreditation: 01/07/2018

#### **(5) Bachelor's programme International Business Administration**

Name of the programme: International Business Administration  
CROHO number: 50952  
Level of the programme: bachelor's  
Orientation of the programme: academic  
Number of credits: 180 EC  
Specializations or tracks: -  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 31/12/2019

#### **(6) Bachelor's programme Tax Economics**

Name of the programme: Tax Economics (Fiscale Economie)  
CROHO number: 56402  
Level of the programme: bachelor's  
Orientation of the programme: academic  
Number of credits: 180 EC  
Specializations or tracks: -  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: Dutch  
Expiration of accreditation: 01/07/2018

#### **(7) Master's programme Accountancy**

Name of the programme: Accountancy  
CROHO number: 60060  
Level of the programme: master's  
Orientation of the programme: academic  
Number of credits: 60 EC  
Specializations or tracks: Professional track RA/RC  
Track CFA  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 01/07/2018

**(8) Master's programme Econometrics and Mathematical Economics**

Name of the programme: Econometrics and Mathematical Economics  
CROHO number: 60056  
Level of the programme: master's  
Orientation of the programme: academic  
Number of credits: 60 EC  
Specializations or tracks: Pensions, Aging and Retirement (Netspar)  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 01/07/2018

**(9) Master's programme Economics**

Name of the programme: Economics  
CROHO number: 66401  
Level of the programme: master's  
Orientation of the programme: academic  
Number of credits: 60 EC  
Specializations or tracks: Track Competition and Regulation  
Track Public Policy  
Track Sustainability and Growth  
Track Pensions, Aging and Retirement (Netspar)  
Track Money, Banking & Financial Markets  
Track Behavioural Economics  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 01/07/2018

**(10) Master's programme Finance**

Name of the programme: Finance  
CROHO number: 60046  
Level of the programme: master's  
Orientation of the programme: academic  
Number of credits: 60 EC  
Specializations or tracks: Track CFA  
Track Pensions, Aging and Retirement (Netspar)  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 01/07/2018

**(11) Master's programme Information Management**

Name of the programme: Information Management  
CROHO number: 60055  
Level of the programme: master's  
Orientation of the programme: academic  
Number of credits: 60 EC  
Specializations or tracks: -  
Location(s): Tilburg  
Mode(s) of study: full time  
Language of instruction: English  
Expiration of accreditation: 01/07/2018



**(12) Master's programme International Management**

Name of the programme:	International Management
CROHO number:	60407
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(13) Master's programme Marketing Management**

Name of the programme:	Marketing Management
CROHO number:	60063
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	Dutch, English
Expiration of accreditation:	01/07/2018

**(14) Master's programme Marketing Research (new name as of September 2016: Marketing Analytics)**

Name of the programme:	Marketing Research (Marketing Analytics)
CROHO number:	60064
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(15) Master's programme Operations Research and Management Science**

Name of the programme:	Operations Research and Management Science
CROHO number:	60057
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(16) Master's programme Quantitative Finance and Actuarial Science**

Name of the programme:	Quantitative Finance and Actuarial Science
CROHO number:	60058
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	Track Pensions, Aging and Retirement (Netspar)
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(17) Master's programme Strategic Management**

Name of the programme:	Strategic Management
CROHO number:	60066
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	Track Strategic Consultancy Track Entrepreneurship
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(18) Master's programme Supply Chain Management**

Name of the programme:	Supply Chain Management
CROHO number:	60093
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	-
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	01/07/2018

**(19) Master's programme Tax Economics**

Name of the programme:	Tax Economics (Fiscale Economie)
CROHO number:	66402
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	Track Indirect taxes
Location(s):	Tilburg
Mode(s) of study:	full time
Language of instruction:	Dutch
Expiration of accreditation:	01/07/2018

The visit of the assessment panel Economics and Business to the Tilburg School of Economics and Management of Tilburg University took place on 12/02/2017 - 15/02/2017.



## ADMINISTRATIVE DATA REGARDING THE INSTITUTION

Name of the institution:	Tilburg University
Status of the institution:	publicly funded institution
Result institutional quality assurance assessment:	positive

## COMPOSITION OF THE ASSESSMENT PANEL

The NVAO has approved the composition of the panel on 21 September 2017. The panel that assessed the programmes Economics and Business consisted of:

- Prof. dr. Michael Powell (chair), professor emeritus of Organizational Studies, former dean of the Business School and pro-vice-chancellor of Griffith University in Queensland (Australia);
- Prof. dr. Bernard Ramanantsoa, professor emeritus of Strategy and Business Policy and former dean of HEC Paris School of Management (France);
- Prof. dr. Josep Franch Bullich, professor of Marketing Management and dean of the ESADE Business School in Barcelona (Spain);
- Prof. dr. Henri L.F. de Groot, professor of Regional Economic Dynamics at Vrije Universiteit Amsterdam in the department of Spatial Economics;
- Jeroen Moonemans, master student International Business, specialisation Controlling, Maastricht University.

It was assisted in its tasks by an expert committee, which provided feedback on the quality of individual programmes as described in the Self-Evaluation Reports. These experts also studied a sample of theses accepted by the respective programmes. The committee consisted of:

- Prof. dr. Ivo Arnold, professor of Economic Education and vice dean at Erasmus School of Education, Erasmus University Rotterdam;
- Prof. dr. Ed Nijssen, professor of Technology Marketing at the School of Industrial Engineering of the Eindhoven University of Technology
- Dr. Martine Cools, professor in the Department of Accountancy and Taxation at the KU Leuven (Belgium);
- Prof. dr. Marc Deloof, professor of Corporate Finance at the University of Antwerp (Belgium);
- Prof. dr. Egon Berghout, professor of Business & IT in the Faculty of Economics and Business, University of Groningen;
- Mr. dr. Sjaak Jansen, former professor of Tax Law at the Erasmus University Rotterdam;
- Prof. dr. Onno Omta, chaired professor in Business Administration at Wageningen University and Research Centre;
- Prof. dr. Henri L.F. de Groot, professor of Regional Economic Dynamics at Vrije Universiteit Amsterdam in the department of Spatial Economics.

The panel was supported by Mark Delmartino MA, who acted as secretary. Due to personal reasons, the panel's secretary, Mark Delmartino, was unable to be present during the site visit. He was replaced by Sietze Looijenga, director of QANU, who overlooked the proceedings and provided support to the panel, and by Alexandra Paffen, project co-ordinator at QANU, who took notes during the interviews. Mark Delmartino produced the report on the basis of these notes and the information made available by the institution and the programmes. The panel's student member, Jeroen Moonemans, had to cancel his participation in the site visit at a late stage due to illness.

Appendix 1 contains the curricula vitae of the panel members.

# WORKING METHOD OF THE ASSESSMENT PANEL

## **Introduction**

From 12 to 15 February 2017, a so-called AACSB-NVAO assessment visit was held at the School of Economics and Management (TiSEM) of Tilburg University and at the TIAS School for Business and Society (TIAS). The visit combined a continuous improvement review by AACSB of both TiSEM and TIAS with the assessment of a total of 34 NVAO accredited programmes at both schools.

The combined AACSB-NVAO assessment at Tilburg University was the fourth visit in which Dutch Business Schools and their programmes are assessed in accordance with both AACSB and NVAO quality standards. It is organised following the April 2015 AACSB-NVAO Agreement of cooperation. QANU was responsible for the assessments of the programmes that will eventually be accredited by NVAO. On behalf of QANU, the project is coordinated by its director, Sietze Looijenga. In accordance with the AACSB-NVAO Agreement and in close deliberation with NVAO, AACSB, the institutions involved and the panel's secretary, he has worked out the details of the panel's working method and safeguards the consistency of approach during the project as a whole.

This report presents the assessment of 19 bachelor and master programmes at TiSEM. The assessments of TiSEM's Research Master programmes and of TIAS' (mainly executive) master programmes are presented in separate reports. The description of the working method reflects the approach to the entire - combined - accreditation exercise.

## **Preparation**

In the run-up to the combined assessment, TiSEM produced several documents: a Continuous Improvement Review report, which was organised according to the 7 AACSB standards for a Continuous Improvement Review of the AACSB-accredited School of Economics and Management; Self-evaluation reports on the BSc and (research) MSc programmes to be reviewed; and two sets of Appendices, one related to AACSB standards and one with complementary school-wide policy documents and materials required by NVAO, such as TiSEM's assessment policy or the school's Teaching and Examination Regulations. TIAS produced a similar set of school- and programme-related materials in line with the respective AACSB / NVAO requirements. All of the above documents, as well as individual curriculum components and examples of assessment materials were made available in the digital base room created for this joint accreditation exercise before, during and after the visit.

Prior to the site visit, a briefing session was organised for the members of the Peer Review Team (PRT): the AACSB volunteers, including the chair of the PRT, the student member and the secretary called in for this teleconference session organised at the AACSB office in Amsterdam, whilst the QANU director and the AACSB representative met in Amsterdam. In this session the specific character of this combined accreditation exercise was presented, as well as the particular perspectives of the AACSB continuous improvement review and the NVAO programme assessments.

Given the number of programmes under review, each self-evaluation report was reviewed by at least one expert from the Netherlands or Flanders, who also checked the quality of a sample of theses per programme. The experts reported on their findings prior to the site visit. The panel secretary collected the feedback and compiled the experts' findings in close cooperation with the chair of the expert committee, who is the Dutch expert member on the peer review team. The list of experts is provided in Appendix 1; the theses reviewed are listed in Appendix 7.

## **Site visit**

The programme of the site visit was established and fine-tuned between TiSEM, TIAS, AACSB, QANU and NVAO. The panel visited the schools from Sunday 12 until Wednesday 15 February 2017. Due to family circumstances, the secretary who had been involved in the preparation of the visit was not able to attend the site visit. He was replaced by a staff member of QANU for the duration of the visit,





but reassumed his tasks for the follow-up of the visit and the report. The student member did not participate in the discussions on site because of illness; the panel ensured, however, that the issues he had brought forward when reviewing the written materials were addressed during the meetings.

On Sunday afternoon, the PRT had an internal discussion. At this meeting, panel members discussed their initial findings at the level of the schools (AACSB) and of the programmes (NVAO), as well as the key issues they wanted to raise with the different stakeholders during the site visit. On Monday and Tuesday, the panel spoke with interviewees from both schools and from all programmes. The programme also featured an open consultation hour; nobody made use of this opportunity. The panel prepared its assessment of the schools and their programmes on Wednesday morning. At the end of the visit, the PRT chair and the Dutch expert member presented the key findings of the panel to the management of both schools. A detailed overview of the programme is provided in Appendix 6.

### **Report**

After the site visit, the secretary wrote a first version of this report and discussed it in detail with the Dutch expert. His comments were integrated into a draft version that was circulated to the other members of the panel for review and feedback. The comments of the panel members were incorporated in the report, which was sent to the School for a check on factual errors. The feedback from the institution was discussed with the Dutch expert and with the other panel members. On the basis of their comments, the report was once more modified where was appropriate. The chair then established the final version of this report.

The report includes some of the findings and considerations from the report prepared for AACSB that are also relevant at programme level and for NVAO standards. Moreover, several issues regarding the NVAO standards are organised at the level of the School and are therefore addressed in a very similar way in each of the programmes.

The panel has used the input from the experts on the individual programmes during the discussions on site. Given the number of programmes to be covered within a relatively short period of time, it was not possible to address each individual remark of every expert on all programmes. Nonetheless, the expert input and the discussions on site have allowed the panel to address the issues that are at play across programmes. Hence the organisation of this report in a general and a programme-specific section. The core findings and considerations are formulated in the general section, where the panel also issued a conclusion per standard that applies to all programmes. The programme-specific section contains an illustration of the individual programme characteristics identified by the experts.

### **Assessment framework**

In establishing the quality of the programmes described in this report, the panel has followed the assessment framework for limited programme assessments of higher education programmes in the Netherlands, as described in the NVAO publication of 19 December 2014. This framework is used for institutions such as Tilburg University which successfully completed the institutional quality assurance assessment. The limited programme assessment is based on a discussion with peers regarding the content and quality of the programme. It focuses on three questions: What is the programme aiming for? How is the programme realising this aim? Is the programme achieving its objectives? These questions have been translated into four standards: (1) intended learning outcomes, (2) teaching-learning environment, (3) assessment, and (4) achieved learning outcomes. For each programme submitted for accreditation, the panel has given a judgement on a four-point scale: unsatisfactory, satisfactory, good or excellent. The panel subsequently issued a final conclusion regarding the overall quality of the programme, on the same four-point scale.

The following definitions are used in the assessment of programmes. They pertain to both the scores obtained for the individual standards and the overall scores awarded to the programme.

- **Generic quality:** the quality that, from an international perspective, can reasonably be expected from a higher education bachelor or master programme.



- Unsatisfactory: the programme does not meet the current generic quality standard and shows serious shortcomings in several areas.
- Satisfactory: the programme meets the current generic quality standard and demonstrates an acceptable level across its entire spectrum.
- Good: the programme systematically surpasses the current generic quality standard.
- Excellent: the programme systematically well surpasses the current generic quality standard across its entire spectrum and is regarded as an international example.

### **Decision rules**

The assessment rules for limited programme assessments are as follows:

- The final conclusion regarding a programme will always be "unsatisfactory" if standards 1, 3 or 4 are judged "unsatisfactory". In case of an unsatisfactory score on standard 1, NVAO cannot grant an *improvement period*.
- The final conclusion regarding a programme can only be "good" if at least two standards are judged "good"; one of these must be standard 4.
- The final conclusion regarding a programme can only be "excellent" if at least two standards are judged "excellent"; one of these must be standard 4.



# SUMMARY JUDGEMENT

## ***Introduction***

This document reports on the assessment of 19 academic degree programmes at the School of Economics and Management (TiSEM) of Tilburg University. The assessment was undertaken as part of a broader exercise combining the Continuous Improvement Review of TiSEM by AACSB with the assessment of programme quality according to the NVAO framework for limited programme assessments. The panel visited Tilburg between 12 and 15 February 2017.

In the run up to the visit, the panel received extensive and good quality information on both TiSEM and the degree programmes. Moreover, the panel could consult supporting materials in the online base room. The panel appreciated the efforts of the central services and the individual programmes to demonstrate the quality of the services and programmes on offer. During the visit, the panel met with management, academic staff, support staff, students and alumni and appreciated the open atmosphere in the discussions. As both School and programmes were already accredited and aimed to maintain the AACSB quality mark and obtain re-accreditation by NVAO, the materials and the discussions very much focused on recent developments at School and programme level. The panel considers that since the previous accreditation progress has been made on all accounts.

## ***Standard 1 – intended learning outcomes***

The panel considers that the mission of TiSEM not only reflects the ambitions of the university, but is also translated adequately in the clearly formulated Strategic Plan 2014-2017. These strategic objectives and their operationalisation are also reflected in the respective degree programme under review.

According to the panel, the intended learning outcomes of the respective programmes are formulated adequately in terms of content, level and orientation and are in line with the respective subject-specific reference framework for business or economics. Without questioning the basic quality and relevance of the respective intended learning outcomes, however, TiSEM may want to consider adopting a more standardised approach towards presenting and formulating the intended learning outcomes per programme. Furthermore, the panel noticed that in several cases the formulation of these learning outcomes can be sharpened in order to reflect (even) better the specificity of the discipline-based knowledge, skills and attitudes students should acquire within a particular programme.

Since the previous accreditation visit the international dimension of the degree programmes has been enhanced with students having more opportunities to go abroad, and programmes attracting and enrolling more international students. Nonetheless, if the ambition is to be a leading international School, TiSEM needs to further strengthen and develop its international strategy. To be a truly international School requires stronger focus on diversity in all areas from student body to academic faculty and advisory board membership.

In sum, the panel considers that there is an adequate alignment between TiSEM's mission, strategy and the intended learning outcomes of the degree programmes. Furthermore, for each programme under review, the intended learning outcomes are of academic orientation and reflect the disciplinary field and the appropriate level of study. Certain programmes are somewhat more advanced than others in setting ambitious objectives and purposeful learning outcomes. Notwithstanding these individual differences, the panel considers that in terms of intended learning outcomes, all programmes under review are of very comparable quality. As a result, **the panel judges that standard 1, intended learning outcomes, is satisfactory across all programmes.**

### ***Standard 2 – teaching learning environment***

The panel considers that all nineteen BSc and MSc programmes under review are structured adequately. Each curriculum is properly designed and the combination of compulsory and elective courses is coherent and relevant. The learning goals of the respective courses contribute invariably to reaching the overall intended learning outcomes at programme level. It therefore comes as no surprise to the panel that students and alumni are generally positive about the quality of the programmes: they have expressed their satisfaction during the discussions on site, but also in course evaluations and in national student and alumni surveys.

The panel thinks highly of the initiatives undertaken by TiSEM following the unexpected drop in student inflow and the weaknesses reported in the national student surveys. The integration of skills based modules into the BSc programmes and the increased attention to linking theory and practice in the MSc programmes will enhance the preparation of students for their life beyond graduation. While it is aware that a lot of efforts have already been undertaken, the panel suggests to further incorporate the potential for internships in all programmes and to ensure that students can benefit from such opportunities without incurring study delays. The panel welcomes the efforts of TiSEM towards a more open and innovative learning culture with new forms of teaching. These developments are certainly interesting and positive, but are not innovative as such and have been implemented elsewhere already some time ago.

Several interviewees at the site visit have been real ambassadors for the School and their programmes. Staff, students and alumni all demonstrated a strong sense of pride in their school, with students and alumni commenting on the accessibility and openness to improvement of both faculty and support staff. The panel has also met with ambitious academic directors who are keen to develop their programmes in line with the strategic objectives set out by TiSEM and the University. If empowered properly, these academic directors have the capacity to become drivers of change in a rapidly changing world.

The panel thinks highly of the informal system of sounding boards to gather student feedback at programme level. There is, however, a risk of jeopardising the functioning of the education committees that operate at a more strategic level. The panel therefore suggests TiSEM to reconsider the organisation of the education committees strengthening their links with the respective programmes while the sounding boards can continue to play an important role as source of information for both programme management and education committee.

The panel considers that both School and programmes are undertaking good efforts to ensure a continuous inflow of students and to support these students throughout their study journey from year one until the thesis. These measures now prove to be impactful as the drop-out rate has been reduced and the success rate of students graduating 'in time' has augmented.

Moreover, programmes are set up in such a way that there are no particular stumbling blocks that may cause study delay: degree programmes are feasible, provided students put in sufficient effort. The other side of the medal, however, is that the current programme portfolio with several programmes, tracks and entry moments featuring only a small number of students puts a lot of strain on the available teaching resources. The panel suggests TiSEM to reflect on the viability of certain programmes or tracks as self-standing units and recommends the School to look for more collaboration in terms of jointly offered courses across programmes.

The panel considers that overall the number of staff at TiSEM and within the respective programmes is appropriate. Academic staff is properly qualified and some have a strong research reputation. The panel has met a dedicated team of staff and noticed with approval that students are satisfied with the quality and availability of their professors, lecturers and supervisors. At the same time, the panel noticed that several teaching staff is educated only to Master level, that PhD students take up an active role not only in teaching but also in thesis supervision, and that only a limited number of academic staff holds a university teaching qualification.



TiSEM is offering a broad range of existing and new services for both students and teaching staff. Further to the feedback from students and staff, the panel considers that this offer is adequate. The panel welcomes in particular the 'TiSEM Cares' programme, a school-wide collective of supervision, care and support services.

In sum, the panel considers that the teaching and learning environment for the nineteen degree programmes under review is adequate. Overall, the design and contents of the curriculum, the quality and quantity of the staff and the education facilities at TiSEM enable students to reach the intended learning outcomes of their respective programmes. Certain programmes are somewhat more advanced than others in so far as individual components of the teaching and learning environment are concerned. Notwithstanding its acknowledgement of the differences that exist across programmes, the panel considers that in terms of teaching-learning environment, all programmes under review are of comparable quality. As a result, **the panel judges that standard 2, teaching and learning environment, is satisfactory across all programmes.**

### **Standard 3 - assessment**

The panel considers that the assessment system at TiSEM is organised properly. The programmes under review have the necessary tools to ensure the link between the overall learning outcomes, the learning goals of individual courses and the assessments that establish to what extent students have covered the learning goals and are achieving the intended learning outcomes. The panel welcomes the specification tables and assessment plans, but considers that there is a substantial potential for further development as communication tool between academic directors, course coordinators and lecturers.

Prior to the site visit, the panel had some concern as to whether the Examination Committee is sufficiently in control of the assessment quality it is supposed to monitor. Academic staff members and students have taken away much of this concern during the site visit, but the panel nonetheless considers that there is still room for further improvement. The assessment system as such is adequate and so is the way assessments are organised. However, the panel recommends TiSEM to strengthen the capacity of the Examination Committee. As a result, the committee would be able to monitor the assessment quality more systematically and, by doing so, contribute to the School's ambition to improve the quality of its education.

The considerations of the panel with regard to thesis evaluation illustrate the above recommendation: both the bachelor thesis and the master thesis are assessed based on an evaluation form that offers assessors the opportunity to express a detailed and differentiated judgement, both quantitatively and qualitatively, on several aspects of the thesis. While in many cases these forms are completed properly, there are also several examples where scores are not properly motivated in the comments section. According to the panel, these cases could/should have been picked up through a systematic monitoring of both the administrative compliance and the assessment quality.

In sum, the panel considers that the central and faculty policies on assessment are implemented adequately at the level of the individual programmes under review. Although there is clearly room for development with regard to the assessment plans/specification tables and with regard to the systematic monitoring of the assessment quality by the examination committee, the overall assessment system and the individual assessments clearly fulfil the basic requirements. Notwithstanding the fact that thesis evaluation forms have been completed to various extents of comprehensiveness across programmes, the panel considers that all degree programmes are of very comparable quality with regard to assessment. As a result, **the panel judges that standard 3, assessment, is satisfactory across all programmes.**

#### **Standard 4 – achieved learning outcomes**

Thesis quality is an important indicator to measure the extent to which students have achieved the intended learning outcomes. Having established that each of the 102 theses reviewed by the experts fulfilled at least the minimum criteria required, the panel considers that across all TiSEM programmes under review, students who pass the thesis invariably achieve the intended learning outcomes and are therefore entitled to graduate.

Another indicator for achieving the intended learning outcomes is to look at the performance of graduates on the labour market. The panel acknowledges the recent efforts of TiSEM in this regard and considers that both TiSEM services and individual programme curricula allow students/graduates to move on to a relevant degree programme or find proper employment when they enter the labour market.


In sum, the panel issues a positive judgement on the achieved learning outcomes for all programmes under review. Whilst acknowledging that some programmes are doing somewhat better than others in terms of thesis quality and/or graduate performance, the panel considers that all programmes are of rather comparable quality. As a result, **the panel judges that standard 4, achieved learning outcomes, is satisfactory across all programmes.**

#### **Overall appreciation**

The panel considers that all programmes meet the quality requirements on each of the four standards. It therefore issues a positive advice to NVAO on the overall quality of the nineteen bachelor and master programmes submitted for programme accreditation.

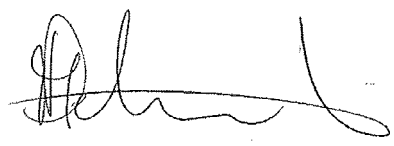
The chair and the secretary of the panel hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 11 January 2018



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Prof. dr. Michael Powell



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Mark Delmartino MA



For each of the programmes, the panel assesses the standards from the *Assessment framework for limited programme assessments* in the following way:

	Standard 1 Intended Learning Outcomes	Standard 2 Teaching- Learning Environment	Standard 3 Assessment	Standard 4 Achieved Learning Outcomes	Overall Judgement
(1) BSc Business Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(2) BSc Econometrics and Operation Research	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(3) BSc Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(4) BSc Economics and Business Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(5) BSc International Business Administration	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(6) BSc Tax Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(7) MSc Accountancy	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(8) MSc Econometrics and Mathematical Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(9) MSc Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(10) MSc Finance	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(11) MSc Information Management	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(12) MSc International Management	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(13) MSc Marketing Management	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(14) MSc Marketing Research (Marketing Analytics)	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(15) MSc Operations Research and Management Science	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(16) MSc Quantitative Finance and Actuarial Science	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(17) MSc Strategic Management	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(18) MSc Supply Chain Management	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory
(19) MSc Tax Economics	satisfactory	satisfactory	satisfactory	satisfactory	satisfactory

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

## Introduction

This report covers the assessment of nineteen bachelor and master programmes at TiSEM, undertaken in the framework of the joint AACSB-NVAO accreditation visit. The AACSB accreditation looks into the performance of the entire Tilburg School of Economics and Management. TiSEM having obtained together with TIAS a shared AACSB accreditation in 2012, the purpose of the current visit was a so-called Continuous Improvement Review establishing to what extent TiSEM (and TIAS) had made progress on a number of issues and deserved maintaining the AACSB quality mark for another five years. The programmes under consideration in this report are submitted for re-accreditation by NVAO. The information materials prepared by TiSEM for both AACSB and NVAO accreditations, as well as the discussions on site were therefore focusing very much on recent developments at faculty and programme level.

The underlying report issued by the Peer Review Team, which TiSEM will submit to NVAO as part of the accreditation process, takes on board several of the findings and considerations which the panel issued for the purpose of the AACSB report, but that are also relevant at programme level and for NVAO standards. Moreover, most issues regarding the four NVAO standards are addressed in a very similar way in each of the programmes, notably with regard to the intended learning outcomes, staff, facilities and assessment. Hence the organisation of this report in two sections: the core findings and considerations are formulated in the general section, including a conclusion per standard that applies to all programmes. The programme-specific section contains a summary of the individual programme characteristics as identified by the experts reviewing the self-evaluation reports of the individual programmes prior to the site visit.

Tilburg University exists since 1927. It currently houses five schools – Economics and Management, Law, Social and Behavioural Sciences, Humanities, and Catholic Theology – and is an 80% shareholder of TIAS School for Business and Society. The university offers 21 bachelor and more than 50 master programmes to about 12,500 students; it employs nearly 2,000 academic and support staff. The Tilburg School of Economics and Management (TiSEM) is the oldest and largest school at the university with 5,600 students and 325 academic staff. It offers a broad research platform and promotes a variety of socially relevant topics such as sustainability, innovation, entrepreneurship, market governance, and ageing.

## General Findings, Considerations and Conclusions

### **Standard 1: Intended learning outcomes**

The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements.

#### **Explanation:**

As for level and orientation (bachelor's or master's; professional or academic), the intended learning outcomes fit into the Dutch qualifications framework. In addition, they tie in with the international perspective of the requirements currently set by the professional field and the discipline with regard to the contents of the programme. Insofar as is applicable, the intended learning outcomes are in accordance with relevant legislation and regulations.

## General findings

### *Aim*

The mission of TiSEM is to *"contribute to the development and transfer of knowledge at a top level in all the main fields of Business and Economics. The ambition is to belong to the best in Europe in*





*all our fields, and to strive for academic excellence in scientific research and in teaching. Our faculty connect, inspire and impact the academic community and society at large. The School tries to accomplish this mission by performing fundamental and applied research, and by providing research-based initial and postgraduate degree programs in business and economics, as well as executive programs."* According to the panel, TiSEM's mission reflects the past, current and future ambitions of Tilburg University. The university aims at 'Understanding Society' and wants to achieve this ambition through five elements that all focus on the core activities of research, teaching and valorisation: 1) quality comes first; 2) innovation according to a focused method; 3) connections through networking; 4) focused international cooperation; and 5) one single, effective university. In its attempt to understand society, TiSEM is emphasizing in particular a variety of societally relevant topics, such as sustainability, innovation, market governance, and banking. Moreover, the School puts effort into connecting with the broader society through actively engaging with its stakeholders.

The panel noticed on the basis of the documents and the discussions on site that TiSEM's ambitious strive for excellence is not new, but has been present for a long time already. In the Strategic Plan that was in place at the time of the previous assessment of most of TiSEM's bachelor and master programmes, the School aimed at excellence in education and research, relevance and visibility. On the basis of the materials and the discussions, the panel acknowledges that progress has been made over the past few years in strengthening TiSEM's international profile, in increasing the scientific output and in improving the quality of the educational programmes. This development can be illustrated among others by the reshaping of bachelor programmes in Economics and International Business Administration (which have been in place for quite some time, but had a name and a curriculum change in 2009), the implementation of the didactic concept of Research Based Learning, the redesigning of nearly all master programmes and the growing number of students spending a semester abroad.

The mission, profile and ambitions of TiSEM are described and developed in its Strategy Plan: the Strategy 2014-2017 'Focus-Excel-Impact-Earn' contains several minutely formulated issues, which in turn are broken down in action lines that reveal the strategy to be followed in order to address the priorities. The panel noticed that based on input from many different stakeholders the Faculty Council eventually approved the current strategy at the end of 2013, featuring action lines / priorities such as a distinctive bachelor portfolio, research based learning, enhanced study progress, international classroom, etc. The panel learned that this strategy was sharpened by TiSEM in Spring 2015 in order to cope with some unforeseen developments: the sudden drop in student inflow (in 2014-2015) into the bachelor programmes had a significant impact on the school's multi-annual budget, while the personnel structure proved too costly as it was based on too optimistic growth forecasts. These elements rendered immediate budget cuts inevitable, but also led to collective constructive action with academic and support staff volunteering to analyse and discuss the reasons for the drop in enrolment figures, the positioning of the bachelor programmes, alternative ways to earn income for research and the internal allocation system and financial prospects. The 2015 Addendum to the 2014-2017 strategy therefore contains ten additional actions that should allow to realise the initial ambitions of the plan by 2017: new priorities include among others the attractiveness of the bachelor programmes through a revision of their educational profile, and a better preparation of students for their professional career. The panel noticed that in the meantime, the student inflow has increased again and that progress has been made on the initial and complementary priorities.

According to the panel, the unexpected turn of events a few years ago has made the School speed up a number of envisaged innovations in terms of both organisation and educational delivery, whilst maintaining its long-standing features of high quality teaching and research and its engagement with academia and society. The panel also acknowledges the alignment of TiSEM with the key choices underlying the mission of Tilburg University. Nonetheless, the panel noticed during the discussions on site that almost every individual programme is struggling with the position of ethics and philosophy in the respective curricula. If the mission of both university and School is in the DNA of the programme directors and lecturers, then one would not expect such struggle. Furthermore, as indicated in the report issued by AACSB, the panel sees an opportunity for TiSEM to define even



more clearly its strategic goals and directions in the forthcoming Strategy for 2018-2021: the ambitions remain impressive, but so are the issues at stake. In this strategy, TiSEM will have to outline how it wants to combine its existing strong research position with a broader focus and an enhanced engagement towards, and impact on, industry and society.

Throughout the discussions, the panel has identified four elements that can be developed in the future and play an important role in delivering the (new) strategic priorities: first of all, TiSEM is continuously enhancing its education programme portfolio. While changes are clearly for the better quality-wise, there is room for further review of the portfolio in terms of the ongoing viability of individual programmes with relatively few students and for further development of synergies (in the form of shared core courses or modules) across programmes.

The current broad offer of small programmes inevitably represents a considerable teaching load for staff and thus less time for research and stakeholder engagement. Secondly, the panel welcomes the involvement of TiSEM in partnerships with, for instance, Eindhoven TU. The contribution of TiSEM's expertise to innovative domains such as data science, business analytics and entrepreneurship will enhance the relevance and attractiveness of the School to both industry and students. Furthermore, the panel has come across a potential for change that is still underexploited: the academic directors and their teams, especially at bachelor level, are highly capable according to the panel and motivated to become drivers of change. Strengthening their position and offering attractive career paths are essential to maintain the School's position in a rapidly changing world. Finally, the panel believes that there are significant potential synergies and advantages to be achieved by TiSEM and TIAS collaborating much more closely. The two schools currently do not appear to benefit from potential synergies, shared learning experiences and knowledge transfer as much as would be desirable.

#### *Intended learning outcomes*

TiSEM offers programmes at undergraduate and graduate levels that reflect the strengths of its research in business and economics. The objectives of each programme are translated in intended learning outcomes, i.e. a set of competences (knowledge, skills and attitudes) which students should have reached by the end of their degree programme. In determining the respective learning outcomes, each programme ensures that its so-called exit qualifications are based on and comply with the Dublin Descriptors at bachelor or master level. The intended learning outcomes of each programme submitted for accreditation are listed in Appendix 3 to this report.

The Dutch and Flemish experts who reviewed the self-evaluation reports allocated to them reported for each individual programme that the intended learning outcomes had been formulated clearly. Moreover, the learning outcomes consist of competencies – knowledge, skills and attitudes – that were relevant to the respective programme objectives. Furthermore, the content of the outcomes was in line with what one can expect of an academic degree programme at bachelor or master level. It was obvious, according to all experts, that the learning outcomes had been set taking into account the requirements of the Dublin Descriptors that apply to programmes at bachelor and master level, respectively.

The experts also reported that the intended learning outcomes per programme are designed in such a way that they fall within the so-called domain specific reference framework for business and economics, respectively. These frameworks, which are provided in Appendix 2 to this report, constitute a benchmark for all bachelor and master programmes at Dutch universities outlining the minimum requirements for academic degree programmes in the disciplines of economics and business. They were drawn up by representatives of all economics and business faculties in the Netherlands and set the standard for curriculum content and design in business and economics disciplines. The panel acknowledges the input from the experts and considers that the intended learning outcomes of the respective programmes under review are in line with the subject-specific reference framework.



Apart from aligning with both European and Dutch frameworks, the panel also noticed that each programme presented itself in the self-evaluation report in comparison to other similar or relevant programmes in the Netherlands and/or abroad. The panel particularly appreciated this – often extensive – benchmarking exercise as it provided insight in the way the programme sees itself and its unique selling propositions within the economics/business higher education landscape.

The experts reported in a few cases that they thought the intended learning outcomes were focused particularly adequately on the specific sub-field of economics or business the programme is addressing. Such considerations are mentioned in the programme-specific section of this report. Whilst acknowledging this finding for a number of programmes, the panel also noticed that across all programmes there is a broad diversity and very little standardisation in the way the learning outcomes have been formulated. Furthermore, in many cases it turned out that the final attainment levels tend to be specified at a rather generic level, while the variation across – and even within – programmes is substantial.

#### *Assurance of Learning*

Assurance of Learning (AOL) is a system promoted by AACSB that aims to support continuous improvement providing a structure to manage change in education programmes. As programmes use AOL to establish through assessment samples, score forms, grade metrics and course manuals whether students achieve the intended learning outcomes, the system is relevant for programme-level assessment and accreditation. The previous AACSB peer review team noticed in 2012 that TiSEM had developed well-articulated learning goals and outcomes that are measured for all programmes, but this measurement only happened at the end of the programme, not throughout the curriculum.

In the meantime this issue has been picked up in TiSEM's new assessment system that is developed and implemented in line with central university guidelines. The panel noticed during the site visit the efforts undertaken by the different programmes to measure their learning goals and outcomes on an ongoing basis. In its report to TiSEM the peer review team therefore indicated that TiSEM has addressed the – previously outstanding – issue of ongoing measurement of programme learning goals and outcomes.

#### *Internationalisation*

Internationalisation has been and continues to be a cornerstone of TiSEM's strategy: it is an integral element of the activity nexus of the School, which is defined as the interplay of research, education and outreach. The panel noticed that internationalisation is addressed in several action lines of the 2014-2017 strategy. In 2016 the then newly Associate Dean for internationalisation at TiSEM drafted an action plan based on five internationalisation pillars: (i) international degree programmes, (ii) research performance; (iii) partnerships and networks; (iv) branding, positioning, open marketing and recruitment; and (v) campus facilities and services. The key target of TiSEM is to attract more foreign students to its international programmes: according to the Strategic Plan, the share of international degree-seeking students should increase steadily to at least 50% in the English-taught Bachelor programmes and to at least 30% in the English-taught Master programmes. In both cases, the aim is that half of the international students comes from outside the European Economic Region (EER). According to the Action Plan, the inflow of foreign students stood at 30% in 2014-2015, hence the ambition to also aim for 50% of international students in the English-taught master programmes.

The panel learned during the discussions on site that TiSEM has a very good reputation abroad for its research (outputs), which helps attracting international students to its programmes. Students at TiSEM from their side have several opportunities to spend a study period abroad as part of their curriculum. The experts reported that in a few cases the international dimension of programmes is particularly adequate. Such findings are mentioned in the programme-specific section of this report.

The panel acknowledges the efforts of the School to develop its education internationally by establishing double degree programmes with nine institutions world-wide. Such structures currently

exist in two bachelor programmes and twelve master programmes. In most cases, however, these programmes – at least until now – are 'one-way degrees', offering opportunities for foreign students to study at Tilburg University. Tilburg students at the MSc Information Management, however, can extend their programme and obtain a double degree from Tilburg and IAE Aix-Marseille or Turku School of Economics.

### **General considerations**

The panel considers that the mission of TiSEM not only reflects the ambitions of the university but is also translated adequately in the clearly formulated Strategic Plans 2014-2017. According to the panel, the strategic objectives and their operationalisation are reflected in the respective degree programme under review. TiSEM is continuously enhancing its education programme portfolio and this has resulted in several new and adjusted programmes since the previous accreditation. Moreover, the panel considers that overall, TiSEM is offering programmes at undergraduate and graduate levels that reflect the strengths of its research in business and economics. In this respect, TiSEM is a traditional economics and business faculty with a strong historical focus on, and global reputation of, research and high-quality education. Whilst it has come across nice examples of embedding the mission of both School and University, the panel noticed that almost every programme is struggling with the position of ethics and philosophy in the curriculum. According to the panel, there is room for improvement in this regard, as the current situation demonstrates that the mission of the School is not yet entirely embedded across all programmes.

Further to the input from the experts and the discussions on site, the panel considers that the intended learning outcomes of the respective programmes under review are formulated adequately in terms of content, level and orientation. According to the panel, each programme is in line with the respective subject-specific reference framework for business or economics. Without questioning the basic quality and relevance of the respective intended learning outcomes, however, TiSEM may want to consider adopting a more standardised approach towards presenting and formulating the intended learning outcomes per programme. Furthermore, the panel noticed that in several cases the formulation of these learning outcomes can be sharpened in order to reflect (even) better the specificity of the discipline-based knowledge, skills and attitudes students should acquire within a particular programme.

According to the panel, TiSEM's focus on internationalisation is part of a broader attempt to innovate its education programmes and this is certainly to be welcomed and supported. Since the previous accreditation visit the international dimension of the degree programmes has been enhanced with students having more opportunities to go abroad, and programmes attracting and enrolling more international students. Nonetheless, if the ambition is to be a leading international School, TiSEM needs to further strengthen and develop its international strategy. For instance, while the current advisory board is certainly active, it also seems very Dutch-centric with no or minimal international representation. To be a truly international school requires greater focus on diversity in all areas from student body to academic staff and advisory board membership.

### **General conclusion**

In sum, the panel considers that there is an adequate alignment between TiSEM's mission, strategy and degree programmes. Furthermore, for each programme under review, the intended learning outcomes are of academic orientation and reflect the disciplinary field and the appropriate level of study. Certain programmes are somewhat more advanced than others in setting ambitious objectives and purposeful learning outcomes. The individual efforts of the respective programmes will be described accordingly in the programme-specific section. Notwithstanding these individual differences, the panel considers that in terms of intended learning outcomes, all programmes under review are of very comparable quality. As a result, **the panel judges that standard 1, intended learning outcomes, is satisfactory across all programmes.**



**Standard 2: Teaching-learning environment**

The curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes.

**Explanation:**

The contents and structure of the curriculum enable the students admitted to achieve the intended learning outcomes. The quality of the staff and of the programme-specific services and facilities is essential to that end. Curriculum, staff, services and facilities constitute a coherent teaching-learning environment for the students.

**General findings***Programme*

This report section covers the quality of the teaching and learning environment of six bachelor and thirteen master programmes at TiSEM. The structure of the programmes and their respective course contents and teaching and learning forms have been described extensively in the self-evaluation reports. Appendix 4 to this report contains an outline of the respective programme curricula.

In line with Dutch regulations, BSc programmes last three years and amount to 180 EC. The panel noticed that all six programmes at TiSEM have a very similar set-up. Each year consists of two semesters, with each semester featuring 5 courses of 6 EC each. During the first two years students follow compulsory courses that provide a broad orientation and foundation into the respective fields of study. The third year of the BSc Business Economics and BSc International Business Administration features a minor – students can focus on a specialisation, take elective courses or study abroad – and finishes with a bachelor thesis of 12 EC. Most bachelor programmes offer students the opportunity for an exchange period abroad as an integral part of the curriculum.

Having reviewed the self-evaluation reports on the six BSc programmes, all experts reported that the structure of each programme is clear and purposeful. The curricula are built up in a logical way; in cases where the programme has undergone changes in the recent past, these adjustments are clearly for the better. The experts also noticed that the courses and their learning goals invariably contribute to achieving the intended learning outcomes of the respective programmes. Their findings at the level of the individual BSc programmes are reported in the programme specific section.

Since the previous accreditation visit, a number of changes have been introduced across all BSc programmes. These modifications are informed by policy concerns and were prepared by different task forces within the School. As a result BSc curricula now feature more attention to academic learning, communication skills and labour market orientation. As of 2016-2017, a new 12 EC skills component is introduced in all BSc programmes: it consists of an academic skills course in the first year covering information literacy, writing and presentation skills and a professional skills course in the second year featuring employability, social, intercultural, leadership and entrepreneurial skills.

At the same time, the range of teaching and learning forms has been extended in the different programmes with more attention to active and blended forms of learning. This adjustment is part of a university-wide development to move from research based learning to the so-called Tilburg Educational Profile with an emphasis on exploring, activating, engaging and connecting. According to the self-evaluation reports and the discussions on site, course coordinators are currently striving to offer a variety of teaching and learning approaches in every course, including forms of blended learning combining online teaching, offline teaching, and learning activities. One example of such blended learning is the so-called i-STAR method, developed by a staff member of Tilburg University, which consists of interactive web lectures, snippet practice, try & test, ask questions, and results.

The thirteen MSc programmes under review are one-year full-time programmes amounting to 60 EC. Programmes are offered in two semesters of 30 EC or four blocks of 15 EC; courses mainly count for 6 EC, while the master thesis represents 18 EC. Just as it was the case for the bachelor programmes, a number of policy concerns have led to some changes across all MSc programmes: the so-called

'harde knip', a legal requirement preventing students from entering a master programme while they are still completing the bachelor programme, led to establishing two entry periods in several MSc programmes; findings from national student surveys resulted in a greater focus on the link between theory and practice in courses, including the involvement of companies in projects and theses; the ambition of the School in terms of internationalisation has led to the introduction of double degrees in a number of master programmes; finally, the developments in society in the field of data science have impacted on the curriculum contents of several programmes.

The experts reviewing the self-evaluation reports on the MSc programmes reported in similarly positive terms as for the BSc programmes about the curriculum being clear and purposeful. They also mentioned that the programme adjustments – link between theory and practice, focus on 'big data', more attention to internationalisation in the classroom and through exchanges – constituted in most cases a clear enhancement of the programme quality. Furthermore, the experts reported that the courses and their learning goals invariably contribute to achieving the intended learning outcomes of the respective MSc programmes. Their findings at the level of the individual MSc programmes are reported in the programme specific section.

In a few cases, however, the experts questioned the viability of a second entry moment: it seems that there are only a limited number of students enrolling in February, and because courses are not always organised twice per year, the second entry moment may jeopardise the logical build-up of the curriculum. The expert findings were confirmed during the discussion on site, although all interviewees, and in particular the students, indicated that the existence of such a second entry moment often constituted an additional – or even decisive – argument for students to enrol in Tilburg. The panel moreover found out that there is another argument in favour of an additional entry moment: the pre-master programmes, which have been redesigned and limited to 30 EC. Students who hold a bachelor degree from a university of applied science or in a different field of study can now enrol in September for a one-semester pre-master programme that allows them to start the MSc programme in February, provided they pass successfully all pre-master courses.

All TISEM degree programmes have an academic director who is responsible for the development and improvement of the curriculum. The director is supported by a programme coordinator, who liaises between students and staff members, and by education specialists supporting curriculum construction, assessment, teaching and learning. The panel noticed during the discussions on site that these programme directors and their teams are highly capable and often very motivated to improve the quality and relevance of their respective programmes. The panel also learned that following the reconsideration of TISEM's bachelor portfolio in 2014-2015, an Associate Dean was appointed to coordinate issues that are common to all bachelor programmes, such as the skills programme and the recruitment of prospective students.

The School has three education committees, consisting of teaching staff and students who monitor the programme activities, advise on educational matters and discuss curriculum changes and annual reports: one for business programmes, one for economics programmes and one for the research master programmes. In addition, most programmes have a so-called 'sounding board' of students who meet regularly with the programme management to give feedback. The panel noticed in the discussions that students are invited to evaluate the quality of the courses and assessments, as well as the educational performance of the staff. A lot of feedback is sought and provided through the sounding boards: they function well as a mechanism for gathering information on and dealing with immediate course or programme problems and concerns. However, the panel had the impression that the 'success' of the sounding boards is at the detriment of the education committee, which according to Dutch law is the formal body for quality assurance at programme level. The panel therefore suggests to reconsider the current organisation of the education committees – possibly by creating more committees – strengthening their links with the respective programmes. This is in line with the recent changes in Dutch law and will furthermore enhance the quality of the advices at a more strategic level. The sounding boards can be integrated in the education committees and





continue to play an important role as source of information for both programme management and education committee.

### *Students*

According to the information materials, TiSEM offers bachelor and master programmes to about 5,600 students. Every year around 1,000 students are entering the BSc programmes. In 2014-2015 there was an unexpected decrease in inflow of 15%. As explained in the section on aims, this sudden drop in inflow resulted in stronger recruitment activities and in adjustments to the BSc programmes. The panel learned that the inflow is now back at the initial level. Moreover, the inflow of international students in the BSc programmes has increased over time from 7% in 2012 to 12% in 2015.

The majority of the bachelor students are living in the wider region of Tilburg. Demographic developments, however, indicate that the potential inflow of students from this area is likely to decrease. The panel gathers from the discussions that TiSEM wants to maintain the level of inflow and will be looking increasingly at students from other parts of the Netherlands and abroad. As Tilburg University as a brand is not well-known outside the wider region of Tilburg in the Southern part of the Netherlands, the university and the School are stepping up their efforts in terms of marketing and student recruitment both in the Netherlands and abroad.

The panel noticed that the inflow in the master programmes has steadily increased from 1,150 in 2012 to more than 1,250 in 2015. According to TiSEM, this may be due to the implementation of a second entry moment and to the increased number of students enrolling for the redesigned pre-master programme before being admitted to an MSc programme at TiSEM. The number of international students has slightly increased over time. Interviewees told the panel TiSEM has the ambition to increase the share of non-Dutch master students in the future.

The admission requirements for all degree programmes are stipulated in the Teaching and Examination Regulations. Students who wish to be admitted to a bachelor programme at TiSEM have to meet the general admission requirements: a relevant secondary school certificate equivalent to the Dutch vwo-diploma. If they have such certificate, students can enter most BSc programmes at TiSEM. Only the BSc International Business Administration is allowed to select students by means of a *numerus fixus* (capped inflow) and decentralised selection. At the time of the site visit, the BSc Economics had a *numerus fixus* with decentralised selection, which will be abolished again as of the academic year 2018-2019).

After their application, prospective first-year BSc students are invited to the matching day. During this mandatory event, students complete an assessment on their cognitive capacity, competences, motivation and interest in the programme they want to enrol in. The assessment results are presented in an advisory report indicating to what extent the student matches the programme. This advice, however, is not binding.

The requirements and selection criteria for students wishing to enter MSc programmes are at the discretion of the School and the individual programmes. Although the Dutch legal requirement to offer continuing master programmes was abandoned in 2014, TiSEM decided to maintain this practice for its own bachelor graduates: this means that all TiSEM students who complete a bachelor programme can move on to at least one MSc programme offered by TiSEM. The experts reviewing the self-evaluation reports for the degree programmes under review indicated that the admission criteria for each programme were adequate and had been stipulated clearly in the information materials.

Every BSc programme has a binding study advice (BSA) for first-year students: at the end of the first year students must have obtained at least 42 EC in order to be allowed to continue their studies. The panel noticed that over the past few years, TiSEM and the BSc programmes have taken several measures to enhance the share of students obtaining a positive BSA: the number of contact hours has increased, teaching and tutoring is organised in smaller groups and student progress is monitored

more regularly. The experts indicated, based on the detailed information provided in the self-evaluation reports, that the drop-out rate has decreased across all BSc programmes and that students who obtain a positive BSA are not likely to drop out afterwards.

Furthermore, the panel gathered from the programme materials and the discussions with students and staff that programmes are set up in such a way that there are no particular course-specific stumbling blocks jeopardising programme completion: overall, degree programmes are feasible, provided students put in sufficient effort. Moreover, the panel learned that any (potential) hindrance would anyway be picked up quickly by the programme sounding boards and in course evaluations, and can be addressed in the relevant education committee.

As a result, the success rate of the different BSc programmes has gone up since the previous accreditation: the data provided in the self-evaluation reports and presented in Appendix 5 to this report show that more and more students entering a BSc programme eventually finish it successfully. The panel, moreover, learned that programmes are increasingly structuring the bachelor thesis as a trajectory with organised counselling and deadlines. This enhances the timely delivery of the bachelor thesis and results in more students graduating 'in time' (nominal duration + 1 year).

The panel noticed on the basis of the input by the experts that the feasibility of the individual MSc programmes is adequate and that overall, the drop-out rate is limited. Several experts reported that also at master level programmes are increasingly structuring the thesis trajectory. There is no clear overall pattern in the success rate of the master programmes. While most students eventually graduate from their MSc programme, there are different programme-specific reasons that account for the success rate: the entry moment, the enrolment in two MSc programmes, the inclusion of an extra-curricular placement period, etc.

#### *Staff*

According to the information materials, the total academic workforce at TiSEM in July 2016 consisted of 331 staff members (274 FTE): 82% have research and teaching duties, 11% are staff with only teaching duties, and 7% are employed as post-doc researchers. For a number of years the share of non-Dutch staff remains stable at 45%, while about 25% of academic staff are women. The School has organised its academic staff in eight Departments: Accountancy, Econometrics and Operations Research, Economics, Finance, Management, Marketing, Public Governance and Tax Economics. The Heads of Department are responsible for managing the education and research activities of their department. The panel learned during the visit that Academic Directors are responsible for the quality of the individual degree programmes, while it is up to the heads of department to allocate the academic staff to the degree programmes.

The Self-Evaluation Reports contain extensive information on the academic staff that is allocated to each degree programme, as well as the names and positions of the coordinators and lecturers involved in each course. The experts noticed that the number of staff (headcount) allocated to each programme is appropriate. Moreover, the staff is properly qualified and seems well supported in their tasks. In a few cases, the experts mentioned that key members of the academic staff had a good reputation both in the Netherlands and abroad.

The experts furthermore noticed that across all programmes a varying yet substantive part of the teaching staff is educated to Master level and does not have a PhD. Moreover, the panel learned during the discussions that PhD students take up an active role in teaching and in thesis supervision. One fifth of their time is reportedly dedicated to teaching. Finally, the experts reported that in most programmes only a small part of the teaching staff has a university teaching qualification (UTQ, basiskwalificatie onderwijs). Overall, 22% of the lecturers and (assistant, associate and full) professors had obtained such qualification by September 2016. Confronted with this finding, interviewees indicated that since 2010 the UTQ is part of the employment conditions for every new employee with a contract for more than one year and 0.6 FTE. In the performance agreement with the ministry of education it was stated that 30% of lecturers and assistant professors should have a



UTQ by the end of 2014. The panel was pleased to hear that Tilburg University introduced a policy (in 2016) that all academic staff members should have a teaching qualification (a BKO) and that senior academics staff can obtain such a qualification via a fast track.

The overall staff student ratio at TiSEM amounts to 1:38. This figure is calculated based on a document provided by the University Board (CvB) indicating that for every 100 students TiSEM has 2.63 FTE of academic staff at its disposal. The panel noticed that over the past few years the School has invested in smaller scale teaching forms and has increased the number of contact hours in order to enhance student satisfaction and student performance.

Given the organisation and allocation of staff per department, it is not possible to provide specific staff student ratios per programme. The discussions on site have convinced the panel that the number and quality of professors and lecturers ensure that the courses are delivered according to plan and in full respect of pedagogical and academic principles. Students moreover indicated that they were satisfied with their professors, supervisors and lecturers and with their availability. If anything, students mentioned that the didactic qualities of some individual professors could be improved.

#### *Facilities and services*

The panel noticed in the information materials that TiSEM offers a broad range of services for both students and teaching staff. Some of these services exist already for a long time, while others have been established or enhanced more recently. Since the previous accreditation, for instance, the role and number of the then academic advisers has increased. They are now called programme coordinators and guide not only students but also support the academic director and the course lecturers. Moreover, in view of the implementation plans for the new Tilburg Education Profile, more career service officers have been hired to support students in their preparation for the labour market.

Furthermore, all students enrolled in a BSc programme can benefit from the 'TiSEM Cares' programme, a school-wide collective of supervision, care and support services ranging from student information and study choice support prior to the start of the programme over the regular support, guidance and supervision activities during the academic programme to career services facilitating the entry on the job market. By combining various support services, TiSEM aims to optimise the coherence of the supervision activities and to enhance student satisfaction and student progress rates. The panel noticed that this offer is publicised broadly in order to underline the personal approach a small university has to offer as a competitive advantage over the larger programmes at other universities.

Several interviewees emphasised that both the School and individual programmes are going at lengths to prepare students for a professional career: career counsellors help students with organising internships, orientating on the labour market and applying for jobs. The mentor programme involves alumni who share their professional experiences with students. Study associations from their side assist students among other things with finding internship opportunities. Students indicated to the panel that they are very satisfied with the support provided and notice the increased efforts of the school and the programmes to include a professional career oriented dimension in the respective curricula.

#### **General considerations**

The extensive and good quality materials provided in the respective self-evaluation reports and the complementary information obtained during the discussions on site have led the panel to consider that all nineteen BSc and MSc programmes under review are structured adequately. In the MSc programmes, moreover, the panel noticed a clear connection between the programmes on offer and the research domains in which TiSEM excels. These programmes also increasingly pay attention to combining academic theory with professional skills development in projects and theses where students apply knowledge and skills to real-world issues. According to the panel, each BSc and MSc curriculum is properly designed and the combination of compulsory and elective courses is coherent



and relevant. The learning goals of the respective courses contribute invariably to reaching the overall intended learning outcomes at programme level. It therefore comes as no surprise to the panel that students and alumni are generally positive about the quality of the programmes: they have expressed their satisfaction during the discussions on site but also in course evaluations and in national student and alumni surveys.

Nonetheless, there is always room for improvement. In this regard the panel thinks highly of the initiatives undertaken by TiSEM following the unexpected drop in student inflow and the weaknesses reported in the national student surveys. The integration of skills based modules into the BSc programmes and the increased attention to linking theory and practice in the MSc programmes will enhance the preparation of students for their life beyond graduation. While some measures have been introduced simultaneously across all programmes, the discussions on site demonstrated that the professional orientation of the respective curricula is not developed to the same extent across all programmes. The panel therefore suggests to further incorporate the potential for internships in all programmes and to ensure that students can benefit from such opportunities without incurring study delays.

In cases where the limited number of students allows to do so, the panel noticed with approval that programmes are offering intensive and small-scale forms of education. Furthermore, the panel welcomes the efforts of TiSEM and its programmes towards a more open and innovative learning culture with new forms of teaching. These developments are certainly interesting and positive, but are not innovative as such: several innovations have been implemented elsewhere already some time ago. Other universities in the Netherlands definitely have more extensive experience with forms of blended learning or flipped classrooms.

Several interviewees at the site visit have been real ambassadors for the School and their programmes. Staff, students and alumni all demonstrated a strong sense of pride in their school, with students and alumni commenting on the accessibility and openness to improvement of both academic and professional staff. The panel has met with ambitious academic directors who are keen to develop their programmes in line with the strategic objectives set out by TiSEM and the University. If empowered properly, these academic directors have the capacity to become drivers of change in a rapidly changing world.

The panel thinks highly of the informal system of sounding boards to gather student feedback at programme level. There is, however, a risk of jeopardising the functioning of the education committees that operate at a more strategic level. Currently the checks and balances seem to be too much on the side of a sound but informal system. The panel therefore suggests TiSEM to reconsider the organisation of the education committees – possibly by creating more committees - strengthening their links with the respective programmes while the sounding boards can continue to play an important role as source of information for both programme management and education committee.

The panel considers that the School and the individual programmes are undertaking good efforts to ensure a continuous inflow of BSc and MSc students from Tilburg region, other parts of the Netherlands and abroad. According to the panel, TiSEM has increased over the past few years the number of contact hours and modified the teaching forms to ensure that an increasing share of the first year BSc students obtain a positive BSA. Similarly, the thesis trajectory has been streamlined in both BSc and MSc programmes to limit as much as possible the study delay. The measures have proved to be impactful as the drop-out rate has been reduced and the success rate of students graduating 'in time' has augmented. Overall, the panel considers that programmes are set up in such a way that there are no particular course-specific stumbling blocks jeopardising programme completion: it is fair to state that degree programmes are feasible, provided students put in sufficient effort.

Nonetheless, and in line with its consideration in the previous section, the panel considers that the current programme portfolio with several programmes, tracks and entry moments featuring only a



small number of students puts a lot of strain on the available teaching resources. The panel suggests TiSEM to reflect on the viability of certain programmes or tracks as self-standing units and recommends the School to look for more collaboration in terms of jointly offered courses across programmes.

The panel considers that overall the number of staff at TiSEM and within the respective programmes is appropriate. Academic staff is properly qualified and some have a strong research reputation. The panel has met a dedicated team of staff and noticed with approval that students are satisfied with the quality and availability of their professors, lecturers and supervisors. Nonetheless, the panel was surprised by the number of teaching staff that is educated only to Master level, by the active role PhD students take up not only in teaching but also in thesis supervision, and by the limited number of academic staff with a university teaching qualification.

TiSEM is offering a broad range of existing and new services for both students and teaching staff. Further to the feedback from students and staff, the panel considers that this offer is adequate. The panel welcomes in particular the 'TiSEM Cares' programme, a school-wide collective of supervision, care and support services. In addition to increasing the link between academic theory and professional practice in the curricula, TiSEM is at the forefront in developing extra-curricular career services for its students. In this respect, the panel thinks highly of the active role of study associations in providing services at the interface between students and companies.

### **General conclusion**

In sum, the panel considers that the teaching and learning environment for the nineteen degree programmes under review is adequate. Overall, the design and contents of the curriculum, the quality and quantity of the staff and the education facilities at TiSEM enable students to reach the intended learning outcomes of their respective programmes. Certain programmes are somewhat more advanced than others in so far as individual components of the teaching and learning environment are concerned. These individual efforts and qualities will be described accordingly in the programme-specific section. Notwithstanding its acknowledgement of the differences that exist across programmes, the panel considers that in terms of teaching-learning environment, all programmes under review are of comparable quality. As a result, **the panel judges that standard 2, teaching and learning environment, is satisfactory across all programmes.**

### **Standard 3: Assessment**

The programme has an adequate assessment system in place.

#### **Explanation:**

The tests and assessments are valid, reliable and transparent to the students. The programme's examining board safeguards the quality of the interim and final tests administered.

### **General findings**

#### *Assessment system*

The panel noticed that the degree programmes under review have a similar assessment system that is based on the provisions of the TiSEM Assessment Policy, which in turn is aligned with the university-wide framework for assessment. Tilburg University developed an assessment policy in 2012 which includes the implementation of a transparent, reliable and valid assessment system in all programmes and involves the close monitoring of the assessment quality by examination committees.

Each BSc and MSc programme at TiSEM has its own Teaching and Examination Regulation (TER), which is decreed every year by the Dean of the School and approved by the Education Committee and the Faculty Council. Part of the TER concerns the examinations of courses and the final examination of the programme. Every year, students receive a digital copy of the Rules and

Guidelines set by the Examination Committee. These cover the organisation of the assessments and includes issues such as the registration for exams and the provisions regarding fraud.

The academic directors are responsible for programme assessment plans, which describe how and when the various learning outcomes of the programme will be tested and clarify the link between the courses and the intended learning outcomes of the programme. Prior to the site visit, the panel received the assessment plans for all nineteen degree programmes under review. Each plan comprises a matrix of information on the intended learning outcomes and the courses. Each matrix cell contains information and a short explanation about how the learning outcomes are assessed. The panel noticed that overall, the assessment plans are a useful tool to monitor that the programmes' intended learning outcomes are effectively addressed and assessed throughout the respective curricula.

Teachers prepare so-called specification tables for their courses. For each learning goal, the table indicates the level (knowledge, application, insight) at which it will be tested and the relative share of this learning goal in the total assessment of the specific course. Teachers also develop assessment criteria for the test and have the examination reviewed by a colleague. The panel has reviewed a sample of specification tables and noticed that there is a link between the specification tables and the assessment plans. Course coordinators indicated how the learning goals of their courses contributed to the intended learning outcomes. This information was used to describe how each intended learning outcome is assessed and at what level. Upon reviewing the specification tables, academic directors consult with TiSEM's education specialists what is and what is not in line with the desired assessment of the programme.

The panel noticed in the self-evaluation reports how each programme is using the assessment plans and specification tables to develop a system that aligns with the university and School provisions and is useful within the specific context of the programme. Students and alumni indicated to the panel that overall, assessment is properly organised at TiSEM. The panel also gathered from these discussions that students are properly informed about the contents and methods of the assessment, as well as about the grading criteria.

#### *Examination Committee*

According to the Dutch Higher Education Act, the examination committee is responsible for maintaining the quality of exams and for determining the guidelines for and descriptions of exams. It is an independent body that monitors and safeguards the assessment system as well as the quality of degrees, and acts when there is suspicion of fraudulent behaviour by students. This means that the committee must assure among other things whether a student meets the requirements specified in the TER with regard to knowledge, understanding and skills that are required to obtain a degree. Over the past few years, the competences and responsibilities of the examination committee have increased considerably. TiSEM's examination committee performs its tasks in line with the university-wide assessment framework. During the meeting with representatives of the examination committee, the panel learned that the committee monitors the quality of the examinations by checking the assessment plans and the specification tables, by reacting to signals concerning the quality of the examinations and by reviewing the checks performed by the university assessment expert.

#### *Thesis assessment*

As part of this AACSB-NVAO joint accreditation exercise, the experts reviewing the self-evaluation reports also studied a sample of 102 theses across all nineteen degree programmes and reported on their findings to the peer review team prior to the site visit. The experts' task was twofold: to look into the quality and contents of the theses (which will be reported on in the next section on achieved learning outcomes) and to review the evaluation of the theses by the assessors.

The theses were selected among final projects of students graduating in 2013-2014 and 2014-2015. While findings which are specific to individual programmes will be reported in the programme specific



section, there are a number of similar findings which several experts have mentioned when reviewing theses belonging to different programmes.

A first common finding is that each BSc programme has a thesis assessment form that is very similar but not identical across the six programmes under review. The form clearly states eight assessment criteria and asks the supervisor and the co-reader to assess the thesis in terms of quality of contents (research question, theory, methodology, results) and quality of communication (consistency in argumentation and layout); the supervisor, moreover, is to give a separate appreciation on the quality of process, notably the level to which the student has worked independently. The form also contains guidelines on how to calculate the final grade. Supervisor and co-reader are expected to fill in the form separately and to agree on a final grade. The criteria are identical across the six BSc programmes, what differs is the assessment scale for the respective criteria (either figures or letters) and the degree of detail provided for the calculation of the final grade.

A second common finding is that each MSc programme has a thesis assessment form that is quite similar across the thirteen programmes under review. Compared to the BSc thesis, the evaluation forms for MSc theses also address quality, communication and process, but the list of criteria is more limited while the scale of assessment differs per programme. Some programmes have a separate evaluation form for the co-reader. The assessment process of MSc theses is longer as students are defending their thesis if both assessors agree that it fulfils minimum quality standards.

A third common finding is that the evaluation forms as such constitute a good basis for assessment. According to the experts the form offers assessors the opportunity to express a detailed and differentiated judgement, both quantitatively and qualitatively, on several aspects of the thesis. If completed properly, the form can offer a wealth of feedback and a detailed motivation for a given score.

All experts, however, also reported that in several cases and across all programmes, the qualitative feedback in the evaluation forms was often very limited, if at all present. Assessors did not systematically use the opportunity offered in the evaluation forms to underpin their appreciation of individual criteria and/or their overall mark. A given score may have been clear to the assessors (and the student), but the experts sometimes found it difficult to follow the reasoning of the assessors and their motivation of the thesis grade on the basis of the information contained in the completed evaluation forms.

Each thesis is assessed by two assessors: the thesis supervisor and the co-reader. In several cases the (independent) role of the co-reader could not be traced back in the form. On the basis of the information provided to the experts, it was not always possible to establish whether the second supervisor had read the entire thesis and done a full, proper and independent assessment.

In a few cases, across programmes, experts reported that students got a low score from the assessors on certain criteria. While the experts agreed that the comments as such are a correct reflection of the thesis quality, the indicated flaws should have been picked up by the thesis supervisor during the thesis trajectory. In these cases the task of the thesis supervisor as counsellor of the student is not always equally strong: in fact assessors sometimes seem to penalise a student for a final product to which supervisors should have provided more input and guidance during the development phase.

A few experts indicated that some theses had been assessed by two staff members without a PhD. According to the panel, this should be avoided.

Looking at the overall picture of the reviewed evaluation forms, the panel acknowledged the positive findings of the experts and reported the points for improvement to the management, programme directors and examination committee. During these discussions the panel felt that some interviewees seemed to refer to their content-related expertise as academics as an argument that they should not

be expected to report too extensively and in too much detail on students' achievements. Other interviewees, however, convinced the panel that the existing processes are carried out carefully.

### **General considerations**

The panel considers that the assessment system at TiSEM is organised properly. The programmes under review have the necessary tools to ensure the link between the overall learning outcomes, the learning goals of individual courses and the assessments that establish to what extent students have covered the learning goals and are achieving the intended learning outcomes. The panel welcomes the specification tables and assessment plans, but considers that there is a substantial potential for further development. They could be used as a communication tool between academic directors and lecturers, and by doing so strengthen both the coherence of the programmes and the awareness of lecturers on their position in the programme.

In line with Dutch legislation, the examination committee has a broad range of tasks. Following the discussion on site, the panel had some concern as to whether the committee (and thus TiSEM) is sufficiently in control of the assessment quality it intends to deliver. Academic staff and students have taken away much of this concern, but the panel nonetheless considers that there is ample room for improvement. The assessment system as such is adequate and so is the way assessments are organised. However, the panel recommends TiSEM to strengthen the capacity of the examination committee. As a result, the committee could monitor more systematically the assessment quality and, by doing so, contribute to the School's ambition to improve the quality of its education.

The considerations of the panel with regard to thesis evaluation illustrate the above recommendation: all programmes under review are evaluating the thesis based on a good quality form that offers assessors the opportunity to express a detailed and differentiated judgement, both quantitatively and qualitatively, on several aspects of the thesis. While in many cases these forms are completed properly, there are also several examples where the scores are not properly motivated, where assessors are educated to Master level, and/or where the feedback seems to indicate that the supervisor could have provided more guidance in the preparatory phase. According to the panel, these cases could/should have been picked up through a systematic monitoring of the assessment quality.

### **General conclusion**

In sum, the panel considers that the central and faculty policies on assessment are implemented adequately at the level of the individual programmes under review. Although there is clearly room for development with regard to the assessment plans/specification tables and with regard to the systematic monitoring of the assessment quality by the examination committee, the overall assessment system and the individual assessments clearly fulfil the basic requirements. Moreover, all programmes have a thesis evaluation form at their disposal that allows for a detailed and differentiated judgement and motivation, if used properly.

As assessment is largely based on policies and regulations at central university and faculty level, the panel's appreciation of the assessment quality per programme is very similar. The individual efforts of the respective programmes with regard to assessment, and notably in so far as thesis assessment is concerned, will be described accordingly in the programme-specific section. Nonetheless, the panel considers that in terms of assessment, all programmes are of very comparable quality. As a result, **the panel judges that standard 3, assessment, is satisfactory across all programmes.**





**Standard 4: Achieved learning outcomes**

The programme demonstrates that the intended learning outcomes are achieved.

**Explanation:**

The level achieved is demonstrated by interim and final tests, final projects and the performance of graduates in actual practice or in post-graduate programmes.

**General findings***Final thesis project*

In order to gain insight in the achieved learning outcomes of students, the experts reviewing the self-evaluation reports also studied a sample of 102 theses across all nineteen degree programmes and reported on their findings to the peer review team prior to the site visit. The list of theses reviewed is presented in Appendix 7 to this report. In addition to reviewing the evaluation of the theses by the assessors (as described under the previous section on assessment), the experts were tasked to check whether each thesis fulfilled the minimum criteria to pass and if the score given by the assessor(s) was adequate.

For each programme the experts reviewed between five and eight theses selected among those products written and accepted in the academic years 2013-2014 and 2014-2015. In their selection QANU ensured that the theses to be reviewed covered as much as possible all programme profiles and were representative in terms of scoring. The size and the complexity of the theses were in line with the level of the students concerned and the number of credits allocated to the thesis: 12 EC for bachelor theses and 18 EC for master theses.

With regard to thesis quality, the experts reported that each thesis fulfilled at least the minimum criteria one would expect of a final product of academic orientation at bachelor or master level. The experts' key findings on thesis quality per programme will be reported in the programme specific section. Out of the 102 theses reviewed, experts expressed doubts about the quality of five theses from five different programmes. In line with NVAO guidelines, these theses were submitted to another expert, in this case the Dutch academic expert on the peer review team. He reviewed the five theses and indicated that they were of limited yet acceptable quality. He partly based this appreciation on the fact that the assessors had issued a similar judgement (narrow pass) in the respective evaluation forms. Having discussed the overall findings on the theses during the preparatory meeting on site and taking on board the observations of the experts per programme, the panel accepted the main message of the experts: TiSEM students who complete the final thesis successfully achieve all intended learning outcomes and are therefore entitled to graduate.

In terms of scoring, the experts agreed in the majority of cases to the marks given by the assessors to the individual theses across all bachelor and master programmes under consideration. When their opinion on the score differed from the mark given by the assessors, it mainly concerned theses with a high mark. Only in a handful of cases, experts thought a thesis was of better quality than the score it had received expressed. Moreover, experts tended to agree with the ranking of the theses in most programmes: final products with a higher score are indeed of a better quality than theses with a lower score. The panel discussed the quality of the thesis scoring during its preparatory meeting and related these observations to findings on thesis assessment. Also in this case the panel accepted the main message of the experts: overall, TiSEM assessors score theses adequately.

*Performance of graduates*

The quality of the achieved learning outcomes is measured not only through the successful accomplishment of the thesis, but also by looking at the performance of graduates on the labour market. The panel noticed in the self-evaluation report and during the discussions on site that the vast majority of BSc programme graduates continue their education with a master programme at TiSEM or elsewhere.

As mentioned in several sections of this report, TiSEM recently stepped up its efforts with regard to preparing its students for a future career. Both within BSc and MSc curricula and as part of extra-curricular student services the link with the labour market has increased noticeably through internships, solving real-life problems, guest lectures and alumni mentors.

The performance of the MSc graduates on the labour market is linked in part to the specific programme they have attended. Key findings will be reported in the programme specific section. The discussions on site with staff and alumni indicated that TiSEM graduates tend to find employment soon after graduation.

### **General considerations**

Thesis quality is an important indicator to measure the extent to which students have achieved the intended learning outcomes. Having established that each of the 102 theses reviewed by the experts fulfilled at least the minimum criteria required, the panel considers that across all TiSEM programmes under review, students who complete the thesis successfully invariably achieve the intended learning outcomes and are therefore entitled to graduate.

Another indicator for achieving the intended learning outcomes is to look at the performance of graduates on the labour market. The panel acknowledges the recent efforts of TiSEM in this regard and considers that both TiSEM services and individual programme curricula allow students/graduates to move on to a relevant degree programme or find proper employment when they enter the labour market.

### **General conclusion**

In sum, the panel issues a positive judgement on the achieved learning outcomes for all programmes under review. The complementary findings at individual programme level on thesis quality and graduate performance will be described accordingly in the programme specific section. Whilst acknowledging that some programmes are doing somewhat better than others on this standard, the panel considers that in terms of achieved learning outcomes, all programmes are of rather comparable quality. While each programme definitely fulfils the generic quality standards in terms of both thesis level and graduate performance, the panel did not come across individual programmes that systematically surpasses these quality standards. As a result, **the panel judges that standard 4, achieved learning outcomes, is satisfactory across all programmes.**

### **Overall appreciation**

The panel considers that all programmes meet the quality requirements on each of the four standards. For all standards, the panel judges that this quality is satisfactory across all programmes. As a result, **the panel judges that the overall quality of each programme is satisfactory** and issues a positive advice to NVAO on the overall quality of the nineteen bachelor and master programmes submitted for programme accreditation.



## PROGRAMME SPECIFIC FINDINGS

This section of the report lists the key findings on individual programmes. The findings were identified by the experts on the basis of the programme reports and the thesis sample. Prior to the site visit, experts were asked to study the self-evaluation reports and list for each programme both positive and critical points, notably with regard to the intended learning outcomes and the teaching and learning environment. The experts also reviewed a sample of theses and their evaluation forms. In their feedback they focused on two elements: the quality of the thesis as a product demonstrating that the student has reached the expected level and achieved the learning outcomes; and the quality of the completed evaluation forms providing a correct and insightful motivation of the score.

The input from the experts and the discussions on site have contributed to the panel's overall findings and considerations. These have been reported in the previous section, where the panel also issued a conclusion per standard that applies to all programmes. This programme-specific section, therefore, contains an illustration of strengths and weaknesses identified by the experts. The findings are not a systematic or comprehensive inventory of individual programme characteristics. As programmes have been reviewed by different experts individually with their own background and their own perspective, the findings presented here cannot be used to compare programmes.

### 1. BSc in Business Economics (Bedrijfseconomie)

#### *Intended learning outcomes*

- The profile of the programme is clear and focuses on four pillars: accounting, finance, management and marketing.
- The annex includes an interesting benchmark exercise comparing this programme to similar programmes in the Netherlands.

#### *Teaching and learning environment*

- The curriculum is built up nicely throughout the years (orientation, deepening and electives) and in full respect of the four main domains of business economics.
- It is unclear if and how (all) students are introduced into issues such as entrepreneurship and human resource management. Moreover, it is unclear if and how the programme makes the link with the professional practice; students have no opportunity to follow an internship as part of the regular curriculum.
- The curriculum features a diverse range of teaching forms.
- Student drop-out and success rates are changing for the better.
- The thesis follows a strict time-path with several deadlines.
- The number of staff allocated to the programme is high, but so is the turnover of instructors.

#### *Assessment*

- The programme features a variety of assessment forms; assignments, however, consist mainly of teamwork, not individual assignments.
- All thesis evaluation forms are completed and most forms provide an insightful motivation of the score.

#### *Achieved learning outcomes*

- The scope of the theses differs according to the focus areas (literature review vs empirical research).
- The quality of the thesis sample (8) is adequate and the scores are correct.



## 2. BSc Econometrics and Operations Research (Econometrie en Operationele Research)

### *Intended learning outcomes*

- Dedicating an entire bachelor's programme to econometrics and operations research is typical for the Netherlands and very uncommon abroad.
- The programme provides students with a solid foundation in mathematics and statistics, with applications in business and economics.
- This BSc EOR is implemented at a high level from both quantitative and applied perspective.

### *Teaching and learning environment*

- The curriculum has a good structure with an adequate mix of compulsory courses in the first years and elective courses towards the end.
- The first year is taught in Dutch and English; the second and third years are entirely in English. Given the fact that there is an opportunity to follow the entire programme in English, the inflow of foreign students is rather modest.
- The annual student inflow varies, but allows to pay attention to individual students. The number of contact hours is adequate in all three years.
- The programme is challenging: the drop-out is relatively high and the success rates are below the average BSc programmes at TISEM.
- The programme is addressing some of the weaknesses in the curriculum, such as the absence of a first-year course in IT-skills or the communication, information and writing skills of students.
- Students are made aware of the work field in a number of courses through practical assignments and guest lecturers.
- The teaching staff, and in particular the course coordinators, have a good reputation as highly qualified academics. Some also have adequate professional expertise.
- The study association Asset Econometrics is very active, both in organising activities for students and in representing students towards programme management.

### *Assessment*

- All thesis evaluation forms are completed and most forms provide an insightful motivation of the score.

### *Achieved learning outcomes*

- The quality of the thesis sample is adequate and the scores are correct.
- Most graduates enrol on a master's programme; nonetheless, their bachelor's degree in econometrics also allows them to find a relevant job on the labour market.

## 3. BSc Economics

### *Intended learning outcomes*

- This is the only BSc programme in the Netherlands that exclusively specializes in economics. The benchmark exercise consists of several programmes abroad.
- The main focus is on microeconomics and macroeconomics.

### *Teaching and learning environment*

- The curriculum is changing and this has started for students enrolling in 2016-2017.
- The programme uses the didactic concept of research-based learning: connection between teaching and research; student activation; innovative teaching and learning; link to practice and future job market.
- The international dimension is particularly present in topics, students and staff.
- Given the limited number of students, teaching is small-scale and intensive.
- Students and alumni strongly appreciate the programme.



- Around 60% of the students are non-Dutch representing on average 15 countries.
- Given that admission is selective, there is a relatively high drop-out after one year. According to the panel this may be due to a mismatch in the selection or to the fact that there is little variation in course contents.
- Given the continuously limited inflow (below the *numerus fixus*), the long-term viability of the programme can be questioned.
- The expertise of the teaching staff allocated to the programme is good; part of the staff (professors and assistants) is non-Dutch or affiliated with organisations in the work field. However, only 7% of the staff has a teaching qualification.

#### *Assessment*

- The assessment system is adequate and the programme has a variety of assessment forms.
- The detailed assessment plan demonstrates that during the curriculum all competencies (knowledge, skills and attitude) of the intended learning outcomes are assessed.
- All evaluation forms are completed. One thesis is assessed by two PhD students. While the assessment as such is done properly, this approach is not in line with the policy mentioned in the self-evaluation report.

#### *Achieved learning outcomes*

- The theoretical and analytical level of some of the theses in the sample is merely sufficient; this is somewhat below expectation given the selective admission and the considerable drop-out. The two theses with the highest scores are both of good quality and fully deserve their grade.
- Nearly all graduates enrol on a Master's programme, and this is done relatively often at a different university in the Netherlands or abroad.

## 4. BSc Economics and Business Economics (Economie en Bedrijfseconomie)

#### *Intended learning outcomes*

- At the time of the site visit, the programme was in transition. It now focuses on synergies between economics and business economics.
- According to the benchmark exercise, this BSc programme at TiSEM stands apart for its attention to modern business analytics.
- The programme claims that the new curriculum (the first year of which started in September 2016) impresses on students a curious and open mind toward the changing origins and effects of societal challenges. The panel appreciates this new approach, but was not yet able to confirm this claim.
- It aims explicitly at preparing future BSc graduates for the global job market.

#### *Teaching and learning environment*

- The programme has been reshaped: starting in 2016, it features three tracks: financial management, commercial management, economics & society.
- The new structure constitutes an improvement; it seems more balanced than before in addressing economics, business economics and business analytics.
- The focus on business analytics is fine on paper; however, the programme has to demonstrate in the years to come that this is more than a new label for traditional courses.
- Students' professional skills are developed through skills courses, guest lectures and assignments such as an in-company research project for the bachelor's thesis.
- On the one hand, the inflow of students is smaller than envisaged; on the other hand, the limited group size allows for interaction in class and a group feeling among cohorts.
- The efforts regarding student guidance and tutoring result in reduced drop-out rates and more students obtaining a positive BSA.

#### *Assessment*

- The assessment system is adequate and the programme has a variety of assessment forms.
- The detailed assessment plan demonstrates that during the curriculum all competencies (knowledge, skills and attitude) of the intended learning outcomes are assessed.
- Evaluation forms are completed. One thesis is assessed by two PhD students; this approach is not in line with the policy mentioned in the self-evaluation report.

#### *Achieved learning outcomes*

- The quality of the thesis sample is sufficient. In two cases, grading is rather generous.
- Nearly all graduates enrol on a Master's programme. Students that continue at TISEM mainly proceed to the MSc Economics, although a growing number chooses for business related programmes such as Accountancy or Finance.

## 5. BSc International Business Administration

#### *Intended learning outcomes*

- The intended learning outcomes are clear and relevant.
- The programme objectives are embedded in the internationalisation strategy of Tilburg University.
- The programme focus is not so much on international business but rather on business administration with an international orientation.
- The annex includes an interesting benchmark exercise comparing this programme to similar BSc programmes in the Netherlands and in Europe.

#### *Teaching and learning environment*

- The structure is good, the contents are balanced and the international dimension is very strongly present. One semester is dedicated to electives, an internship or a study abroad.
- The curriculum has been reviewed in 2016 following a benchmark review. Notably the skills component is enhanced. The new curriculum should attract more foreign students.
- Students think highly of the programme, as is demonstrated by the IBA student monitor and external surveys.
- The efforts regarding student guidance and tutoring result in reduced drop-out rates and more students obtaining a positive BSA.
- The number of staff allocated to the programme is high, but so is the turnover of instructors. It seems difficult to ensure that the most qualified teachers are and remain involved in the programme. Overall, the staff is international.

#### *Assessment*

- The detailed assessment plan demonstrates that during the curriculum all competencies (knowledge, skills and attitude) of the intended learning outcomes are assessed.
- Most thesis evaluation forms in the sample reviewed are completed adequately. Several theses in the overview are assessed by two PhD students.

#### *Achieved learning outcomes*

- The scope of the theses differs according to the focus areas (literature review vs empirical research).
- The quality of the thesis sample (8) is adequate and the scores are correct.
- The programme plans to inform bachelor students more about career opportunities.
- It envisages establishing an IBA alumni forum that would act as an advisory board.



## 6. BSc Tax Economics (Fiscale Economie)

### *Intended learning outcomes*

- Dedicating an entire bachelor's programme to tax economics is typical for the Netherlands and uncommon abroad. The benchmark with Dutch universities shows that programmes are quite similar; the BSc programme at TiSEM puts a somewhat stronger emphasis on the legal training of students (vs attention to economic education elsewhere).
- The programme has a good reputation in the fiscal world in the Netherlands.

### *Teaching and learning environment*

- The curriculum ensures that the intended learning outcomes are adequately covered.
- The programme of the first year is identical to the BSc Business Economics; only one course specifically addresses tax economics.
- On the one hand, the inflow of students is small; on the other hand, the limited group size allows for interaction in class and a group feeling among cohorts.
- The professors linked to this programme have a good reputation.
- There is relatively little attention in the curriculum to labour market opportunities. However, students get acquainted with professional practice through the study association Smeetskring, the professional activities of teaching staff, alumni and guest lecturers.

### *Assessment*

- The assessment system is adequate; the programme is aware that there is room for more variation in assessment forms throughout the curriculum.
- The thesis evaluation forms are completed with two assessors grading separately. The criteria mentioned in the forms are relevant and the final scores are motivated adequately.

### *Achieved learning outcomes*

- The quality of the theses reviewed is adequate: they all fulfil the level that can be expected of a final bachelor's product of academic orientation. The scoring is correct: the expert considers that the theses with a higher score are indeed of better quality.
- The topics addressed in the theses concern actual fiscal issues. Most subjects (in the sample) concern fiscal-legal rather than fiscal-economic topics.
- Most bachelor graduates enrol on the follow-up MSc in Tax Economics in Tilburg or the Netherlands, although they are also prepared for other MSc programmes.

## 7. MSc Accountancy

### *Intended learning outcomes*

- The intended learning outcomes are solid: they are of clear academic value and in full alignment with international standards.
- The programme pays good attention to the needs of the professional community and provides an adequate basis for possible post-master programmes.

### *Teaching and learning environment*

- The programme features two tracks: a professional (Register Accountant / Register Controller) track and the Chartered Financial Analyst track.
- The programme structure is clear with courses building upon each other logically.
- The curriculum allows to achieve the intended learning outcomes and its combination of academic and professional competencies.
- The programme offers a variety of teaching forms.
- The number of students is growing, but the number of staff and courses are not; hence a growing student-staff ratio and bigger student groups in most – compulsory – courses.
- The reputation of the programme and its academic staff is good.

- There is a turnover of instructors but also a recruitment constraint.
- Students appreciate the second entry moment.
- The programme offers an interesting range of career-oriented (extra-) curricular activities.

#### *Assessment*

- The assessment system in general and the assessment plan in particular are adequate.
- The master thesis evaluation form is adequate. However, not all assessors are making optimum use of the opportunities offered by the form to motivate their grades. In a few cases, it was impossible to follow the reasoning of one or both assessors for a given score.

#### *Achieved learning outcomes*

- The quality of the thesis sample reflects the envisaged level adequately. The scores are correct and in a few cases even rather modest.
- Graduates find a proper job on the labour market relatively quickly.

## 8. MSc Econometrics and Mathematical Economics

#### *Intended learning outcomes*

- The programme aims at offering a strong theoretical basis whilst also paying attention to practical applications. This objective is reflected adequately in the intended learning outcomes.

#### *Teaching and learning environment*

- The programme structure is clear. Students can choose between a general programme and the Netspar (Network for Studies in Pensions, Aging and Retirement) specialisation.
- Students have quite some freedom within this structure to combine courses that taken together match their specific interest.
- Looking at the six subfields within EME, it seems that the programme adequately covers the econometrics component, while the specific domain of mathematical economics is somewhat underrepresented.
- The inflow of students has increased over time, but is still low (21 in 2014-2015).
- More than half of the students are non-Dutch and more than half of the Dutch students got their bachelor degree elsewhere.
- The success rate varies; based on the data available, it requires follow-up.
- Staff on the programme has a good reputation as academic researchers; moreover, several staff have a part-time position in practice.
- The staff holding a PhD is very high (94%) but only 6% has a teaching qualification.
- The programme offers an interesting and broad range of career-oriented curricular and extra-curricular activities.

#### *Assessment*

- The assessment plan reflects both the old and the new programme structure (2015-2016). All competencies of the intended learning outcomes are tested throughout the curriculum.
- The sample of theses contained both old and new evaluation forms. The new form is a clear improvement as it offers good opportunity to report on the assessment and motivate the scores. Based on the sample, most assessors are not making full use of the form.

#### *Achieved learning outcomes*

- The quality of the theses in the sample is adequate. Whilst all theses fulfil the minimum requirements, the expert tends to score several theses differently, both higher and lower.
- Students have the opportunity to combine their thesis with an internship in a company and thus combine academic research with working on a real life problem. As companies are reportedly satisfied with the competencies of the students, the internship often leads to a first employment.
- Career perspectives of EME graduates are good.





## 9. MSc Economics

### *Intended learning outcomes*

- The programme offers students the opportunity to specialise in one of six subfields of economics. There is a clear link between these specialisms and the research expertise at TiSEM. The boundaries of the programme are reflected adequately in the intended learning outcomes.

### *Teaching and learning environment*

- The programme has an extensive, varied and flexible curriculum that pays considerable attention to scientific training.
- While the programme structure is clear and logical when starting in September, this is much less the case for the second entry in February. As courses are offered once per year, there is no logical build-up towards more depth, particularly in the methods courses.
- Some tracks have only a limited number of students. While staffing is limited and courses are manifold, the long-term viability of some tracks is questionable. The programme may want to investigate the possible streamlining of certain courses and tracks.
- From an educational point of view, small tracks seem to offer less opportunities for mutual learning and cooperation.
- The number of students is growing slightly. Around 40% of students is non-Dutch from a wide variety of nationalities:
- The staff holding a PhD is high (91%) but only 3% has a teaching qualification.
- Students can combine their thesis with an internship in a company or institution.

### *Assessment*

- The assessment system is adequate. The assessment plan demonstrates that during the curriculum all competencies of the intended learning outcomes are addressed and assessed for each track.
- The thesis evaluation form offers a good template to report on the assessment and motivate the scores. Although one form was not available, it seems that most assessors were making proper use of the form.

### *Achieved learning outcomes*

- Based on the sample of six theses reviewed, the level of each thesis is adequate for a final product of academic orientation at master's level. In terms of empirics, the theses reflect the level and orientation of the programme adequately.
- In most cases the expert agrees to the scores given.

## 10. MSc Finance

### *Intended learning outcomes*

- This programme is a merger of two master's programmes in Financial Management and Investment Analysis, which are still the two main focus areas.
- The intended learning outcomes focus both on understanding academic financial concepts and on applying these to solve real world financial problems.

### *Teaching and learning environment*

- The programme structure is good and the contents of the individual courses relevant.
- The curriculum implements what the programme sets out to do in the intended learning outcomes: embedded research and applications of real world issues.
- The programme is clearly aware that upon graduation most students will be employed outside of academia.
- The courses are taught by high quality staff, part of which is non-Dutch, with a good track record in research.



- Approximately one third of students is non-Dutch, from a range of countries. Most Dutch students are bachelor graduates from TiSEM.
- The programme is correct in mentioning two elements that require attention in the long run: maintaining a constant inflow of good quality domestic and foreign students, and the recruitment of new staff whilst maintaining current quality standards.
- The share of students finishing their study in two years is growing, as a result of a stricter procedure in starting and delivering the master's thesis.
- The programme offers a range of career-oriented curricular and extra-curricular activities, organised among others in cooperation with Netspar and the CFA Institute.

#### *Assessment*

- The assessment system is adequate. All competencies of the intended learning outcomes are tested throughout the curriculum.
- The template of the master thesis evaluation form is adequate, as demonstrated by a few examples in the sample. However, there is room for improvement by monitoring that all assessors make good use of the form motivating their scores with insightful comments.

#### *Achieved learning outcomes*

- The quality of the thesis sample is adequate. Whilst all theses fulfil the minimum requirements, there are clear quality differences, which the assessors have spotted and assessed correctly. The expert agrees very much to all scores.
- The programme uses two sources to follow-up on their graduates: the most recent alumni monitor and its own LinkedIn analysis show that 89% of graduates are working in the financial sector; on average, they found a job after three months.

## 11. MSc Information Management

#### *Intended learning outcomes*

- Information management is about the use of information for the benefit of the functioning of (networked) organisations. The programme has a long tradition and good reputation.
- It differs from other IM programmes in the Netherlands by its embedding in the economics / management faculty. Its benchmarks are Münster, Leuven and Rotterdam.
- The intended learning outcomes are adequate and reflect commonly accepted standards developed by international associations such as ACM and AIM.

#### *Teaching and learning environment*

- The programme identifies two themes – governance and data science – which represent the two traditional pillars of information management and information systems.
- The programme has an explicit international dimension. It is currently the only programme with a double degree that is also open to TiSEM students.
- The curriculum has been adjusted in 2016-2017, also to offer students starting in February a logical and coherent set of courses.
- All courses offered in this programme are relevant. However, it is not clear why courses such as Business Process Integration and Service Oriented Architecture are elective and not compulsory.
- There is no course in cybersecurity, although this is a topic of actual relevance and several theses are dedicated to security-related issues.
- The BSc Information Management is phased out. Notwithstanding the growth in student numbers, the programme will have to monitor that incoming bachelor graduates from TiSEM are properly prepared to start and study this MSc programme successfully.
- Due to staff turnover in recent years, there is a shortage of teaching staff and PhD students. Staff allocated to the programme is properly qualified and reflects the interdisciplinary nature of the domain. However, only 8% has a teaching qualification.



### *Assessment*

- All competencies of the intended learning outcomes are tested throughout the curriculum. The assessment methodology for both courses and thesis is adequate.
- Some assessors make good use of the thesis evaluation form providing quality feedback to motivate their scores. Others are completing the forms but provide unspecific and/or limited arguments to illustrate their judgements.

### *Achieved learning outcomes*

- The sample of theses reviewed demonstrates that the overall quality of the Information Management programme is good. The individual theses differ in terms of quality although most students seem to have worked hard and apply academic rigour. This is picked up by the assessors, whose scores are correct and in two cases even somewhat modest.
- Students often combine their thesis with an internship, which sometimes leads to employment. Career opportunities are excellent for IM graduates.

## 12. MSc International Management

### *Intended learning outcomes*

- The programme covers the main business disciplines, including finance, marketing and corporate social responsibility.
- The intended learning outcomes are adequate. Several public and private universities in the Netherlands offer comparable degrees with similar intended learning outcomes.

### *Teaching and learning environment*

- The programme structure is clear and enables students to achieve the intended learning outcomes. Students acquire both academic and professional knowledge and skills.
- The curriculum is set up in such a way (including two courses offered twice) to accommodate as much as possible students entering both in September and February.
- Student groups are not too big, which allows for small-scale teaching and the creation of group feeling.
- The student inflow is diverse: TiSEM, Dutch universities, pre-master track. About one quarter is non-Dutch.
- Teaching staff are allocated by different academic departments. It is quite international and some staff bring practical experience.
- Half of the staff has a teaching qualification, the highest rate of all programmes.
- The success rate of students after one year and two years is high and increasing further.
- The programme offers a broad range of career-oriented extra-curricular activities, including an international study trip and activities organised by the study association.
- The programme has an international advisory board that meets once a year to reflect on the curriculum.

### *Assessment*

- All competencies of the intended learning outcomes are tested throughout the curriculum.
- The master thesis evaluation form is adequate, although it contains relatively few criteria and assessment categories. The form is very clear on how to arrive at the final score. Some – but not all – assessors are using the form in an effective way providing an insightful motivation of their scores.
- Some comments in the thesis sample seem to indicate that the role of the supervisor in the thesis trajectory is not particularly strong. Certain flaws reported in the evaluation are correct, but could have been anticipated by the supervisor.

### *Achieved learning outcomes*

- The sample of theses reviewed indicates that the level is sufficient in all cases and the scoring is most often correct.

- Some theses are based on a limited number of interviews or on the analysis of student data. The programme may want to encourage students to also collect real data for their thesis as this may become part of their job afterwards.
- Career opportunities are good; students are supported actively in preparing for the job market.

## 13. MSc Marketing Analytics

### *Intended learning outcomes*

- Previously known as marketing research, the programme changed name to reflect its increasing focus on big data (such as derived from social media platforms).
- The intended learning outcomes provide students with competencies to translate concrete marketing problems into academically relevant research problems and vice versa.
- They reflect international standards such as the American Marketing Association.

### *Teaching and learning environment*

- The programme is well structured leaving students some choice to specialise or differentiate. In order to facilitate the second entry moment, the introductory course is offered twice per year.
- The curriculum is an explicit and balanced combination of theory and practice, stimulating a research attitude and facilitating hands-on learning; in this way both contents and didactic approach contribute to reaching the intended learning outcomes.
- Student inflow has grown but remains limited. The programme is actively looking for ways to increase the inflow from TiSEM, pre-master and international students.
- The success rate of students is below average, in particular among TiSEM bachelor graduates: students either include an extra-curricular internship or enrol on two MSc programmes.
- Staff is research driven and diverse: 50% are women, 70% is non-Dutch. On the other hand, 38% is educated to master's level and only 19% has a teaching qualification.
- The programme offers a range of career-oriented extra-curricular activities, but students give it a low score on job market preparation.

### *Assessment*

- The assessment system is adequate: all competencies are being assessed throughout the curriculum and each course is examined through at least two different assessment forms.
- The thesis evaluation form is adequate. It is not clear to what extent there is a check for consistency (or monitoring) of scores across theses as the expert has rated several theses differently.

### *Achieved learning outcomes*

- The level of the theses reviewed is always at least satisfactory, but scores are sometime overrated.
- The sample seems to indicate that 'academic' theses are of better quality than 'company' theses. The latter seem to have limited time to combine research question formulation with an internship and data gathering and analysis.
- The programme follows up on its graduates, who have good employment opportunities and often find a proper job soon after graduating.

## 14. MSc Marketing Management

### *Intended learning outcomes*

- The intended learning outcomes reflect the specific aim of the programme: a specialised academic programme with a focus on the professional practice of the marketing manager.
- They reflect international standards (American Marketing Association).
- The report includes a benchmark with similar programmes in the Netherlands and abroad.



#### *Teaching and learning environment*

- The programme is well structured with five compulsory courses, two electives and a thesis, leaving students some choice to specialise or differentiate.
- The introductory course is offered twice per year to facilitate the spring inflow.
- The curriculum stimulates research attitude, offers good methodology courses and focuses on professional practice. It contributes to reaching the intended learning outcomes.
- The thesis project is well organised and contributes to more students graduating in time.
- The number of incoming students is fairly high; about half of the students enter through a pre-master track.
- Staff is research driven. Coordinators are mainly tenured staff, often assisted by junior staff or PhD students.
- Teaching staff reportedly received high teaching ratings.
- The programme offers a range of career-oriented extra-curricular activities, but students give it a low score on job market preparation.

#### *Assessment*

- The assessment system is fine: all competencies are being assessed throughout the curriculum and each course is examined through at least two different assessment forms.
- The thesis evaluation form is adequate. However, it is not clear to what extent there is a check for consistency of scores across theses, nor if the performance of thesis supervisors without PhD are monitored.

#### *Achieved learning outcomes*

- The level of the theses reviewed is satisfactory. However, the expert indicated that several theses were somewhat overrated, including a hardly sufficient one with an average score.
- The programme follows up on its graduates, who have good employment opportunities and often find a proper job soon after graduating.

## 15. MSc Operations Research and Management Science

#### *Intended learning outcomes*

- There is a shift in focus at programme and curriculum level since 2016-2017 from prescriptive analytics to both prescriptive and predictive analytics, from optimization techniques to also including (big) data science skills.

#### *Teaching and learning environment*

- The programme offers a new specialization in business analytics and operations research.
- The courses offered in the curriculum all belong to the domain(s) of ORMS but it is not clear how they fit together in the programme. Moreover, several topics related to OR and MS such as linear, stochastic and combinatorial optimization are not covered.
- Only two courses (dynamic real investment and management science) have a theoretical focus and provide diverse applications of ORMS methods in the new curriculum. The programme will have to monitor carefully whether it still dedicates sufficient attention to scientific literature and to applications.
- The number of students is slightly growing, but not high; most are bachelor graduates from TiSEM. The inflow of foreign students is limited as they often lack OR techniques.
- All staff hold a PhD, but only 20% has a teaching qualification.
- The programme offers an interesting and broad range of career-oriented curricular and extra-curricular activities.

#### *Assessment*

- All competencies expressed in / laid down in the intended learning outcomes are tested throughout the curriculum.

- The sample of thesis contained both old and new evaluation forms. The new form is a clear improvement as it offers good opportunities to report on the assessment and motivate the scores. Based on the sample, some assessors provide an insightful motivation of their scores, while others are not making full use of the form.

#### *Achieved learning outcomes*

- The quality of the thesis sample is adequate and the expert agrees to most scores.
- Students have the opportunity to combine their thesis with an internship in a company and thus combine academic research with working on a real life problem. As companies are reportedly satisfied with students' competencies, the internship often leads to a first job.
- Career perspectives of ORMS graduates are very good.

## 16. MSc Quantitative Finance and Actuarial Science

#### *Intended learning outcomes*

- The programme focuses on advanced quantitative models, as well as on methods and techniques for risk management and measurement in finance and insurance.
- Students not only learn how to apply methods but also how to develop new tools. These objectives are reflected adequately in the intended learning outcomes.

#### *Teaching and learning environment*

- The programme structure is clear. Students can choose between a general programme and the Netspar (Network for Studies in Pensions, Aging and Retirement) specialisation.
- Students can design a curriculum that focuses on their own interests and career plans in a balanced mix of theory, application and empirical methods
- The number of students is stable; most are bachelor graduates from TISEM. The inflow of foreign students is limited: they often lack sufficient knowledge of statistics/mathematics.
- The data available indicates that the success rate of the programme (students finishing the programme within two years) requires attention.
- Most courses are coordinated by full professors.
- The programme offers an interesting and broad range of career-oriented curricular and extra-curricular activities.

#### *Assessment*

- The description of the QFAS assessment system shows that all competencies of the intended learning outcomes are tested throughout the curriculum.
- The sample of thesis contained both old and new evaluation forms. The new form is an improvement as it offers a good opportunities to report on the assessment and motivate the scores. Based on the sample, most assessors are not making full use of the form.

#### *Achieved learning outcomes*

- The quality of the thesis sample is adequate and the expert agrees to most scores.
- Students have the opportunity to combine their thesis with an internship in a company and thus combine academic research with working on a real life problem. As companies are reportedly satisfied with students' competencies, the internship often leads to a first job.
- Career perspectives of QFAS graduates are very good.

## 17. MSc Strategic Management

#### *Intended learning outcomes*

- The programme focuses on the business function 'strategy' and fits the business and management competences identified in the European Tuning Project.



- The extensive benchmarking of the programme against similar degrees in the Netherlands and abroad is interesting.
- The intended learning outcomes are clear and include a broad range of skills.

#### *Teaching and learning environment*

- The programme structure is clear and features two tracks: strategic consultancy and entrepreneurship. Apart from the track-specific modules, all courses are compulsory.
- The curriculum accommodates as much as possible students entering both in September and February. This has led to a growing number of students entering in spring.
- Apart from plenary lectures, students are taught in small tutoring and coaching groups.
- Companies are starting to get involved in the co-creation of education.
- Student numbers are growing: 60% are TiSEM bachelor graduates; about one third entered through a pre-master and roughly 10% is non-Dutch. This diversity is used in team assignments to enhance students' learning experience.
- The programme intends to adopt a more severe selection procedure to reach a balance between good quality and appropriate quantity of students.
- The success rate of students after one year and two years is high.
- Staff is well qualified content-wise. One third has a teaching qualification.
- The programme offers a range of career-oriented extra-curricular activities.

#### *Assessment*

- All competencies of the intended learning outcomes are tested throughout the curriculum.
- The master thesis evaluation form is adequate and contains clear indications how to arrive at the final score. Some assessors are using the form in an effective way to provide an insightful motivation of their scores, but this is not systematic across all assessors.
- Some comments in the thesis sample seem to indicate that the role of the supervisor in the thesis trajectory is not particularly strong. Certain flaws reported in the evaluation are correct, but could/should have been anticipated by the supervisor.

#### *Achieved learning outcomes*

- The sample of theses reviewed indicates that the level is sufficient. In several cases the scoring was somewhat overrated.
- Some theses are based on a limited number of interviews or on analysis of student data. The programme may want to encourage students to also collect real data for their thesis as this may become part of their job afterwards.
- Based on different sources, the programme follows actively where graduates end up.

## 18. MSc Supply Chain Management

#### *Intended learning outcomes*

- The competencies described in the intended learning outcomes are adequate.
- The programme is benchmarked against similar MSc degrees in the Netherlands and abroad. In comparison it has an explicit inter-disciplinary focus; realism and pragmatism are key points of attention in the attitudes to be achieved.

#### *Teaching and learning environment*

- The programme features two entry moments with their own clearly specified curriculum set-up. However, the learning line is more coherent in the September entry.
- All students of the respective September and February entries take the same curriculum.
- The educational approach combines research-based and research-driven teaching, qualitatively solid education and a broad social orientation.
- Roughly half of the student population are TiSEM bachelor graduates; about one third entered through a pre-master and about 15% comes from another university. International students



account for 15%. The number of students is growing strongly, mostly from an increasing number of pre-master students entering the program.

- The success rate of students after both one year and two years is high.
- The growth in student numbers affects the class size and impacts negatively on the teaching load of the rather limited number of teaching staff available.
- The academic quality of the staff is good.
- The programme offers a broad range of career-related extra-curricular activities, among others in cooperation with TiSEM Career Services and the study association Asset Strategy and Logistics.

#### *Assessment*

- The assessment system and the assessment plan are fine. All competencies of the intended learning outcomes are tested throughout the curriculum.
- The master thesis evaluation form is adequate and contains clear indications how to arrive at the final score. Some assessors – not all – are using the form in an effective way to provide an insightful motivation of their scores.

#### *Achieved learning outcomes*

- The sample of theses indicates that the level is sufficient and most scores are correct.
- The expert who studied theses of this program felt that some theses were based on a limited number of interviews or on analysis of student data. According to the program director, all theses are based on real data. This is necessary, because students have to be prepared to their future jobs in which they are expected to be skilled in collecting real data from real companies.
- Based on different sources, the programme follows-up actively where graduates end up. SCM students tend to find a proper job relatively quickly upon graduating. As students can write a thesis in a company, some even have a job before they finish the programme.

## 19. MSc Tax Economics (Fiscale Economie)

#### *Intended learning outcomes*

- The programme aims to provide students with a broad academic background in the field of tax economics. It is not clear to what extent this economics-related objective aligns with the profile of the graduate and the demands of the labour market: the TE graduate is not a proper economist nor a lawyer, but often ends up in a fiscal-legal environment. During the site visit, the panel learnt from graduates of the programme that the knowledge and skills that had acquired were in line with the requirements of the labour market.
- The competencies to be achieved in the intended learning outcomes are ambitious.

#### *Teaching and learning environment*

- The programme consists of a regular curriculum and a specialisation track in indirect taxes; in the latter, TiSEM co-operates with other Dutch universities.
- While the programme studies the Dutch taxation system, it also pays substantial attention to international developments in courses, notably in a separate course on international and EU developments and in the option to write a thesis as part of international graduation projects.
- The success rate of students finishing the programme in two years is well below average. This is reportedly due to the optional extracurricular internship, but the programme may also want to check to what extent the intended learning outcomes are too ambitious.
- According to the report, topics for the master thesis are related to tax economic issues. The expert mentioned that the theses indeed concern actual fiscal issues, but most subjects (in the sample) cover fiscal-legal rather than fiscal-economic topics.
- The inflow of students is relatively stable; most are TiSEM graduates from the BSc Tax Economics. The second entry moment has increased the share of bachelor graduates who successfully passed the pre-master's programme.
- Teaching staff has a good academic reputation. However, one third of the staff is educated to Master's level and 31% has a teaching qualification.



### *Assessment*

- The assessment system is fine as it shows that all competencies of the intended learning outcomes are addressed and tested throughout the curriculum.
- The thesis evaluation form contains relevant criteria. Based on the sample of forms reviewed, this allows often for insightful and objective comments. However, from the sample it is not always clear if the second assessor made an independent assessment.

### *Achieved learning outcomes*

- The quality of the thesis sample is adequate and the scores are correct: theses with a higher score are indeed of better quality.
- Career perspectives of MSc TE graduates are excellent: they find a relevant job quickly and consider that the programme provided them with a good basis.
- The Fiscal Institute Tilburg has good contacts with the alumni association (De Tiende Penning), which in turn has close relations with the study association (Smeetskring).

# APPENDICES





## APPENDIX 1: CURRICULA VITAE OF THE MEMBERS OF THE ASSESSMENT PANEL

### AACSB-NVAO panel

**Prof. dr. Michael Powell (chair)** is professor emeritus of Organizational Studies and former pro vice chancellor (Business) at Griffith University (Australia). Previous to this appointment he held the position of dean of Griffith Business School, having joined Griffith in early 2005 from the University of Auckland. His portfolio includes leadership of the University's Business Group, and associated Research Centres and Academic Departments. He has also been president of the Australian Business Deans' Council, which represents university business schools across the country. He is also past chair of the Globally Responsible Leadership Initiative and is an invited member of the Continuous Improvement Review Committee of AACSB International. Professor Powell graduated from the University of Auckland with B Arts and M Arts (Hons) degrees in History, and with a PhD in Organisational Sociology from the University of Chicago. After an initial appointment at the University of North Carolina at Chapel Hill, Michael returned to New Zealand to take up a position at the University of Auckland Business School as Senior Lecturer in Organisation Studies. Subsequently, he was appointed associate professor of Public Sector Management, and then professor of Health Management before taking on the role of deputy dean of the Business School.

**Prof. dr. Bernard Ramanantsoa** holds an Engineering degree from the "Ecole Supérieure d'Aéronautique de Toulouse". He obtained a Post-graduate DEA degree in sociology in 1987 and also a Ph.D. in management sciences from Paris-Dauphine University in 1991, and a further DEA in the history of philosophy from Paris-1 University in 1993. He is Chevalier of the Legion of Honor. Initially lecturer at the "Ecole Supérieure d'Aéronautique" in 1971 and 1972, he became head of the Marketing Division, "Grandes Lignes" for the SNCF in 1972. A specialist on ethics and culture in the business place and himself advocate of an open-minded approach and a multi-cultural scope in the corporate world, he joined the HEC faculty in 1979 as professor of Business Strategy. He was head of HEC Paris from 1995 to 2015. He is currently administrator of ANVIE, member of the AACSB International Committee, member of the Advisory Board of ESADE (Barcelona, Spain), University of St-Gallen (Switzerland) and the School of Management of the University of Zhejiang (China). He is the author of numerous communications and publications in the field of business management. In particular, he received the Harvard Expansion Prize in 1989 for *Technologie et Stratégie d'entreprise* and the Prize from the Académie des Sciences Commerciales in 1983 for *Stratégie de l'Entreprise et Diversification*.

**Prof. dr. Josep Franch Bullich** has extensive teaching experience in various countries. He is expert in international marketing and global marketing, and his main area of specialization is brand management in multinational and global companies. He has also worked on subjects related to digital marketing and relationship marketing. He has published more than 50 case studies in the fields of marketing and international business. He has won the EFMD Case Writing Competition on three occasions (1999, 2001 and 2013) and also has three case writing awards at the North American Case Research Association (NACRA) Annual Conference (2004, 2010 and 2015). He regularly serves as a track chair in several case conferences and as a reviewer for different case journals and case collections, he sits on the Editorial Board of the *Case Research Journal* and *Wine Business Case Research Journal* and is one of the co-editors of the *Global Jesuit Case Series*. He regularly delivers sessions on how to write and teach with case studies, both at ESADE as well as for other programmes including the International Teachers Programme (ITP). He has previous experience as marketing manager at Fuji Film and has worked as consultant for different companies, including FC Barcelona, Interroll, Novartis, Soler & Palau, Sony and Xerox. He has also worked in many in-company training programs with different companies including: APM Terminals, Bunge, Desigual, Esteve, Novartis, Roca, Roland DG, Saint-Gobain, Sony, Telefónica and Tenaris.



**Prof. dr. Henri L.F. de Groot** is professor of Regional Economic Dynamics at Vrije Universiteit Amsterdam in the department of Spatial Economics since May 2010 (sponsored by Ecorys NEI). His research focuses on regional and urban economics, agglomeration, meta-analysis, empirics of economic growth, trade and development, and environmental and energy economics. He teaches courses in Economics of Globalization, Microeconomics, Regional and Urban Economics (at Bachelor, Master and MPhil level), and Meta-analysis and the Empirics of Economic Growth (at the Ph.D. level). Also, he is programme director of the BSc Economics and Business Economics and crown-appointed member of the Social and Economic Council of the Netherlands (SER).

**Jeroen Moonemans** is master student in International Business, specializing in Controlling, at the School of Business and Economics of Maastricht University. He is chairman of the Student Council, member of the Faculty Council and student advisor in the Faculty Board.

## Thesis panel

**Prof. dr. Ivo Arnold** is part-time professor of Economic Education at the Erasmus School of Education, Erasmus University Rotterdam. He also fulfils the function of vice dean and works as programme director at ESE, responsible for designing, implementing and evaluating major educational reforms. His research at the Erasmus University Rotterdam focuses on the effectiveness and efficiency of the educational structure and the identification of best practices in (economic) education. He is a member of the Erasmus Research Institute of Management (ERIM). Professor Arnold is also professor of Monetary Economics at Nyenrode Business University. At Nyenrode Business University professor Arnold is chairman of the Nyenrode Research Council. His research interests are European monetary and financial integration, financial intermediation and economics education. His writings have been published in international journals including *The Journal of Banking and Finance*, *The Journal of International Money and Finance*, *International Finance*, *The European Journal of Political Economy* and *The Review of World Economics*. He has been a member of several accreditation or evaluation committees.

**Prof. dr. Egon Berghout** is parttime professor of Business & ICT at the University of Groningen. His research interests cover the entire field of Information Management, Information Systems and philosophy in general. At the University of Groningen he coordinates the Business & ICT curriculum within the various Bachelor and Master Programs. He is also chair of Information Systems at the University of Groningen and independent Board Advisor. As advisor, he helps organizations to create sustainable strategic advantage through IT. He is also president of the Benelux Chapter of the Association for Information Systems (AIS) and chartered IT Auditor. Professor Berghout received his PhD from Delft University of Technology, an Executive Master's degree in IT Auditing from Erasmus University and his MSc (Economics & Information Management) from Tilburg University. In executive education professor Berghout is associated to the University of Groningen's Executive Controllers Program, TIAS Business School and the Erasmus School of Accounting & Assurance (ESAA). His specialisations concern the economic aspects of information technology and its management & control.

**Dr. Martine Cools** is professor in Accounting at the KU Leuven (Belgium) and research fellow at the research unit Accountancy, Finance and Insurance. She also teaches courses in Accounting for the MBA programme Flanders Business School of the KU Leuven. Previously, she worked as a research associate and assistant professor in the department of Financial Management of the Rotterdam School of Management (RSM), Erasmus University Rotterdam. She has published numerous works in (academic) journals. In 2010 she received the American Accounting Association's JMAR best paper award 2010 for the article 'Tax-compliant transfer pricing and responsibility accounting' in *the Journal of Management Accounting Research*. She is a member of the editorial boards of, among others, *Advances in Management Accounting*, *Qualitative Research in Accounting and Management* and the *Journal of accounting & organizational change*.



**Prof. dr. Marc Deloof** is a full professor of Corporate Finance at the University of Antwerp. From 2012 to 2015 he was also Head of the Department of Accounting and Finance. Prior to joining the University of Antwerp in 2000, he was a Post-Doctoral Research Fellow of the Flemish Fund for Scientific Research (FWO) after receiving his PhD from the Free University of Brussels in 1996. He was also Visiting Professor at the Hull University Business School, the University of Calabria and the University of International Business and Economics in Beijing, and held part-time positions at the Louvain School of Management, the Vlerick Business School, Ghent University, and Hasselt University. His research covers a wide range of topics in entrepreneurial finance, (multinational) business group finance and financial history. He has published over 40 articles in refereed academic journals in the fields of finance, accounting, management and history, such as the *Journal of Corporate Finance*, *Journal of Banking and Finance*, *Financial Management*, *Review of Accounting Studies*, *Journal of Business Finance and Accounting*, *Small Business Economics*, *Family Business Review*, *Corporate Governance – An International Review*, *Journal of Economic History* and *Explorations in Economic History*. He is a guest editor of a special issue of the *Journal of Banking and Finance*. He has been the supervisor of eight completed PhD dissertations, and has additionally served on 37 doctoral dissertation committees at 14 different universities.

**Prof. dr. Ed Nijssen** is a professor of Technology Marketing at the Innovation, Technology Entrepreneurship and Marketing group of the School of Industrial Engineering, Eindhoven University of Technology and holds a PhD from Tilburg University. He also served two terms on the Executive Committee of the European Marketing Academy. His research interest focuses on marketing and innovation (e.g., adoption of new products, NPD tools, self-service technologies, social media), sales research, service research (innovation in the front line, servitization), marketing strategy, and international marketing. He has published in among others the *International Journal of Research in Marketing*, the *Journal of International Marketing* and the *Journal of Product Innovation Management* and he is the author of several books, including *Marketing Strategy*, and *Entrepreneurial Marketing, an effectual approach*. A many-times “teacher of the year” award winner, he received prizes for several of his articles, including for best managerial paper (global branding), highly recommended paper (private label strategy; self-service technology adoption) and most excellent paper (cautionary note on use of scales in cross cultural research). He is on the review boards of *Industrial Marketing Management* and *Journal of Product Innovation Management*. He is also active in accreditation committees for NVAO/VLUHR, as consultant, and as a professional trainer in executive education.

**Mr. dr. Sjaak Jansen** was professor in Tax Law at the Faculty of Law of the Erasmus University Rotterdam from 1999 until 2012. Since 2010 he works for the Council of State. He is chair of the editorial board of the *Journal of Tax Law (Weekblad voor Fiscaal Recht)* and a member of the editorial board of the Dutch series *Belastingwijzers*.





## APPENDIX 2: DOMAIN-SPECIFIC FRAMEWORK OF REFERENCE

### A. DOMAIN-SPECIFIC REFERENCE FRAMEWORK FOR THE ECONOMICS DISCIPLINE

#### 1. Introduction and benchmark

A domain-specific Economics benchmark for 2009 was created in order to assess the standard of all BSc and MSc degree programs at Dutch universities that fall within the scope of the Economics 2009 cluster. The benchmark outlines the minimum requirements for academic degree programs in the Economics field or subfield. Because of the diversity of degree programs within the cluster, it was decided that the benchmark should not be prescriptive. The benchmark thus offers degree programs the latitude to develop their own profiles, giving variable weight to specific aspects of the programs depending on the central aims and the approach taken. This framework requires degree programs to justify the choices made by proving that they meet the criteria of the NVAO accreditation framework. Explicit references to the domain-specific Economics benchmark for 2009 can be used to explain deviations.

#### 2. Economics as a discipline

Economics is the social science that analyses the production and distribution of scarce resources. Many economists study the factors which drive agents to act in markets and within organizations. Such analyses focus on the important role played by the allocation of scarce production factors and the impact this has on the prosperity of society as a whole. General economics takes a primarily social perspective, whereas business economics goes deeper into the various business processes. Another key focus area is the study of business process management. Methodology is another important aspect of this domain: this is where subjects such as decision-making, econometrics and mathematics come into play.

#### 3. Aims, level and orientation of the degree programs

In general, the committee expects the aims of the degree programs to express the fact that they aim to train students both in the chosen discipline (i.e. in relation to the field in question) and academically. This means that students should gain knowledge and understanding of the field and acquire both relevant subject-related and general academic skills. Hence the programs emphasize the characteristics and value of academic research, the importance of knowledge and understanding of theory and methodology, and the relative nature of interpretations; they also offer a framework within which students can learn to apply that knowledge and understanding appropriately.

A BSc degree program offers a broad, general education to an elementary academic standard. Students who have completed a BSc degree meet the criteria for entry to an MSc degree program. An MSc program offers the opportunity to go deeper into a particular field, subfield or combination of subfields than is possible in a BSc program. An MSc program also focuses more on the future working environment, for instance research institutes, government institutions or the business world.

The various degree programs also prepare students for careers in society at large, where the knowledge and skills gained during their studies may be put to use. Generally speaking, this is not so much a case of preparation for specific career paths; rather, it is about acquiring an academic attitude and a box of academic tools. These should dovetail with the expectations society has of graduates of the degree programs assessed in the context of the Economics 2009 assessment. This means that the degree programs highlight both academic and social aspects and do not merely concentrate on current developments within the field of study. The BSc degree program is the cornerstone of the development of a general academic way of thinking. During this period students learn not only to cast the net further than their own subfield; they also learn to view subject-specific issues in a wider social context. Considering the importance of the BSc degree program for the development of academic skills, facilities to prepare students with a BSc degree in Higher Professional Education to transfer to a university MSc degree must concentrate on developing an academic way of thinking. This covers issues such as bolstering students' understanding of the relationship between



the various fields of knowledge, familiarizing them with research methods and applying those methods in practice, and learning to take the time to consider the results of their own or other's research.

#### **4. Skills**

##### **a. Subject-specific skills**

The skills acquired by students on an Economics degree program depend on the subfield and specialization of the program in question. A degree program referred to as 'Economics' must give students a coherent understanding of economic concepts that goes further than an 'Introduction to...' course. These concepts encompass general economics (for example macroeconomics, microeconomics, public sector economics and international economics), business economics (for example reporting, finance, marketing, organization, information science and strategy) and the methodological subjects (mainly statistics and mathematics). Methodological courses are by definition core parts of the Econometrics and Decision-making field.

A BSc degree program provides students with the basic tools needed to study one or more disciplines in depth. The subject-specific skills of students on MSc degree programs build on the skills they acquired in the BSc degree program. In the spirit of the Treaty of Bologna, and given the increasing international character of degree programs, quality standards must be as 'international' as possible.

##### *Use of proper terminology*

Students on a BSc degree program learn how to use their knowledge when confronted with a relatively straightforward economics problem in the realm of business or public policy.

They must also be able to put what they've learned into perspective. For instance, this can be achieved by comparing one theory with another, or by confronting economics concepts with approaches from other relevant fields. Students with a BSc degree in Economics will have acquired the following skills:

- Reproduction and interpretation – graduates can reproduce conceptual and methodological principles of economics, and can discuss them with colleagues.
- Analysis and explanation – graduates can analyze and explain phenomena and problems using the conceptual and methodological principles of economics.

Graduates of an MSc degree program in Economics meet the following profile:

- Graduates are able to work independently, and can formulate relevant research questions themselves and draft a plan of action in justification. This includes sourcing and using relevant subject-specific literature, and plugging any gaps there may be in the knowledge required to answer the research question.
- Graduates are able to read and understand recent articles from journals and relevant sections of renowned academic publications and put their own research question in the context of existing literature.
- Graduates should also be able to analyze variations on existing models to some extent.

##### *The ability to make a contribution to the development of the field by means of research*

Graduates of a BSc degree program can collect, collate and interpret relevant insights gleaned from literature in the field. Research in the MSc degree program focuses much more on testing and developing theories. Graduates of an MSc degree program in Economics should have the following skills in this respect:

- Formulation of aim and problem definition – graduates can formulate a problem definition relating to economics based on academic concepts and theories.
- Choice of research design – graduates can choose a research design that suits the problem definition.
- Selection of methods for collecting and processing data – graduates can choose one or more suitable methods for collecting and processing data.
- Drawing conclusions – graduates can make pronouncements about the initial problem definition on the basis of the results.

*The ability to develop policy from knowledge and understanding gleaned from the field*

At the level of a BSc degree, the opportunities for developing policy are limited to the formulation of a plan of action for one specific problem. At the level of an MSc degree program, however, more attention should be paid to the wider context, whether that be in relation to business or public policy. Graduates of an MSc degree program in Economics should have the following skills in this respect:

- Drafting policy advice documents – graduates can draw up a proposal for solving economics problems, based on economics concepts and theories.
- Strategic activities – graduates are able to assess whether their policy recommendations are feasible and practical.

**b. General skills**

General skills comprise knowledge, skills and attitudes which, although they are developed within the context of a degree program, are not a specific product of the program in question. These general academic skills form the basis for later academic thinking patterns and attitudes. The fact that many degree program – even those in the field of economics – are not specifically tailored to the requirements of the job market means that many students soon find themselves working in jobs that make no demands on their know-how in the field.

The following three subject-specific skills in particular contribute to the desired general skills: the hypothetical-deductive nature of economics, the different decision-making methodologies and the importance attached to empirical research.

The committee expects the learning outcomes of all the BSc degree programs it assesses to communicate the fact, either implicitly or explicitly, that graduates have acquired academic, research and communicative skills to a basic standard. In addition, it expects the learning outcomes to be related to the admission requirements of at least one MSc degree program and, where applicable, the professional sphere. The committee expects the learning outcomes of all the MSc degree programs it assesses to communicate the fact that graduates have developed academic, research and communicative skills to an advanced level, and that these learning outcomes have a bearing on the professional sphere.

*Academic skills*

- Graduates of BSc degree programs have the skills needed to devise and sustain arguments and to solve problems within the field of study. Graduates of MSc degree programs are able to apply the same skills to new or unfamiliar circumstances within a wider, or multidisciplinary, context within the field of study.
- Graduates of BSc degree programs have a general understanding of the nature and function of academic research. Graduates of MSc degree programs have an in-depth knowledge of their subject.
- Graduates of BSc degree programs are able to collect and interpret relevant information from a range of sources and subfields. Graduates of MSc degree programs are able to assimilate knowledge and deal with complex subject matter.
- Graduates of BSc degree programs are able to form an opinion that is at least partly based on a comparative assessment of relevant social, scientific or ethical aspects. Graduates of MSc degree programs are able to form an opinion based on incomplete or limited information, taking into account the aforementioned aspects when applying their own knowledge and judgement.
- Graduates of BSc degree programs are able to work independently under supervision and as part of a team. Graduates of MSc degree programs are able to work both independently and as part of a multidisciplinary team.

*Research Skills*

- Graduates of BSc degree programs are, under supervision, able to set up and carry out a modest literature search or other research on a limited scale that has a reasonable and realistic program. Graduates of MSc degree programs are able independently to set up and carry out an academic research project that meets the requirements of the field of study.



- Graduates of MSc degree programs have a thorough understanding of the relevant research methods and techniques in the field of study. Graduates of BSc degree programs have a passive understanding of all these methods, and an active understanding of some of them.

#### *Communication Skills*

- Graduates of BSc degree programs are able to communicate information, ideas and solutions to both specialist and non-specialist audiences. Graduates of MSc degree programs are able to draw conclusions and use their knowledge, understanding, motivation and considered reasoning to substantiate these conclusions and convey them to similar audiences.
- Graduates of BSc degree programs are able to summarize the results of research on a limited scale orally or in writing, in a way that is clear and precise. Graduates of MSc degree programs are able to do the same for research where the scope and complexity matches the level of the degree program.

#### *Relationship with the professional sphere*

The learning outcomes are tailored to the expectations of future employers, regardless of diversity or otherwise.

- Graduates have the necessary skills to perform work in which an academic education to BSc level or MSc level is required or preferred.
- Graduates of BSc degree programs are aware of the possible relevance and use of academic insights in their field of study in relation to social issues and needs. Graduates of MSc degree programs are able to make a considered judgement on the possible relevance or use of academic insights within their field of study in relation to social issues and needs.
- Graduates will have been able to consider the options for possible future work at the appropriate level.

#### *Learning environment*

A salient feature of academic degree programs is that they encourage students to do things that enrich their academic experience. Stimulating independence and allowing students to work in teams without undue external influence are important in this regard.

## **B. DOMAIN-SPECIFIC REFERENCE FRAMEWORK FOR THE BUSINESS DISCIPLINE**

December 2011

### **1. The Business discipline**

Business programmes focus on the interdisciplinary study of organizations with respect to their internal processes as well as their interaction with their environment. Due to its broad nature, a precise definition of Business as an academic discipline is difficult to give. Academic Business programmes emphasize research, analysis and reflection and do not offer specialized professional training.

Business students study the complex and dynamic functioning of organizations in its broadest sense. The aim is to understand how the various activities within an organization contribute to achieving the organization's goals, and how these activities may be managed to increase this contribution. The Business discipline does not differentiate between for-profit and not-for-profit organizations, as commercial, governmental, voluntary and international organizations are all object of study.

Students will encounter sub-disciplines such as Marketing, Strategy, Human Resources Management, Organization Behaviour, Business Ethics, Information Management, Accounting, Finance, Economics, International Management, Logistics, Business Law and Entrepreneurship. The common theme underlying all these sub-disciplines is a link with organizational activities and change. Business students distinguish themselves through their ability to integrate two or more disciplines, to tackle organizational problems and to understand and participate in organizational change processes.



Due to the broad nature of this multidisciplinary field, Business programmes will differ in the emphasis on each of the disciplines, since they cannot all be covered to the same extent. For example, programmes may profile and position themselves as an economics programme, a social sciences programme, or a technical programme. Also, programmes may focus more on understanding organizational processes or on designing interventions to improve these processes.

The relevance of the programmes follows from a reference frame consisting of the business and management practice, programmes offered by schools and universities which are internationally recognized as being of high quality, and academic research communities. There is a number of international accreditation bodies that focus on the business field (e.g., EQUIS, AACSB) whose activities help in identifying good programmes. However, these bodies typically refrain from meeting discipline-specific learning outcomes as part of their accreditation, which is a reflection of the broad nature of the field. As such, individual programmes will emphasize different aspects within the general reference frame.

The broad nature of business and management professions implies that many students soon find themselves working in jobs that make demands on know-how beyond their specialization. In this respect, it is imperative that BSc degree programmes provide their graduates with acquired academic, research and communicative skills to a basic standard. In addition, the learning outcomes need to be related to the admission requirements of at least one MSc degree programme and, where applicable, the professional sphere. Additionally, the MSc degree programmes provide graduates with academic, research and communicative skills to an advanced level and graduates are able to link these learning outcomes to the professional sphere.

## **2. Aims, level and orientation of the degree programmes**

The degree programmes aim to train students both in the chosen discipline (i.e. in relation to the field of practice) and academically. This means that students should gain knowledge and understanding of the field and acquire both relevant subject-related and general academic skills. Hence the programmes emphasize the characteristics and value of academic research, the importance of knowledge and understanding of theory and methodology, and the relative nature of interpretations; they also offer a framework within which students can learn to apply that knowledge and understanding appropriately.

A BSc degree programme offers a broad, general education to an elementary academic standard. Students who have completed a BSc degree meet the criteria for entry to an MSc degree programme. An MSc programme offers the opportunity to go deeper into a particular field, subfield or combination of subfields than is possible in a BSc programme. The various degree programmes also prepare students for careers in society at large, where the knowledge and skills gained during their studies may be put to use. Generally speaking, this is not so much a case of preparation for specific career paths; rather, it is about acquiring an academic attitude and a box of academic tools.

## **3. Subject-specific skills**

The skills acquired by students on a degree programme depend on the subfield and specialization of the programme in question. Thus, the content-related exit qualifications depend on the specific choices made by the student. However, in general, students on a BSc degree programme learn how to use their knowledge when confronted with a relatively straightforward problem in the realm of business or public policy. They must also be able to put what they've learned into perspective. For instance, this can be achieved by comparing one theory with another, or by confronting disciplinary concepts (e.g. from psychology) with approaches from other disciplines (e.g. from economics).

Students with a BSc degree in Business will have acquired the following skills:

- Reproduction and interpretation – graduates can reproduce conceptual and methodological principles of business, and can discuss them with colleagues.



- Analysis and explanation – graduates can analyse and explain phenomena and problems in various sub-disciplines of business using the conceptual and methodological principles of the disciplines.

Graduates of an MSc degree programme in Business meet the following profile:

- Graduates are able to work independently, and can formulate relevant research questions themselves and draft a plan of action in justification. This includes sourcing and using relevant subject-specific literature, and plugging any gaps there may be in the knowledge required to answer the research question.
- Graduates are able to read and understand recent articles from journals and relevant sections of renowned academic publications and put their own research question in the context of existing literature.
- Graduates should also be able to analyse variations on existing models to some extent.

#### **4. General skills**

##### *General academic skills*

- Graduates of BSc degree programmes have the skills needed to devise and sustain arguments and to solve problems within the field of study. Graduates of MSc degree programmes are able to apply the same skills to new or unfamiliar circumstances within a wider, or multidisciplinary, context within the field of study.
- Graduates of BSc degree programmes have a general understanding of the nature and function of academic research. Graduates of MSc degree programmes have an in-depth knowledge of their subject.
- Graduates of BSc degree programmes are able to collect and interpret relevant information from a range of sources and subfields. Graduates of MSc degree programmes are able to assimilate knowledge and deal with complex subject matter.
- Graduates of BSc degree programmes are able to form an opinion that is at least partly based on a comparative assessment of relevant social, scientific or ethical aspects. Graduates of MSc degree programmes are able to form an opinion based on incomplete or limited information, taking into account the aforementioned aspects when applying their own knowledge and judgement.
- Graduates of BSc degree programmes are able to work independently under supervision and as part of a team. Graduates of MSc degree programmes are able to work both independently and as part of a multidisciplinary team.

##### *Research skills*

- Graduates of BSc degree programmes are, under supervision, able to set up and carry out a modest literature search or other research on a limited scale that has a reasonable and realistic programme. Graduates of MSc degree programmes are able independently to set up and carry out an academic research project that meets the requirements of the field of study.
- Graduates of MSc degree programmes have a thorough understanding of the relevant research methods and techniques in the field of study. Graduates of BSc degree programmes have a passive understanding of all these methods, and an active understanding of some of them.

##### *Communication skills*

- Graduates of BSc degree programmes are able to communicate information, ideas and solutions to both specialist and non-specialist audiences. Graduates of MSc degree programmes are able to draw conclusions and use their knowledge, understanding, motivation and considered reasoning to substantiate these conclusions and convey them to similar audiences.
- Graduates of BSc degree programmes are able to summarize the results of research on a limited scale orally or in writing, in a way that is clear and precise. Graduates of MSc degree programmes are able to do the same for research where the scope and complexity matches the level of the degree programme.

#### *Relationship with the professional sphere*

The learning outcomes are tailored to the expectations of future employers, regardless of diversity or otherwise.

- Graduates have the necessary skills to perform work in which an academic education to BSc level or MSc level is required or preferred.
- Graduates of BSc degree programmes are aware of the possible relevance and use of academic insights in their field of study in relation to social issues and needs. Graduates of MSc degree programmes are able to make a considered judgement on the possible relevance or use of academic insights within their field of study in relation to social issues and needs.
- Graduates will have been able to consider the options for possible future work at the appropriate level.

#### *Learning environment*

A salient feature of academic degree programmes is that they encourage students to do things that enrich their academic experience. Stimulating independence and allowing students to work in teams without undue external influence are important in this regard.





## APPENDIX 3: INTENDED LEARNING OUTCOMES

### 1. BSc in Business Economics

#### Knowledge

Graduates of the BSc program in Business Economics have:

- Knowledge and understanding of scientific thinking, important theories, facts, and principles within the disciplines of business economics: Accounting, Finance, Management, and Marketing (K1);
- Knowledge and understanding of the basic principles and techniques of the related disciplines of Business Economics (Microeconomics, Macroeconomics, Tax Economics, and Company Law), to the extent that they are relevant and applicable to business-related questions (K2);
- Knowledge and understanding of the dynamics in professional practice, based on the disciplines, as mentioned in K1 and K2 (K3);
- Knowledge and understanding of relevant research methods and techniques in order to solve complex problems in a scientific and societal context, both now and in the future (K4).

#### Skills

Graduates of the BSc program in Business Economics have the skills necessary in order to:

- Communicate effectively, both orally and in writing (S1);
- Work systematically (S2);
- Cooperate with peers (S3);
- Reflect critically on their own work and that of others (S4);
- Analyze cases from professional practice using theories from the disciplines of business economics (Accounting, Finance, Management, and Marketing) and suggest well-argued solutions (S5);
- Build consistent argumentation based on academic or semi-academic articles (S6);
- Set up and conduct business-related research in an academic manner (S7).

#### Attitudes

Graduates of the BSc program in Business Economics:

- Are open to change and to the opinions of others (A1);
- Are curious about all aspects of a business and its interaction with the environment (A2);
- Have their own opinions and critical attitudes toward information, including research information (A3);
- Take responsibility for their own work and teamwork (A4);
- Are able to reflect from an ethical and philosophical perspective on business economics (A5);
- Are interested in current developments within the field of business economics (A6);
- Have insight into their own qualities and interests, and are able to translate this insight into well-considered choices (with regard to further education) (A7).

### 2. BSc in Econometrics and Operation Research

#### Knowledge

Graduates of the BSc in Econometrics and Operations Research have:

- Basic knowledge of econometrics, operations research, mathematical economics, quantitative finance, and actuarial science (K1);
- Knowledge of mathematical analysis, algebra, probability theory, statistics, and optimization, particularly with regard to developing and analyzing models in the fields of business administration and economics (K2).



### **Skills**

Graduates of the BSc Econometrics and Operations Research are able to:

- Follow and apply a strictly model-oriented method (S1);
- Use relevant computer software and become familiar with new programs (S2);
- Write and present assignments and articles concisely for specialized or non-specialized audiences (S3);
- Solve practical problems in the areas of econometrics, operations research, mathematical economics, quantitative finance, actuarial science with quantitative models, and/or basic scientific literature (S4);
- Explain the basic scientific literature in the field of Econometrics and Operations Research (as well as the connections therein) and, under supervision, create modest extensions to models in this literature (S5).

### **Attitudes**

Graduates of the BSc in Econometrics and Operations Research have the attitudes needed in order to:

- Be eager to study and solve both practical and theoretical decision problems by using quantitative approaches (A1);
- Reflect critically 'on their own work and that of others, paying attention to both logical coherence (with the attitude of a mathematician) and its relevance in business administration and economics (A2);
- Be motivated to continue learning and take up new challenges (A3);
- Take responsibility for individual and group work, while being open to different opinions (A4);
- Be willing to share knowledge and use it for the public good (A5);
- Believe that individuals, companies, governments, and organizations should operate in an ethically accepted manner (A6).

## **3. BSc in Economics**

### **Knowledge**

Upon successful completion of the BSc program in Economics, graduates have knowledge of:

- The main concepts, facts, and models and their interrelationships in the areas of microeconomics and macroeconomics (K1);
- The application of microeconomics and macroeconomics in the international context of development economics, economic growth, industrial economics, information economics, international trade, and public sector economics (K2);
- Specialized topics linked to contemporary economic research areas (K3);
- The basics of international accounting and finance (K4);
- Quantitative tools and methods relevant for economic research (K5).

### **Skills**

Upon successful completion of the BSc program in Economics, graduates are able to:

- Evaluate the main features of national and international economic events analytically and critically (S1);
- Give meaning to economic papers and reports (S2);
- Formulate policy advice based on economic research (S3);
- Conduct scientific research using the basic tools and methods in economic research (S4);
- Work effectively with actors from different cultural backgrounds to achieve formulated objectives (S5);
- Inform others by means of a written report about findings, ideas, conclusions, and/or recommendations in English (S6);
- Give a clear presentation in English (S7);
- Start up, plan, conduct and complete (individual) assignments (S8).



### **Attitude**

Upon successful completion of the BSc program in Economics, graduates have an attitude characterized by:

- A critical mind with respect to information received, their own opinions and those of others (A1);
- Appreciation of cultural differences (A2);
- Continuous curiosity with regard to national and international economic developments and the eagerness to investigate them (A3);
- Willingness to formulate their own opinions based on analytical thinking and a valid assessment of their own abilities and the boundaries of the field (A4);
- Willingness to share knowledge and use it for the public good (A5);
- Willingness to view the field of economics from a philosophical point of view (A6);
- The belief that individuals, companies, governments, and organizations should operate in an ethically acceptable manner (A7).

## **4. BSc in Economics and Business Economics**

### **Knowledge**

Graduates of the BSc EBE have knowledge and understanding of:

- The main concept, models, quantitative tools, and their interrelationships in a) microeconomics, b) macroeconomics, c) business economics (K1);
- Specific knowledge domains not described in K1 (K2);
- One of the content areas taught in three specialized tracks: economics & society, financial economics, and commercial economics (K3);
- Quantitative methods of business analytics relevant for business-related and other economic research (K4).

### **Skills**

Graduates of the BSc EBE have the skills necessary in order to:

- Define societal challenges in economic terms (S1);
- Analyze cases for professional practice using theories from the disciplines of general economics (micro- and macroeconomics) and business economics (accounting, finance, management, and marketing), and suggesting well-argued solutions (S2);
- Set up and conduct business-related research in an academic manner (S3);
- Work systematically, both alone and in a group (S4);
- Cooperate with a diversity of colleagues and fellow students (S5);
- Learn from each other through feedback that is given and received (S6);
- Communicate and present ideas, findings, and opinions clearly and convincingly, both orally and in writing (S7).

### **Attitude**

Graduates of the BSc EBE have attitudes that can be considered:

- Critically reflective, with an open mind for alternative points of view (A1);
- Analytical, and therefore willing and able to take on complex problems with modern business analytics (A2);
- Realistic regarding their own capacities and the possibilities (or impossibilities) within their specific fields of expertise (A3);
- Open to shifting between assignments, projects, and points of view (A4);
- Interested and engaged in today's societal challenges (A5);
- Willing to reflect on business economics from an ethical and philosophical perspective (A6).



## 5. BSc in International Business Administration

### Knowledge

Graduates of the program in International Business Administration (IBA) have:

- Knowledge and understanding of scientific thinking, principles, facts, and dominant theories with respect to the business disciplines of accounting, finance, management, and marketing within an international environment (K1);
- Knowledge and understanding of cultural differences and knowledge about how to cope with these differences in international management (K2);
- Knowledge and understanding of the economic forces, actors, and legislation affecting the management of internationally operating firms (K3);
- Knowledge and understanding of the dynamic relationship between the business disciplines and the translation of this relationship to international practice (K4);
- Knowledge and understanding of widely accepted scientific research methods and techniques for solving complex managerial problems in the domain of international business (K5).

### Skills

Graduates of the IBA program are capable of:

- Working effectively with actors from different cultural backgrounds to achieve formulated objectives (S1);
- Negotiating effectively with actors in a multicultural setting (S2);
- Communicating and presenting ideas, findings, and opinions clearly and convincingly, both orally and in writing (S3);
- Solving international business cases based on relevant economic theories (S4);
- Conducting international business research (gathering, analyzing, interpreting, and presenting data and information) according to scientific principles (S5);
- Initiating, planning, conducting, and completing national and international projects according to the principles of project management (S6);
- Reflecting on their own work and results, as well as those of their peers (S7);
- Working systematically (S8).

### Attitude

Graduates of the IBA program have attitudes that are characterized by:

- Appreciation of cultural differences (A1);
- Eagerness to examine and learn about developments in the local and global environments of organizations (A2);
- Openness towards change and the opinion of others (A3);
- A critical mind with respect to information provided (A4);
- Taking responsibility for their own work and the work of groups (A5);
- Appreciation of the importance of companies acting in an ethically accepted manner (A6);
- Willingness to approach the field of international business from a philosophical point of view (A7).

## 6. BSc in Tax Economics

### Knowledge

A graduate of the BSc in Tax Economics has:

- A thorough knowledge of the national and relevant international systems of tax laws, particularly the principles of direct and indirect taxation (K1);
- Knowledge of and insight into the main areas of business economics, such as Accounting and Corporate Finance (K2);
- Knowledge of and insight into the main areas of general economics, such as Microeconomics, Macroeconomics and Public Finance (K3);

- Knowledge of and insight into the main areas of law, particularly matrimonial property law, inheritance law, property law, constitutional law and administrative law (K4);
- Knowledge of and insight into the relevant research methods and techniques to solve tax and economic problems – now and in the future – in a scientific manner within the relevant social context (K5).

### **Skills**

A graduate of the BSc in Tax Economics has the ability to:

- Classify, clearly articulate, analyze and critically assess problems of tax economics, possibly involving different academic disciplines (S1);
- Analyze problems of tax law involving different jurisdictions, drawing a clear distinction between main and subsidiary issues (S2);
- Identify connections and relationships with other disciplines (S3);
- Communicate and collaborate effectively with peers orally and in writing (S4);
- Handle the flow of information on current tax issues in society (S5);
- Set up and conduct demarcated research into tax economics in an academically responsible manner (S6).

### **Attitude**

A graduate of the BSc in Tax Economics:

- Follows the relevant tax developments in society (through professional literature and media) (A1);
- Has the analytical attitude required to investigate issues of tax economics in a critical manner (A2);
- Is constantly searching for solutions to issues of tax economics in a context of business, economics and law (A3);
- Is prepared to take responsibility for choices and assessments in matters of tax economics (A4);
- Is prepared to collaborate with students from different and possibly related study programs (A5);
- Is able to view the field of tax economics from an ethical and philosophical perspective (A6).

## **7. MSc in Accountancy**

### **Knowledge**

A graduate of the MSc in Accountancy has knowledge of:

- The demand for and supply of forms of accounting (e.g., auditing, standard setting process, the quality of financial reporting) (K1);
- Accounting and its importance to external stakeholders (e.g., investors, banks) and internal stakeholders (e.g., improving the quality of managerial decision making) (K2);
- Recent developments in tools and methods used in the fields of management accounting, control, and auditing (K3);
- Relevant theories, quantitative models, methods and techniques in accounting and related fields (e.g., corporate finance) (K4);
- Financial accounting standards, as developed by the International Accounting Standards Board (IASB), and insight into the principles that underlie these standards (K5).

### **Skills**

A graduate of the MSc in Accountancy is able to:

- Identify and analyze (i.e., cause and effect) breaches in a firm's accounting system and propose workable solutions (S1);
- Apply theory in practice; i.e., knowing how to link practical, real-life economic problems and specialist knowledge (S2);
- Read, understand, and explain academic papers on accounting and related fields (e.g., corporate finance) (S3);
- Understand, evaluate, and apply analytical and research methods and techniques (S4);



- Write and present (audit, review, consulting) reports and articles (S5).

### **Attitude**

A graduate of the MSc in Accountancy can:

- Identify professional values (e.g., integrity, objectivity, independence, professional skepticism, due care) and the attitudes and behavior that are consistent with these values (A1);
- Study and solve both practical and scientific problems, making use of scientific approaches and methods, while remaining receptive to the ideas and opinions of others (A2);
- Take up new challenges, and inspire others to take up these challenges (A3);
- Judge his or her own and others' work in a critical light, both in terms of logical coherence and in terms of economic relevance (A4);
- Embrace the concept of continuous learning, in order to update knowledge and skills required in the ever-changing landscape of accounting and related fields (e.g., corporate finance) (A5).

## 8. MSc in Econometrics and Mathematical Economics

### **Knowledge**

A graduate of the MSc in EME has:

- Advanced knowledge of econometrics and mathematical economics and their applications (K1);
- Knowledge of relevant economic notions and theories (K2);
- Advanced knowledge of mathematical and statistical methods and techniques (K3).

### **Skills**

A graduate of the MSc in EME is able to:

- Make a link between practical economic problems and specialized knowledge of econometrics and mathematical economics, in order to apply this knowledge in practice (S1);
- Use advanced mathematical and statistical models, methods and techniques to solve economic problems (S2);
- (Learn to) use and develop relevant computer software (S3);
- Comprehend, critically evaluate, and apply scientific literature in econometrics and mathematical economics and to do scientific research (S4);
- Summarize quantitative analyses and solutions of economic problems in written and oral presentations, and discuss the relevance/limitations of the models, methods and results both in quantitative and in qualitative terms (S5);
- Judge his/her own and others' work in a critical light, both in terms of logical coherence (with the attitude of a mathematician) and in terms of practical relevance (S6);
- Develop new methods and techniques to solve complex quantitative economic problems (S7).

### **Attitude**

Graduates of the MSc in EME:

- Are eager to study and solve both practical and theoretical economic problems by using or developing advanced quantitative approaches (A1);
- Are critical, both with respect to their own work and with respect to the work of others, and receptive to the ideas of others (A2);
- Are motivated to continue learning, take on new challenges, and entuse others for these challenges (A3).

## 9. MSc in Economics

### **Knowledge**

After completing the MSc in Economics program, a graduate will have acquired master-level knowledge of:

- Economic principles, concepts, and models (K1);
- The various research tools, methods and techniques used in the field, with a special emphasis on econometrics and formal modeling. (K2);
- The relevant empirical facts and institutions (K3);
- The boundaries of the field (K4)

in one or more of the following field-specific areas

- Money, Banking and Financial Markets
- Competition and Regulation
- Sustainability and Growth
- Pensions and Aging
- Public Policy
- Behavioral Economics

### **Skills**

After completing the MSc in Economics program, the graduate is able to:

- Make a positive analysis of (strategic) choices made by market participants and of the resulting outcomes, market failures and government failures, in both a static and a dynamic context (S1);
- Make a normative analysis of possible strategic responses to market developments, market failures and government failures, from the perspective of the different market participants (firms, households, governments, regulatory bodies) (S2);
- Understand economic (scientific) literature and extract conclusions for business and/or policy issues (S3);
- Conduct research into specific markets and market failures using quantitative tools (econometrics, formal modeling and/or experimental design) (S4);
- Reflect on theories discussed and properly evaluate the scientific quality of their own work as well as of work done by others (S5);
- Work independently and in a team (S6);
- Communicate the results of the analysis both on paper as well as orally to an audience of either experts or laypersons (S7).

### **Attitude**

After completing the MSc in Economics program, the graduate will be:

- Able to critically appraising theories and empirical evidence presented (A1);
- Keep abreast of the new developments in the field throughout their career (A2);
- Willing to give constructive criticism of the work of others, and to critically assess their own work (A3);
- Flexible enough to work in teams (A4).

## **10. MSc in Finance**

### **Knowledge**

A graduate of the MSc in Finance has knowledge of:

- Key academic concepts and frameworks in corporate finance (focus on the firm) and investment analysis (focus on the investor) (K1);
- Quantitative techniques to analyze practical problems both in corporate finance and investment analysis (K2);
- Current policy topics that affect the financial sector or non-financial firms through the financial sector (e.g., regulation of the banking sector, regulation of financial markets, pension sector, and rating agencies, caps on bonuses, bans on short sales in crisis times, bankruptcy law, tax policy) (K3).

### **Skills**

A graduate of the MSc in Finance has the ability to:



- Extract the main message of scientific finance literature (S1);
- Apply insights from the literature to formulate state-of-the-art solutions to real world finance problems (S2);
- Judge their own and others' work critically, both in terms of logical coherence (is it scientifically sound?) and in terms of economic relevance (is the solution practically useful/implementable?) (S3);
- Identify the main problem in complex situations with heterogeneous information or information overload (S4);
- Apply quantitative techniques, with the use of econometric/statistical software, to analyze financial data (S5);
- Summarize objectives, methods and results in written and oral presentations (S6);
- Cooperate/work together in teams (S7).

### **Attitude**

A graduate of the MSc in Finance:

- Is eager to study and solve practical financial problems with the help of scientifically sound tools (A1);
- Is critical, both with respect to their own work and to the work of others, and is open to the ideas of others (A2);
- Works independently, either individually or in small teams (A3);
- Is motivated to continue learning, take up new challenges, and inspire interest on the part of others in these challenges (A4).

The intended learning outcomes as described above apply to the general program and for the two tracks (CFA and Netspar). Students who follow the CFA track are well prepared to sit for the level 1 exam of the CFA institute. The Netspar track focuses on topics that are most relevant for the pension and insurance sectors.

## 11. MSc in Information Management

### **Knowledge**

Graduates of the MSc in Information Management have:

- Profound insight into the alignment of business and ICT for the purpose of optimizing the design, management and governance of organizations and networks of organizations (K1);
- Knowledge of methods for modelling and analyzing decision and data management processes (K2);
- Knowledge and understanding of how modern information systems can leverage business process performance and create competitive advantages (K3).

### **Skills**

Graduates of the MSc in Information Management can:

- Model and analyze decision and data management processes (S1) ;
- Assess the potential of ICT developments for business innovation (S2);
- Critically evaluate both industrial and scientific literature (S3);
- Analyze and solve practical problems in a scientifically sound way (S4);
- Give advice, both orally and in writing, on information management decisions to various stakeholders in the organization (S5);
- Work in teams and apply project management methods to ensure timely and concrete results (S6).

### **Attitude**

Graduates of the MSc in Information Management:

- Are eager to take up the challenges that result from rapid changes in technology and motivate others to do so too, while distinguishing 'hype' from genuine opportunities (A1);



- Have an open mind and towards other people and other professional cultures and are able to cope with uncertainty and change (A2);
- Strive for continuous improvement of themselves, the working environment and society as a whole (A3).

## 12. MSc in International Management

### Knowledge

Graduates of the MSc in IM have:

- Theoretical knowledge in the core management disciplines, including corporate social responsibility (K1);
- Knowledge of the main points of international communication (K2).

### Skills

Graduates of the MSc in IM are able to:

- Conduct research in the area of international management (S1);
- Translate academic research in the area of international management into practical recommendations (S2);
- Make professional and social responsible managerial decisions grounded in academic literature (S3);
- Provide advice to managers (S4);
- Work with others in an international environment (S5);
- Motivate other through written and spoken communication using convincing arguments (S6).

### Attitude

Graduates of the MSc in IM:

- Adopt a critical attitude towards theoretical and practical issues (A1);
- Are responsible and accountable with regard to their work and working environment (A2);
- Are perceptive and open-minded with regard to differences in cultures and business practices (A3).

## 13. MSc in Marketing Management

### Knowledge

A graduate of the MSc in Marketing Management (MM) has:

- Profound insight into and contribution to theories concerning the development and extension of commercial relations between organizations and their target groups (K1);
- Knowledge of the diverse models, procedures, techniques and methods that can shape and be used to implement marketing policies as well as of how to use these in the right way and at the appropriate time (K2);
- Awareness of the position and dependence of marketing within policy making of organizations as a whole (K3).

### Skills

A graduate of the MSc in MM can:

- analyze and solve practical problems in a scientifically sound way (S1);
- communicate, both orally and in writing, policies, ideas and working methods to others and persuade others (S2);
- critically reflect on his or her own and other people's work (S3).

### Attitude

A graduate of the MSc in MM:



- takes on new challenges and involve others in these (A1);
- is open but critical towards developments and other people's opinions (A2);
- follows developments in science and society in a critical manner (A3);
- is motivated to continue learning (A4).

## 14. MSc in Marketing Analytics (formerly known as Marketing Research)

### Knowledge

A graduate of the MSc in MA has knowledge of:

- Research methodology, pertaining to the various stages of the research process, in particular study design and data analysis (K1);
- Marketing; an understanding of the conceptual issues is essential to enable accurate problem identification, choice of study design, formulation of conclusions, and communication with customers in the research project (often marketing decision makers) (K2).

### Skills

A graduate of the MSc in MA can:

- Understand situations involving a marketing problem and delineate the corresponding research question (S1);
- Understand alternative research methods and make a selection given the research question, and finally apply the method (S2);
- Communicate the findings, by means of presentations, reports, and articles (S3);
- Use relevant computer software (S4);
- Critically evaluate their own and other's work in the field of marketing research (S5);
- Understand scientific literature in the field of marketing (S6).

### Attitude

A graduate of the MSc in MA:

- Appreciates research as an essential tool for the progress of marketing in practice and science (A1);
- Has an intrinsic interest in studying relevant (practical and scientific) marketing problems (A2).

## 15. MSc in Operations Research and Management Science

### Knowledge

A graduate of the MSc in ORMS has:

- Specialized knowledge of operations research and management science models, methods and techniques, including the required mathematical methods and techniques (K1);
- Advanced knowledge of quantitative models in business and/or economics (K2).

### Skills

A graduate of the MSc in ORMS can:

- Make a link between practical decision problems and specialized knowledge of operations research and management science models, methods and techniques, in order to apply these models, methods and techniques in practice (S1);
- Use advanced operations research methods and techniques, or develop new methods and techniques to solve complex decision problems (S2);
- Use relevant computer software (S3);
- Comprehend, evaluate, and apply scientific literature in operations research and management science and carry out scientific research (S4);

- Summarize decision-making or optimization models, methods and produce written and oral presentations, and discuss the relevance/limitations of the models and results both in quantitative and in qualitative terms (S5);
- Critically evaluate their own work and that of others, both in terms of its logical coherence (with the attitude of a mathematician) and in terms of practical relevance (S6);
- Independently learn new methods and techniques to solve complex decision problems (S7).

#### **Attitude**

A graduate of the MSc in ORMS:

- Is eager to study and solve both practical and theoretical decision problems by using or developing advanced quantitative approaches (A1);
- Is critical, both with respect to their own work and with respect to the work of others, and is receptive to ideas from others (A2);
- Is motivated to continue learning, take up new challenges, and inspire others with regard to these challenges (A3).

## 16. MSc in Quantitative Finance and Actuarial Science

#### **Knowledge**

A graduate of the MSc in QFAS has advanced knowledge of:

- Quantitative finance and actuarial science models and methods, and their applications (K1);
- Mathematical and statistical methods and techniques, specifically analysis, algebra, probability theory, and optimization (K2);
- Quantitative models in business and/or economics (K3).

#### **Skills**

A graduate of the MSc in QFAS can:

- Make a link between practical financial and actuarial problems and specialized knowledge of quantitative finance and actuarial science, in order to apply this knowledge in practice (S1);
- Use advanced mathematical and statistical models, methods, and techniques to solve financial and actuarial problems (S2);
- (Learn to) use and develop relevant computer software (S3);
- Comprehend, critically evaluate, and apply scientific literature in quantitative finance and actuarial science and to carry out scientific research (S4);
- Summarize quantitative analyses and solutions of financial and actuarial problems in written and oral presentations, and discuss the relevance/limitations of the models, methods and results both in quantitative and in qualitative terms (S5);
- Critically evaluate their own and others' work, both in terms of logical coherence (with the attitude of a mathematician) and in terms of practical relevance (S6);
- Develop new methods and techniques to solve complex quantitative financial and actuarial problems (S7).

#### **Attitude**

A graduate of the MSc in QFAS:

- Is eager to study and solve both practical and theoretical financial and actuarial problems by using or developing advanced quantitative approaches (A1);
- Adopts a critical approach, both with respect to their own work and with respect to the work of others, and is receptive to ideas from others (A2);
- Is motivated to continue learning, take up new challenges, and enthuse others for these challenges (A3).



## 17. MSc in Strategic Management

### Knowledge

A graduate of the MSc in Strategic Management has:

- Scientific knowledge and understanding of international strategy, corporate-level strategy, business-level strategy, and strategy implementation (K1);
- Knowledge and understanding of scientific research methods that are relevant to strategy (K2).

### Skills

A graduate of the MSc in Strategic Management can:

- Identify and map out an organization's strategic challenges (K1);
- Analyze an organization's external environment and internal resources and capabilities (K2);
- Design and develop the strategy of an organization and its implementation, based on scientific research (K3);
- Perform independent research on strategic management by using the outcomes of relevant scientific research and applying relevant quantitative and/or qualitative scientific research methods (K4);
- Analytically reflect on research in the field of strategy (K5);
- Communicate their views of strategy for a specialist and non-specialist audience, orally and in written form (K6);
- Collaborate in a professional way within a team (K7);
- Additional goal for consultancy track: Graduates are able to provide substantiated advice – by means of collaborative team work - to internal and external clients on strategic issues (K8);
- Additional goal for entrepreneurship track: Graduates are able to contribute to the creation of new business for a new or existing firm (K9).

### Attitude

A graduate of the MSc in Strategic Management:

- Thinks in an independent, detached, analytical, solution-focused, and committed manner.
- Keeps pace with new developments inside and outside their company and are eager to continue learning from these developments.
- Seeks feedback from and provide feedback to others.

## 18. MSc in Supply Chain Management

### Knowledge

Graduates of the MSc in Supply Chain Management have knowledge of:

- The basic and more advanced concepts, tools, and (decision-making) models in the intra-organizational business processes of purchasing management, production management, and physical distribution management (K1);
- How these intra-organizational processes influence and are influenced by similar processes in and behaviors of other organizations in the (international) supply chain (K2);
- How the characteristics of the supply chain and its (changing) (international) environment affect the behavior and performance of supply chain partners (K3).

### Skills

Graduates of the MSc in Supply Chain Management can:

- Initiate, plan and complete projects, both individually and in teams (S1);
- Analyze supply chain issues in a scientific manner (i.e., reliable, reproducible, building on existing knowledge in the field) in order to arrive at the best possible decisions/ recommendations (S2);
- Collaborate as a generalist with specialists from other business functions (inside and outside the organization, and inside and outside the home country) to arrive at and implement decisions/ recommendations (S3);

- Make informed decisions or provide substantiated recommendations, taking into account limitations imposed by a lack of or incomplete information (i.e., uncertainty) (S4);
- Continuously adjust existing decisions or recommendations in the light of relevant new information and changing circumstances (S5).

### **Attitude**

Graduates of the MSc in Supply Chain Management:

- Are committed to improving and transforming supply chain processes (A1);
- Are systematic, yet pragmatic when required, in their approach (A2);
- Are oriented at collaboration with functional specialists within and outside their organization (who may be from different countries/ cultural backgrounds) (A3);
- Are aware of and realistic about the (sometimes limited) impact of decisions or recommendations in light of actions of other actors in the supply chain (A4);
- Are aware of and take account of relevant external developments as well as relevant emerging knowledge that may alter or improve existing decisions or recommendations (A5).

## 19. MSc in Tax Economics

### **Knowledge**

A graduate of the MSc in Tax Economics has:

- In-depth knowledge of and insight into the relevant areas of tax law, including income tax, corporation tax and European and international tax law (K1);
- Integrated knowledge of the links between the various components of tax legislation (K2);
- Integrated knowledge of the links between tax legislation and relevant economic and political processes (K3);
- Knowledge of alternative approaches to issues of tax economics (K4);
- Insight into current tax issues in society (K5);
- In-depth knowledge of a number of broad themes of tax economics, such as tax assurance, transfer pricing, business succession and international tax policy (K6);
- Knowledge of and insight into the relevant research methods and techniques to solve complex problems of tax economics – now and in the future – in a scientific manner within the relevant social context (K7).

### **Skills**

A graduate of the MSc in Tax Economics:

- Can analyze complex problems of tax law involving different jurisdictions, drawing a clear distinction between main and subsidiary issues (S1);
- Can classify, clearly articulate, analyze, critically assess and generate multiple solutions for complex problems of tax economics with the aid of different related academic disciplines (S2);
- Is able to synthesize problems of tax economics and tax law to improve tax policy and legislation (S3);
- Can assess the need to invoke knowledge from other disciplines (S4);
- Has the necessary oral and written skills to communicate effectively with other specialists and to make complex problems of tax economics understandable for lay people (S5);
- Can collaborate effectively with different groups of specialists, such as economists, lawyers, policymakers, corporate tax specialists, accountants, business experts and IT specialists (S6);
- Can independently absorb the flow of information concerning current tax issues in society and is then able to distinguish between the main and subsidiary aspects of these issues (S7);
- Can set up and conduct research into tax economics in an academically responsible manner (S8).

### **Attitude**

A graduate of the MSc in Tax Economics:

- Follows the relevant tax developments in society (through professional literature and media) and takes a critical attitude towards these developments (A1);



- Has the analytical attitude required to investigate complex issues of tax economics and relevant tax developments in society in a critical manner (A2);
- Constantly seeks alternative solutions to complex issues of tax economics and relevant tax developments in society (A3);
- Constantly seeks to balance the interests of individuals, companies, public sector bodies and society as a whole (A4);
- Is prepared to take responsibility for choices and assessments in matters of tax economics (A5);
- Is prepared to collaborate effectively with different groups of specialists, such as economists, lawyers, policymakers, corporate tax specialists, accountants, business experts and IT specialists (A6).

The intended learning outcomes as described above are valid for both the general program and the track Indirect taxes.



## APPENDIX 4: OVERVIEW OF THE CURRICULUM

### 1. BSc in Business Economics

Curriculum for cohort 2015-2016

#### Year 1

Semester 1	Semester 2
Organisatie en Strategie (6 ECTS)	Financiering 1 (6 ECTS)
Accounting 1: Financial Accounting (6 ECTS)	Marketing 1 (6 ECTS)
Inleiding Onderzoeksmethoden (3 ECTS)	Statistiek 1 (6 ECTS)
Wetenschap voor Beleid (3 ECTS)	Mondelinge Vaardigheden (1 ECTS)
Macro Economie (6 ECTS)	Macro Economie (6 ECTS)
Wiskunde 1 (6 ECTS)	Choice of 5 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Entrepreneurial Business Planning (5 ECTS)</li> <li>• Fiscale Economie (5 ECTS)</li> </ul>

#### Year 2

Semester 1	Semester 2
Balans, Resultatenrekening en Administratieve Processen (6 ECTS)	Accounting 2: Management Accounting (6 ECTS)
Management en Informatiesystemen (ECTS)	Financiering 2 (6 ECTS)
Operations Management (6 ECTS)	Marketing 2: Consumentengedrag (6 ECTS)
Sociale Filosofie en Wetenschapsfilosofie (6 ECTS)	Methoden van Bedrijfseconomisch Onderzoek (6 ECTS)
Statistiek 2 (6 ECTS)	Wiskunde 2 (6 ECTS)

#### Year 3

Semester 1	Semester 2
Choice of 30 ECTS: <ul style="list-style-type: none"> <li>• Study abroad (30 ECTS)</li> <li>• Minor TiSEM* (18 ECTS) and free electives (12 ECTS)</li> </ul>	Bedrijfsethiek (6 ECTS)
	Geïntegreerde Bedrijfseconomie (6 ECTS)
	Ondernemingsrecht (6 ECTS)
	BSc Thesis (12 ECTS), choice of: <ul style="list-style-type: none"> <li>• BSc Thesis Accounting</li> <li>• BSc Thesis Finance</li> <li>• BSc Thesis Marketing</li> <li>• BSc Thesis Management</li> </ul>

#### \*Minors TiSEM (3 courses of 6 ECTS):

##### Minor Accounting

- Auditing and Accounting Information Systems
- Intermediate Financial Accounting
- Intermediate Management Accounting

##### Minor Finance

- Financial Management
- Financial History and Intermediation
- Risk Management



#### Minor Marketing Management

- Digital and Social Media Strategy
- Marketing @ Work
- Services Marketing

#### Minor Marketing Analytics

- Digital and Social Media Strategy
- Marketing @ Work
- Marketing Analytics for Big Data

#### Minor Entrepreneurship

- Introduction to Entrepreneurship
- Creative Entrepreneurship
- Entrepreneurship Theory and Practice

#### Minor Information Management

- Decision Risk Analysis
- Value Chain Transformation
- Information Systems Strategy

#### Minor Management

- Supply Chain Management
- Industrial Organization
- International Comparative Management

#### Minor Economics

- Economics of the European Union
- History of Economics Thought
- Innovation and Development

## 2. BSc in Econometrics and Operation Research

The first year of the BSc Econometrics and Operations Research has a unit structure: a semester consists of two study units of 7 weeks; most of the courses are taught in one of these study units.

Curriculum for cohort 2015-2016

### Year 1

Each semester is divided in two study units

<b>Semester 1</b>	<b>Semester 2</b>
Linear Algebra (6 ECTS, study unit 1)	Mathematical Analysis 2 (6 ECTS, study unit 3)
Macroeconomie for EOR (6 ECTS, study unit 1)	Microeconomics for EOR (6 ECTS, study unit 3)
Introduction Analysis and Probability Theory (6 ECTS, study unit 1 and 2)	Probability and Statistics (6 ECTS, study unit 3 and 4)
Mathematical Analysis 1 (6 ECTS, study unit 2)	Introduction Econometrics (6 ECTS, study unit 4)
Linear Optimization (6 ECTS, study unit 2)	Introduction Finance and Actuarial Science (6 ECTS, study unit 4)
Improving Society Lab (continues in year 2)	

### Year 2

Semester 1	Semester 2
Advanced Linear Algebra (6 ECTS)	Differentiation and Integration Theory (6 ECTS)
Computer Programming (6 ECTS)	Econometrics (6 ECTS)
Introduction Mathematics Economics (6 ECTS)	Introduction Asset Pricing (6 ECTS)
Statistics for Econometrics (6 ECTS)	Modeling in Practice (5 ECTS)
Stochastic Operations Research Methods (6 ECTS)	Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Filosofie van Economie en Economische Ethiek (6 ECTS)</li> <li>Philosophy of Economics and Economic Ethics (6 ECTS)</li> </ul>
Improving Society Lab (1 ECTS)	

### Year 3

Semester 1*	Semester 2
Philosophy of Science and Statistics (6 ECTS)	BSc Thesis Econometrics and Operations Research (12 ECTS)
Choice of 30 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Combinatorial Optimization (6 ECTS)</li> <li>Computational Aspect in EOR (6 ECTS)</li> <li>Games and Economics Behavior (6 ECTS)</li> <li>Quantitative Finance (6 ECTS)</li> <li>Risk Management (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Auctions, Bargaining and Networks (6 ECTS)</li> <li>Inventory and Production Management (6 ECTS)</li> <li>Life Insurance (6 ECTS)</li> <li>Operations Research Methods (6 ECTS)</li> </ul>
<ul style="list-style-type: none"> <li>Electives (12 ECTS)</li> </ul>	

\* Students can also study abroad. They should take a Philosophy course (instead of Philosophy of Science and Statistics), two courses in Econometrics and Operations Research (replacing 12 ECTS of the courses in semester 1) and two electives abroad. In semester 2 they have to choose 18 ECTS out of the courses offered in semester 2 and the thesis.

## 3. BSc in Economics

Curriculum for cohort 2015-2016

### Year 1

Semester 1	Semester 2
Macroeconomics 1 (6 ECTS)	Macroeconomics 2: International Finance (6 ECTS)
Microeconomics 1 (6 ECTS)	Microeconomics 2: Welfare Economics (6 ECTS)
Business Economics 1: Accounting (6 ECTS)	Financial Economics (6 ECTS)
Mathematics 1 (6 ECTS)	Business Economics 1: Finance (6 ECTS)
Statistics (6 ECTS)	Mathematics 2 (6 ECTS)

### Year 2

Semester 1	Semester 2
Macroeconomics 3: Dynamic Models and Policy (6 ECTS)	Macroeconomics 4: Growth and Institutions (6 ECTS)
Microeconomics 4: Information Economics (6 ECTS)	Microeconomics 3: Industrial Economics (6 ECTS)
Econometrics (6 ECTS)	Development Economics (6 ECTS)
International Trade (6 ECTS)	Public Sector Economics (6 ECTS)



Philosophy, Science and Free Markets (6 ECTS)	Philosophy of Economics and Economic Ethics (6 ECTS)
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### Year 3

Semester 1	Semester 2
Choice of 30 ECTS: <ul style="list-style-type: none"> <li>• Study abroad</li> <li>• Free electives or electives such as               <ul style="list-style-type: none"> <li>◦ Economics of the European Union (6 ECTS)</li> <li>◦ History of Economic Thought (6 ECTS)</li> <li>◦ Innovation and Development (6 ECTS)</li> </ul> </li> </ul>	Choice of 18 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Competition Policy and Regulation (6 ECTS)</li> <li>• Environmental Economics (6 ECTS)</li> <li>• Experimental and Behavioral Economics (6 ECTS)</li> <li>• Labor Economics (6 ECTS)</li> <li>• The Economics of Banking and Finance (6 ECTS)</li> </ul>
	BSc Thesis (12 ECTS)

## 4. BSc in Economics and Business Economics

Curriculum for cohort 2015-2016

### Year 1

Semester 1	Semester 2
Macro-Economie 1 (6 ECTS)	Macro-Economie 2: International Finance (6 ECTS)
Micro-Economie 1 (6 ECTS)	Micro-Economie 2: Welvaartstheorie (6 ECTS)
Accounting 1: Financial Accounting (6 ECTS)	Financiering 1 (6 ECTS)
Economie en Strategie 1 (6 ECTS)	Wiskunde 2 (6 ECTS)
Wiskunde 1 (6 ECTS)	Statistiek 1 (6 ECTS)

### Year 2

Semester 1	Semester 2
Macroeconomics 3: Dynamic Models and Policy (6 ECTS)	Financiering 2 (6 ECTS)
Microeconomics 4: Information Economics (6 ECTS)	Microeconomics 3: Industrial Economics (6 ECTS)
Econometrics (6 ECTS)	Accounting 2 (6 ECTS)
International Trade: Trade Theory and Policy (6 ECTS)	Financial Economics (6 ECTS)
Filosofie, Wetenschap en Vrije Markt (6 ECTS)	Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Bedrijfsethiek (6 ECTS)</li> <li>• Philosophy of Economics and Economics Behavior (6 ECTS)</li> </ul>

### Year 3

Semester 1	Semester 2
Choice of 42 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Study abroad (30 ECTS)</li> <li>• Advanced Linear Algebra (6 ECTS)</li> <li>• Auditing and Accounting Information Systems (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Competition Policy and Regulation (6 ECTS)</li> <li>• Environmental Economics (6 ECTS)</li> <li>• Experimental and Behavioral Economics (6 ECTS)</li> <li>• Labor Economics (6 ECTS)</li> </ul>

<ul style="list-style-type: none"> <li>• Intermediate Financial Accounting (6 ECTS)</li> <li>• Intermediate Management Accounting (6 ECTS)</li> <li>• Financial Management (6 ECTS)</li> <li>• Financial History and Intermediation (6 ECTS)</li> <li>• Risk Management (6 ECTS)</li> <li>• Marketing for Pre-master (6 ECTS)</li> <li>• Industrial Marketing (6 ECTS)</li> <li>• Marketing @ Work (6 ECTS)</li> <li>• Services Marketing (6 ECTS)</li> <li>• Economics of the European Union (6 ECTS)</li> <li>• History of Economic Thought (6 ECTS)</li> <li>• Innovation and Development (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• The Economics of Banking and Finance (6 ECTS)</li> <li>• Macroeconomics 4: Growth and Institutions (6 ECTS)</li> <li>• Development Economics (6 ECTS)</li> <li>• Public Sector Economics (6 ECTS)</li> <li>• Marketing 2: Consumentengedrag (6 ECTS)</li> <li>• Methoden van Bedrijfseconomisch Onderzoek (6 ECTS)</li> </ul>
	Economie en Strategie 2 (6 ECTS)
	Bachelor's Thesis Economics and Business Economics (12 ECTS)

## 5. BSc in International Business Administration

Curriculum for cohort 2015-2016

### Year 1

Semester 1	Semester 2
International Management (6 ECTS)	Finance 1 (6 ECTS)
Accounting 1 (6 ECTS)	Marketing Management (6 ECTS)
Organizational Behavior (6 ECTS)	Statistics 1 (6 ECTS)
Mathematics 1 6 (ECTS)	Project IBA (6 ECTS)
Microeconomics (6 ECTS)	Macroeconomics (6 ECTS)

### Year 2

Semester 1	Semester 2
Comparative and Cross-cultural Management (6 ECTS)	Accounting 2 (6 ECTS)
Finance 2 (6 ECTS)	Decision Making in Marketing (6 ECTS)
Philosophy of Science (6 ECTS)	Business Research (6 ECTS)
Statistics 2 (6 ECTS)	Strategic Management (6 ECTS)
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Information Management (6 ECTS)</li> <li>• Operations Management (6 ECTS)</li> </ul>	Mathematics 2 (6 ECTS)

### Year 3

Semester 1	Semester 2
Choice of 30 ECTS: <ul style="list-style-type: none"> <li>• Study abroad (30 ECTS)</li> <li>• Minor TiSEM*(18 ECTS) and free electives (12 ECTS)</li> </ul>	Business Law (6 ECTS)
	Morality of Commercial Life (6 ECTS)
	Innovation and Technology Management (6 ECTS)



	BSc Thesis (12 ECTS), choice of: <ul style="list-style-type: none"> <li>• BSc Thesis Accounting</li> <li>• BSc Thesis Finance</li> <li>• BSc Thesis Marketing</li> <li>• BSc Thesis Management</li> </ul>
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**\*Minors TiSEM (3 courses of 6 ECTS):**

*Minor Accounting*

- Auditing and Accounting Information Systems
- Intermediate Financial Accounting
- Intermediate Management Accounting

*Minor Finance*

- Financial Management
- Financial History and Intermediation
- Risk Management

Minor Marketing Management

- Digital and Social Media Strategy
- Marketing @ Work
- Services Marketing

*Minor Marketing Analytics*

- Digital and Social Media Strategy
- Marketing @ Work
- Marketing Analytics for Big Data

*Minor Entrepreneurship*

- Introduction to Entrepreneurship
- Creative Entrepreneurship
- Entrepreneurship Theory and Practice

*Minor Information Management*

- Decision Risk Analysis
- Value Chain Transformation
- Information Systems Strategy

*Minor Management*

- Supply Chain Management
- Industrial Organization
- International Comparative Management

*Minor Economics*

- Economics of the European Union
- History of Economics Thought
- Innovation and Development



## 6. BSc in Tax Economics

Curriculum for cohort 2015-2016

### Year 1

Semester 1	Semester 2
Organisatie en Strategie (6 ECTS)	Financiering 1 (6 ECTS)
Accounting 1: Financial Accounting (6 ECTS)	Marketing 1 (6 ECTS)
Inleiding Onderzoeksmethoden (3 ECTS)	Statistiek 1 (6 ECTS)
Wetenschap voor Beleid (3 ECTS)	Mondelinge Vaardigheden (1 ECTS)
Micro Economie (6 ECTS)	Macro-Economie (6 ECTS)
Wiskunde 1 (6 ECTS)	Choice of 5 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Entrepreneurial Business Planning (5 ECTS)</li> <li>• Fiscale Economie (5 ECTS)</li> </ul>

### Year 2

Semester 1	Semester 2
Balans, Resultatenrekening en Administratieve Process en (6 ECTS)	Accounting 2: Management Accounting (6 ECTS)
Sociale Filosofie en Wetenschapsfilosofie (6 ECTS)	Financiering 2 (6 ECTS)
Inleiding Bestuursrecht (3 ECTS)	Vermogensrecht (6 ECTS)
Inleiding Staatsrecht (3 ECTS)	Grondslagen Belastingheffingen Ondernemingen (6 ECTS)
Openbare Financiën (3 ECTS)	Grondslagen Inkomstenbelasting (6 ECTS)
Huwelijksgoederen –en Erfrecht en Ondernemingsrecht (9 ECTS)	

### Year 3

Semester 1	Semester 2
Formeel Belastingrechts (6 ECTS)	Bedrijfsethiek (6 ECTS)
Grondslagen Europees en Internationaal Belastingrecht (6 ECTS)	Openbare Financiën 2 (6 ECTS)
Grondslagen Venootschapsbelasting (6 ECTS)	BSc Thesis Fiscale Economie (12 ECTS)
Omzetbelasting (6 ECTS)	
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• SFR "De Smeetskring" (6 ECTS)</li> <li>• Electives (6 or 12 ECTS)</li> </ul>	

## 7. MSc in Accountancy

Curriculum for cohort 2015-2016

### Professional track RA/RC

Semester 1	Semester 2
Advanced Accounting Information Systems (6 ECTS)	Corporate Financial Reporting (6 ECTS)
Management Control Systems (6 ECTS)	Financial Accounting Theory (6 ECTS)
Advanced Accounting (6 ECTS)	Advanced Financial Accounting (6 ECTS)



Choice of: <ul style="list-style-type: none"> <li>Financial Statement Analysis (6 ECTS)</li> <li>Incentives and contracts (6 ECTS)</li> </ul>	MSc Thesis Accountancy (18 ECTS)
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*Track CFA*

Semester 1	Semester 2
Empirical Methods in Finance (6 ECTS)	Corporate Financial Reporting (6 ECTS)
Investment Analysis (6 ECTS)	Financial Analysis and Investor Behavior (6 ECTS)
Management Control Systems (6 ECTS)	Advanced Financial Accounting (6 ECTS)
Financial Statement Analysis (6 ECTS)	MSc Thesis Accountancy (18 ECTS)

## 8. MSc in Econometrics and Mathematical Economics

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Choice of 24 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Empirical Finance (6 ECTS)</li> <li>Microeconometrics (6 ECTS)</li> <li>Panel data Analysis of Microeconomics Decisions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Dynamic Models and their Applications (6 ECTS)</li> <li>Dynamic Real Investment (6 ECTS)</li> <li>Games and Cooperative Behavior (6 ECTS)</li> </ul>
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Financial Models (6 ECTS)</li> <li>Nonlinear and Robust Optimization (6 ECTS)</li> <li>Pension System Design (6 ECTS)</li> <li>Simulation (6 ECTS)</li> <li>The Economics and Finance of Pensions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Asset Liability Management (6 ECTS)</li> <li>Issues in Finance and Insurance (6 ECTS)</li> <li>Management Science (6 ECTS)</li> </ul>
<ul style="list-style-type: none"> <li>Free elective (6 ECTS)*</li> </ul>	
Free elective (6 ECTS)*	
MSc Thesis Econometrics Methods and Mathematical Science (18 ECTS)	

\* Specific requirements apply

*Netspar specialization*

Semester 1	Semester 2
Panel Data Analysis of Microeconomic Decisions (6 ECTS)	Dynamic Models and their Applications (6 ECTS)
The Economics and Finance of Pensions (6 ECTS)	
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Empirical Finance (6 ECTS)</li> <li>Microeconometrics (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Dynamic Real Investment (6 ECTS)</li> <li>Games and Cooperative Behavior (6 ECTS)</li> </ul>
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>Financial Models (6 ECTS)</li> <li>Nonlinear and Robust Optimization (6 ECTS)</li> <li>Pension System Design (6 ECTS)</li> <li>Simulation (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Asset Liability Management (6 ECTS)</li> <li>Issues in Finance and Insurance (6 ECTS)</li> <li>Management Science (6 ECTS)</li> </ul>
<ul style="list-style-type: none"> <li>Free elective*</li> </ul>	
Free elective (6 ECTS)*	
MSc Thesis Econometrics Methods and Mathematical Science (18 ECTS)	

\*Specific requirements apply

## 9. MSc in Economics

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	MSc Thesis Economics (12 ECTS)
Choice of 24 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Seminar Competition and Innovation (6 ECTS)</li> <li>Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)</li> <li>Seminar Financial Markets and Institutions (6 ECTS)</li> <li>Seminar Generational Economics (6 ECTS)</li> <li>Seminar Growth and Regional Development (6 ECTS)</li> <li>Seminar Taxation (6 ECTS)</li> <li>The Economics and Finance of Pensions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>Seminar Competition Policy (6 ECTS)</li> <li>Seminar Economics and Psychology of Risk and Time (6 ECTS)</li> <li>Seminar Environmental and Resource Economics (6 ECTS)</li> <li>Seminar Financial Economics (6 ECTS)</li> <li>Seminar Health Economics (6 ECTS)</li> <li>Seminar Labor Economics (6 ECTS)</li> </ul>
Choice of 9 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Methods: Experiments and Surveys (3 ECTS)</li> <li>Methods: Game Theory 1 (3 ECTS)</li> <li>Methods: Game Theory 2 (3 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Methods: Econometrics 2 (3 ECTS)</li> <li>Methods: Numerical Simulations (3 ECTS)</li> </ul>
Free elective (6 ECTS)	

### Track Competition and Regulation

Semester 1	Semester 2
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Methods: Numerical Simulation (3 ECTS)
Methods: Game Theory 1 (3 ECTS)	Seminar Competition and Regulation in Network Industries (6 ECTS)
Methods: Game Theory 2 (3 ECTS)	Seminar Competition Policy (6 ECTS)
Seminar Competition and Innovation (6 ECTS)	MSc Thesis Economics (12 ECTS)
Choice of 6 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)</li> <li>Seminar Financial Markets and Institutions (6 ECTS)</li> <li>Seminar Generational Economics (6 ECTS)</li> <li>Seminar Growth and Regional Development (6 ECTS)</li> <li>Seminar Taxation (6 ECTS)</li> <li>The Economics and Finance of Pensions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Seminar Economics and Psychology of Risk and Time (6 ECTS)</li> <li>Seminar Environmental and Resource Economics (6 ECTS)</li> <li>Seminar Financial Economics (6 ECTS)</li> <li>Seminar Health Economics (6 ECTS)</li> <li>Seminar Labor Economics (6 ECTS)</li> </ul>
Free elective (6 ECTS)	



*Track Money, Banking and Financial Markets*

<b>Semester 1</b>	<b>Semester 2</b>
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Seminar Financial Economics (6 ECTS)
Seminar Financial Markets and Institutions (6 ECTS)	Methods: Econometrics 2 (3 ECTS)
	MSc Thesis Economics (12 ECTS)
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Innovation (6 ECTS)</li> <li>• Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)</li> <li>• Seminar Generational Economics (6 ECTS)</li> <li>• Seminar Growth and Regional Development (6 ECTS)</li> <li>• Seminar Taxation (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>• Seminar Competition Policy (6 ECTS)</li> <li>• Seminar Economics and Psychology of Risk and Time (6 ECTS)</li> <li>• Seminar Environmental and Resource Economics (6 ECTS)</li> <li>• Seminar Health Economics (6 ECTS)</li> <li>• Seminar Labor Economics (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Corporate Governance and Restructuring (6 ECTS)</li> <li>• Investment Analysis (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Methods: Experiments and Surveys (6 ECTS)</li> <li>• Methods: Game Theory 1 (3 ECTS)</li> <li>• Methods: Game Theory 2 (3 ECTS)</li> </ul>	
<ul style="list-style-type: none"> <li>• Methods: Numerical Simulation (3 ECTS)</li> </ul>	
Free elective (6 ECTS)	

*Track Public Policy*

<b>Semester 1</b>	<b>Semester 2</b>
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Seminar Health Economics (6 ECTS)
Methods: Game Theory 1 (3 ECTS)	Seminar Labor Economics (6 ECTS)
Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)	MSc Thesis Economics (12 ECTS)
Seminar Taxation (6 ECTS)	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Innovation (6 ECTS)</li> <li>• Seminar Financial Markets and Institutions (6 ECTS)</li> <li>• Seminar Generational Economics (6 ECTS)</li> <li>• Seminar Growth and Regional Development (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>• Seminar Competition Policy (6 ECTS)</li> <li>• Seminar Economics and Psychology of Risk and Time (6 ECTS)</li> <li>• Seminar Environmental and Resource Economics (6 ECTS)</li> <li>• Seminar Financial Economics (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Methods: Experiments and Surveys (3 ECTS)</li> <li>• Methods: Game Theory 2 (3 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Methods: Econometrics 2 (3 ECTS)</li> <li>• Methods: Numerical Simulation (3 ECTS)</li> </ul>

*Track Sustainability and Growth*

<b>Semester 1</b>	<b>Semester 2</b>
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Seminar Environmental and Resource Economics (6 ECTS)
Methods: Experiments and Survey (3 ECTS)	MSc Thesis Economics (12 ECTS)
Seminar Growth and Regional Development (6 ECTS)	
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Innovation (6 ECTS)</li> <li>• Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)</li> <li>• Seminar Financial Markets and Institutions (6 ECTS)</li> <li>• Seminar Generational Economics (6 ECTS)</li> <li>• Seminar Taxation (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> <li>• International and European Environmental Law (6 ECTS)</li> <li>• Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>• Seminar Competition Policy (6 ECTS)</li> <li>• Seminar Economics and Psychology of Risk and Time (6 ECTS)</li> <li>• Seminar Financial Economics (6 ECTS)</li> <li>• Seminar Health Economics (6 ECTS)</li> <li>• Seminar Labor Economics (6 ECTS)</li> </ul>	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Methods: Game Theory 1 (3 ECTS)</li> <li>• Methods: Game Theory 2 (3 ECTS)</li> <li>• Methods: Econometrics 2 (3 ECTS)</li> <li>• Methods: Numerical Simulation (3 ECTS)</li> </ul>	
Free elective (6 ECTS)	

*Track Pensions, Aging and Retirement*

<b>Semester 1</b>	<b>Semester 2</b>
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Seminar Economics and Psychology of Risk and Time (6 ECTS)
Seminar Generational Economics (6 ECTS)	MSc Thesis Economics (12 ECTS)
The Economics and Finance of Pensions (6 ECTS)	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Innovation (6 ECTS)</li> <li>• Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)</li> <li>• Seminar Financial Markets and Institutions (6 ECTS)</li> <li>• Seminar Growth and Regional Development (6 ECTS)</li> <li>• Seminar Taxation (6 ECTS)</li> <li>• Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>• Seminar Competition Policy (6 ECTS)</li> <li>• Seminar Financial Economics (6 ECTS)</li> <li>• Seminar Environmental and Resource Economics (6 ECTS)</li> <li>• Seminar Health Economics (6 ECTS)</li> <li>• Seminar Labor Economics (6 ECTS)</li> </ul>	
Choice of 9 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Methods: Experiments and Surveys (6 ECTS)</li> <li>• Methods: Game Theory 1 (3 ECTS)</li> <li>• Methods: Game Theory 2 (3 ECTS)</li> <li>• Methods: Econometrics 2 (3 ECTS)</li> <li>• Methods: Numerical Simulation (3 ECTS)</li> </ul>	
Free elective (6 ECTS)	



*Track Behavioral Economics*

<b>Semester 1</b>	<b>Semester 2</b>
Applied Economics Analysis 1 (3 ECTS)	Applied Economics Analysis 2 (3 ECTS)
Methods: Econometrics 1 (3 ECTS)	Seminar Economics and Psychology of Risk and Time (6 ECTS)
Methods: Experiments and Surveys (3 ECTS)	MSc Thesis Economics (12 ECTS)
Methods: Game Theory 1 (3 ECTS)	
Seminar Economics and Psychology of Social Norms and Strategic Behavior (6 ECTS)	
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Seminar Competition and Innovation (6 ECTS)</li> <li>• Seminar Generational Economics (6 ECTS)</li> <li>• Seminar Financial Markets and Institutions (6 ECTS)</li> <li>• Seminar Growth and Regional Development (6 ECTS)</li> <li>• Seminar Taxation (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Seminar Competition and Regulation in Network Industries (6 ECTS)</li> <li>• Seminar Competition Policy (6 ECTS)</li> <li>• Seminar Financial Economics (6 ECTS)</li> <li>• Seminar Environmental and Resource Economics (6 ECTS)</li> <li>• Seminar Health Economics (6 ECTS)</li> <li>• Seminar Labor Economics (6 ECTS)</li> </ul>
Choice of 3 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Methods: Game Theory 2 (3 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Methods: Econometrics 2 (3 ECTS)</li> <li>• Methods: Numerical Simulation (3 ECTS)</li> </ul>
Free elective (6 ECTS)	

## 10. MSc in Finance

Curriculum for cohort 2015-2016

<b>Semester 1</b>	<b>Semester 2</b>
Advanced Corporate Finance (6 ECTS)	MSc Thesis Finance (18 ECTS)
Empirical Methods in Finance (6 ECTS)	
Investment Analysis (6 ECTS)	
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Financial Statement Analysis (6 ECTS)</li> <li>• Corporate Governance and Restructuring (6 ECTS)</li> <li>• Corporate Valuation (6 ECTS)</li> <li>• Global Banking (6 ECTS)</li> <li>• Investment Analysis of Pensions and Insurance (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> </ul>	Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Applied Corporate Finance (6 ECTS)</li> <li>• Corporate Financial Reporting (6 ECTS)</li> <li>• Derivative Securities and Risk Management (6 ECTS)</li> <li>• Entrepreneurial Finance (6 ECTS)</li> <li>• Financial Analysis and Investor Behavior (6 ECTS)</li> <li>• Seminar Financial Economics (6 ECTS)</li> </ul>

*Track CFA*

<b>Semester 1</b>	<b>Semester 2</b>
Empirical Methods in Finance (6 ECTS)	Derivative Securities and Risk Management (6 ECTS)



Investment Analysis (6 ECTS)	Financial Analysis and Investor Behavior (6 ECTS)
Corporate Governance and Restructuring (6 ECTS)	MSc Thesis Finance (18 ECTS)
Financial Statement Analysis (6 ECTS)	
Advanced Corporate Finance (6 ECTS)	

*Track Pensions, Aging and Retirement*

<b>Semester 1</b>	<b>Semester 2</b>
Empirical Methods in Finance (6 ECTS)	Financial Analysis and Investor Behavior (6 ECTS)
Investment Analysis (6 ECTS)	Free elective (6 ECTS)
Advanced Corporate Finance (6 ECTS)	MSc Thesis Finance (18 ECTS)
Investment Analysis of Pensions and Insurance (6 ECTS)	
The Economics and Finance of Pensions (6 ECTS)	

## 11. MSc in Information Management

Curriculum for cohort 2015-2016

<b>Semester 1</b>	<b>Semester 2</b>
Advanced Resource Planning (6 ECTS)	Project Management: People and Technology (6 ECTS)
Business Intelligence and Data Management (6 ECTS)	Supply Chain Modeling (6 ECTS)
Enterprise Governance and Digital Transformation (6 ECTS)	MSc Thesis Information Management (18 ECTS)
Choice of 12 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Business Process Integration (6 ECTS)</li> <li>• Enterprise Architecture as a Business Strategy (6 ECTS)</li> <li>• Service Oriented Architecture (6 ECTS)</li> <li>• Strategic Sourcing (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Business Analytics and Emerging Trends</li> <li>• Knowledge Management and Societal Innovation (6 ECTS)</li> <li>• Smart Business Networks (6 ECTS)</li> </ul>

## 12. MSc in International Management

Curriculum for cohort 2015-2016

<b>Semester 1</b>	<b>Semester 2</b>
Consulting Skills (3 ECTS)	Cross Cultural Skills (3 ECTS)
International Management Control (6 ECTS)	International Financial Management (6 ECTS)
International Marketing (6 ECTS)	International Management (6 ECTS)
Research Skills International Management (6 ECTS)	MSc Thesis International Management (18 ECTS)
Choice of 6 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Corporate Responsibility A (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable Entrepreneurship (6 ECTS)</li> <li>• Corporate Responsibility B (6 ECTS)</li> </ul>



## 13. MSc in Marketing Management

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Brand Management (6 ECTS)	Marketing Communication (6 ECTS)
Marketing Channel Management (6 ECTS)	Strategic Marketing Management (6 ECTS)
Introduction to Research in Marketing (6 ECTS)	MSc Thesis Marketing Management (18 ECTS)
Choice of 12 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>International Marketing (6 ECTS)</li> <li>Conjoint Analysis (6 ECTS)</li> <li>Market Assessment (6 ECTS)</li> <li>Survey Methodology (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Customer Analytics (6 ECTS)</li> <li>Experimental Research (6 ECTS)</li> <li>Research in Social Media (6 ECTS)</li> </ul>

## 14. MSc in Marketing Analytics

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Introduction to Research in Marketing (6 ECTS)	Strategic Marketing Management (6 ECTS)
	MSc Thesis Marketing Research (18 ECTS)
Choice of 30 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Conjoint Analysis (6 ECTS)</li> <li>Market Assessment (6 ECTS)</li> <li>Survey Methodology (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Customer Analytics (6 ECTS)</li> <li>Experimental Research (6 ECTS)</li> <li>Research in Social Media (6 ECTS)</li> </ul>
OR	
Choice of 24 ECTS from the above mentioned courses and 6 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Business Intelligence and Data Management (6 ECTS)</li> <li>Marketing Models (6 ECTS)</li> <li>Panel Data Analysis of Microeconomic Decisions (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Quantitative Models in Marketing (6 ECTS)</li> <li>Structural Equation Modeling for Business and Economics (6 ECTS)</li> <li>Business Analytics and Emerging Trends (6 ECTS)</li> </ul>

## 15. MSc in Operations Research and Management Science

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Choice of 24 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>Nonlinear and Robust Optimization (6 ECTS)</li> <li>Simulation (6 ECTS)</li> <li>ORMS in Practice (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>Management Science (6 ECTS)</li> <li>Dynamic Real Investment (6 ECTS)</li> </ul>

Choice of 12 ECTS out of the following courses:
<ul style="list-style-type: none"> <li>• Financial Models (6 ECTS)</li> <li>• Panel Data Analysis of Microeconomic Decisions (6 ECTS)</li> <li>• Microeconometrics (6 ECTS)</li> <li>• Asset Liability Management (6 ECTS)</li> <li>• Issues in Finance and Insurance (6 ECTS)</li> <li>• Free elective*</li> </ul>
Free elective (6 ECTS)*
MSc Thesis Operations Research and Management Science (18 ECTS)

\* Specific requirements apply

## 16. MSc in Quantitative Finance and Actuarial Science

Curriculum for cohort 2015-2016

Semester 1	Semester 2
Choice of 24 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Empirical Finance(6 ECTS)</li> <li>• Financial Models (6 ECTS)</li> <li>• Pension System Design (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Asset Liability Management (6 ECTS)</li> <li>• Issues in Finance and Insurance (6 ECTS)</li> <li>• Dynamic Real Investment (6 ECTS)</li> </ul>
Choice of 12 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Nonlinear and Robust Optimization (6 ECTS)</li> <li>• Panel Data Analysis of Microeconomic Decisions (6 ECTS)</li> <li>• Simulation (6 ECTS)</li> <li>• Microeconometrics (6 ECTS)</li> <li>• The Economics and Finance of Pensions (6 ECTS)</li> <li>• Free elective*</li> </ul>	<ul style="list-style-type: none"> <li>• Dynamic Models and their Applications (6 ECTS)</li> <li>• Games and Cooperative Behavior (6 ECTS)</li> <li>• Management Science</li> </ul>
Free elective (6 ECTS)*	
MSc Thesis Quantitative Finance and Actuarial Science (18 ECTS)	

\* Specific requirements apply

Semester 1	Semester 2
Pension System Design (6 ECTS)	Asset Liability Management (6 ECTS)
The Economics and Finance of Pensions (6 ECTS)	
Choice of 12 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Empirical Finance(6 ECTS)</li> <li>• Financial Models (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Issues in Finance and Insurance (6 ECTS)</li> <li>• Dynamic Real Investment (6 ECTS)</li> </ul>
Choice of 6 ECTS out of the following courses:	
<ul style="list-style-type: none"> <li>• Nonlinear and Robust Optimization (6 ECTS)</li> <li>• Panel Data Analysis of Microeconomic Decisions (6 ECTS)</li> <li>• Simulation (6 ECTS)</li> <li>• Microeconometrics (6 ECTS)</li> <li>• Free elective*</li> </ul>	<ul style="list-style-type: none"> <li>• Dynamic Models and their Applications (6 ECTS)</li> <li>• Games and Cooperative Behavior (6 ECTS)</li> <li>• Management Science</li> </ul>
Free elective (6 ECTS)*	
MSc Thesis Quantitative Finance and Actuarial Science (18 ECTS)	

\* Specific requirements apply



## 17. MSc in Strategic Management

Curriculum for cohort 2015-2016

### *Track Strategic Consultancy*

<b>Semester 1</b>	<b>Semester 2</b>
Business-Level Strategy (6 ECTS)	Strategic Consultancy (6 ECTS)
Corporate-Level Strategy (6 ECTS)	Strategy Implementation (6 ECTS)
Research Skills (6 ECTS)	MSc Thesis Strategic Management (18 ECTS)
Choice of 12 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• International Strategy (6 ECTS)</li> <li>• Corporate Entrepreneurship (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• International Management (6 ECTS)</li> <li>• Organization Theory (6 ECTS)</li> </ul>

### *Track Strategic Consultancy*

<b>Semester 1</b>	<b>Semester 2</b>
Business-Level Strategy (6 ECTS)	Sustainable Entrepreneurship (6 ECTS)
Corporate-Level Strategy (6 ECTS)	Strategy Implementation (6 ECTS)
International Strategy (6 ECTS)	MSc Thesis Strategic Management (18 ECTS)
Research Skills (6 ECTS)	
Corporate Entrepreneurship (6 ECTS)	

### *Track International Dual Degree*

#### Year 1

<b>Semester 1</b>	<b>Semester 2</b>
Business-Level Strategy (6 ECTS)	Strategy Implementation (6 ECTS)
Corporate-Level Strategy (6 ECTS)	Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Sustainable Entrepreneurship (6 ECTS)</li> <li>• Strategic Consultancy (6 ECTS)</li> </ul>
International Strategy (6 ECTS)	MSc Thesis Strategic Management (18 ECTS)
Research Skills (6 ECTS)	

#### Year 2

<b>Semester 1</b>	<b>Semester 2</b>
Free elective at partner university (6 ECTS)	

## 18. MSc in Supply Chain Management

Curriculum for cohort 2015-2016

<b>Semester 1</b>	<b>Semester 2</b>
Production Management (6 ECTS)	Collaboration Game and Advanced Topics (6 ECTS)
Purchasing Management (6 ECTS)	MSc Thesis Supply Chain Management (18 ECTS)
Distribution Management (6 ECTS)	Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Supply Chain Management Science (6 ECTS)</li> <li>• Supply Chain Modeling (6 ECTS)</li> </ul>
Research Skills (6 ECTS)	

Corporate Entrepreneurship ( 6 ECTS) for September inflow Organization Theory (6 ECTS) for February inflow	
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*Track International Dual Degree*

Year 1

<b>Semester 1</b>	<b>Semester 2</b>
Production Management (6 ECTS)	Collaboration Game and Advanced Topics (6 ECTS)
Purchasing Management (6 ECTS)	MSc Thesis Supply Chain Management (18 ECTS)
Distribution Management (6 ECTS)	Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Supply Chain Management Science (6 ECTS)</li> <li>• Supply Chain Modeling ( 6 ECTS)</li> </ul>
Research Skills (6 ECTS)	

Year 2

<b>Semester 1</b>	<b>Semester 2</b>
Free elective at partner university (6 ECTS)	

## 19. MSc in Tax Economics

Curriculum for cohort 2015-2016

<b>Semester 1</b>	<b>Semester 2</b>
Capita Selecta Belastingheffing Particulieren (6 ECTS)	Capital Selecta Europees en Internationaal Belastingrecht (6 ECTS)
Methodologie van het Belastingrecht (6 ECTS)	Capita Selecta Vennootschapsbelasting (6 ECTS)
Successiewet en Wet Belastingen van Rechtsverkeer (6 ECTS)	
Elective (6 ECTS)	
Choice of 6 ECTS out of the following courses: <ul style="list-style-type: none"> <li>• Comprehensive Case Studies European &amp; International Tax Law (6 ECTS)</li> <li>• Geschiedenis van het Belastingrecht (6 ECTS)</li> <li>• Tax Assurance 1 (6 ECTS)</li> <li>• Transfer Pricing (6 ECTS)</li> </ul>	<ul style="list-style-type: none"> <li>• Capita Selecta Omzetbelasting (6 ECTS)</li> <li>• Fiscale Aspecten van Vererving (6 ECTS)</li> <li>• Fiscale en Civielrechtelijke Aspecten van Toekomstvoorzieningen (6 ECTS)</li> <li>• Oefenrechtbank Fiscaal (6 ECTS)</li> <li>• Tax Assurance 2 (6 ECTS)</li> </ul>
MSc Thesis Fiscale Economie (18 ECTS)	

*Accent Indirecte Belastingen*

<b>Semester 1</b>	<b>Semester 2</b>
Capita Selecta Belastingheffing Particulieren (6 ECTS)	Capital Selecta Europees en Internationaal Belastingrecht (6 ECTS)
Methodologie van het Belastingrecht (6 ECTS)	Capita Selecta Vennootschapsbelasting (6 ECTS)



Choice of 18 ECTS out of the following courses:

- European Value Added Tax (6 ECTS)
- Capita Selecta Omzetbelasting (6 ECTS)
- Indirecte Belastingen en International Handel (6 ECTS)
- Indirect Tax Assurance (6 ECTS)

MSc Thesis Fiscale Economie (18 ECTS)

## APPENDIX 5: QUANTITATIVE DATA REGARDING THE PROGRAMMES

### Drop-out and success rates of the bachelor programmes

#### 1. Business Economics

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=299)</b>	<b>2010 (N=311)</b>	<b>2011 (N=273)</b>	<b>2012 (N=287)</b>
Output after 3 years	25%	39%	45%	41%
Output after 4 years	75%	78%	88%	
Output after 5 years	86%	87%		
Output after 6 years	90%			

*Output (with regard to inflow of all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=319)</b>	<b>2010 (N=320)</b>	<b>2011 (N=283)</b>	<b>2012 (N=311)</b>
Output after 3 years	25%	39%	46%	41%
Output after 4 years	75%	78%	88%	
Output after 5 years	85%	88%		
Output after 6 years	90%			

*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=496)</b>	<b>2010 (N=455)</b>	<b>2011 (N=476)</b>	<b>2012 (N=409)</b>	<b>2013 (N=361)</b>	<b>2014 (N=308)</b>
Dropout rate after 1 year	40%	32%	43%	30%	25%	24%
Dropout rate after 2 years	42%	34%	43%	31%	27%	
Dropout rate after 3 years	43%	35%	43%	32%		

*Dropout rate after 1, 2 and 3 years (inflow of all students), cumulative*

<b>Cohort</b>	<b>2009 (N=526)</b>	<b>2010 (N=481)</b>	<b>2011 (N=506)</b>	<b>2012 (N=457)</b>	<b>2013 (N=421)</b>	<b>2014 (N=350)</b>
Dropout rate after 1 year	39%	33%	44%	32%	29%	25%
Dropout rate after 2 years	41%	35%	44%	33%	31%	
Dropout rate after 3 years	42%	36%	44%	35%		

#### 2. Econometrics and Operation Research

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=47)</b>	<b>2010 (N=49)</b>	<b>2011 (N=54)</b>	<b>2012 (N=59)</b>
Output after 3 years	17%	29%	9%	34%
Output after 4 years	77%	78%	63%	
Output after 5 years	85%	94%		
Output after 6 years	91%			





*Output (with regard to inflow of all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=55)</b>	<b>2010 (N=60)</b>	<b>2011 (N=69)</b>	<b>2012 (N=68)</b>
Output after 3 years	24%	30%	17%	34%
Output after 4 years	76%	73%	68%	
Output after 5 years	87%	93%		
Output after 6 years	93%			

*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=69)</b>	<b>2010 (N=83)</b>	<b>2011 (N=89)</b>	<b>2012 (N=99)</b>	<b>2013 (N=100)</b>	<b>2014 (N=55)</b>
Dropout rate after 1 year	32%	41%	39%	40%	28%	20%
Dropout rate after 2 years	35%	41%	45%	42%	38%	
Dropout rate after 3 years	35%	45%	45%	42%		

### 3. Economics

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=14)</b>	<b>2010 (N=16)</b>	<b>2011 (N=10)</b>	<b>2012 (N=8)</b>
Output after 3 years	64%	75%	30%	50%
Output after 4 years	71%	88%	90%	
Output after 5 years	79%	94%		
Output after 6 years	93%			

*Output (with regard to inflow of all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=45)</b>	<b>2010 (N=45)</b>	<b>2011 (N=41)</b>	<b>2012 (N=29)</b>
Output after 3 years	67%	60%	54%	62%
Output after 4 years	80%	80%	85%	
Output after 5 years	84%	87%		
Output after 6 years	89%			

*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=21)</b>	<b>2010 (N=20)</b>	<b>2011 (N=17)</b>	<b>2012 (N=9)</b>	<b>2013 (N=16)</b>	<b>2014 (N=19)</b>
Dropout rate after 1 year	33%	20%	41%	11%	19%	32%
Dropout rate after 2 years	38%	30%	41%	11%	19%	
Dropout rate after 3 years	38%	35%	41%	11%		

## 4. Economics and Business Economics

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=24)</b>	<b>2010 (N=28)</b>	<b>2011 (N=48)</b>	<b>2012 (N=54)</b>
Output after 3 years	25%	33%	25%	31%
Output after 4 years	50%	68%	65%	
Output after 5 years	67%	87%		
Output after 6 years	67%			

*Output (with regard to inflow all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=26)</b>	<b>2010 (N=30)</b>	<b>2011 (N=53)</b>	<b>2012 (N=60)</b>
Output after 3 years	27%	40%	30%	42%
Output after 4 years	50%	60%	79%	
Output after 5 years	65%	87%		
Output after 6 years	65%			

*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=59)</b>	<b>2010 (N=98)</b>	<b>2011 (N=85)</b>	<b>2012 (N=90)</b>	<b>2013 (N=91)</b>	<b>2014 (N=73)</b>
Dropout rate after 1 year	59%	71%	44%	40%	32%	29%
Dropout rate after 2 years	68%	71%	45%	42%	32%	
Dropout rate after 3 years	69%	72%	46%	43%		

## 5. International Business Administration

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=126)</b>	<b>2010 (N=123)</b>	<b>2011 (N=120)</b>	<b>2012 (N=71)</b>
Output after 3 years	46%	45%	45%	49%
Output after 4 years	79%	81%	81%	
Output after 5 years	90%	88%		
Output after 6 years	95%			

*Output (with regard to inflow of all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=170)</b>	<b>2010 (N=177)</b>	<b>2011 (N=168)</b>	<b>2012 (N=109)</b>
Output after 3 years	44%	47%	51%	53%
Output after 4 years	79%	81%	83%	
Output after 5 years	91%	89%		
Output after 6 years	95%			



*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=188)</b>	<b>2010 (N=150)</b>	<b>2011 (N=151)</b>	<b>2012 (N=93)</b>	<b>2013 (N=128)</b>	<b>2014 (N=115)</b>
Dropout rate after 1 year	33%	18%	21%	24%	13%	14%
Dropout rate after 2 years	34%	20%	23%	28%	13%	
Dropout rate after 3 years	34%	22%	23%	28%		

## 6. Tax Economics

*Output (with regard to VWO student inflow; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=42)</b>	<b>2010 (N=33)</b>	<b>2011 (N=29)</b>	<b>2012 (N=34)</b>
Output after 3 years	29%	42%	48%	53%
Output after 4 years	62%	73%	83%	
Output after 5 years	76%	88%		
Output after 6 years	81%			

*Output (with regard to inflow all students; only for those students who re-enrolled), cumulative*

<b>Cohort</b>	<b>2009 (N=47)</b>	<b>2010 (N=35)</b>	<b>2011 (N=33)</b>	<b>2012 (N=41)</b>
Output after 3 years	32%	46%	48%	49%
Output after 4 years	66%	74%	82%	
Output after 5 years	79%	89%		
Output after 6 years	83%			

*Dropout rate after 1, 2, and 3 years (with regard to VWO student inflow), cumulative*

<b>Cohort</b>	<b>2009 (N=56)</b>	<b>2010 (N=44)</b>	<b>2011 (N=41)</b>	<b>2012 (N=51)</b>	<b>2013 (N=68)</b>	<b>2014 (N=42)</b>
Dropout rate after 1 year	25%	25%	29%	33%	25%	21%
Dropout rate after 2 years	30%	25%	29%	33%	29%	
Dropout rate after 3 years	32%	32%	29%	35%		

## Intake and success rates of the master programmes

### 7. Accountancy

*Output*

<b>Cohort</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>			
Entry Moment	1	1	1	2	1	2		
N	108	123	169	28	124	49	122	49
% output after 1 year	31%	28%	29%	0%	61	8%	61%	16%
% output after 2 years	84%	75%	85%	64%	88%	76%		

Entry moment 1: September

Entry moment 2: February (starting in 2012-2013)

## 8. Econometrics and Mathematical Economics

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	10	14	13	12	5	15	6
% output after 1 year	50%	29%	38%	17%	0%	47%	0%
% output after 2 years	100%	71%	92%	67%	60%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 9. Economics

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	87	63	50	36	5	56	17
% output after 1 year	25%	38%	34%	31%	0%	52%	6%
% output after 2 years	75%	68%	70%	78%	60%		

Entry moment 1: September

Entry moment 2: February

## 10. Finance

### Output

Cohort	2010 (N=138)	2011 (N=156)	2012 (N=172)	2013 (N=190)	2014 (N=130)
Output after 1 year	22%	19%	24%	31%	27%
Output after 2 years	74%	77%	74%	77%	

## 11. Information Management

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	48	62	54	50	19	50	22
% output after 1 year	50%	58%	50%	66%	5%	70%	45%
% output after 2 years	83%	79%	85%	90%	89%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)



## 12. International Management

### Output

<b>Cohort</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>		
Entry Moment	1	1	1	2	1	2	1
N	52	58	56	12	43	27	33
% output after 1 year	15%	34%	55%	8%	56%	70%	70%
% output after 2 years	88%	81%	88%	58%	86%	96%	

Entry moment 1: September

Entry moment 2: February (starting in 2012-2013)

## 13. Marketing Management

### Output

<b>Cohort</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>		
Entry Moment	1	1	1	1	2	1	2
N	193	186	218	148	105	70	73
% output after 1 year	12%	10%	10%	11%	0%	26%	0%
% output after 2 years	82%	75%	71%	80%	75%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 14. Marketing Research (as of September 2016: Marketing Analytics)

### Output

<b>Cohort</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>		
Entry Moment	1	1	1	1	2	1	2
N	10	18	16	20	2	10	6
% output after 1 year	10%	33%	25%	10%	0%	20%	0%
% output after 2 years	80%	67%	63%	70%	100%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 15. Operations Research and Management Science

### Output

<b>Cohort</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>		
Entry Moment	1	1	1	1	2	1	2
N	10	23	31	19	8	14	9
% output after 1 year	30%	13%	26%	16%	13%	7%	0%
% output after 2 years	60%	74%	90%	74%	100%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 16. Quantitative Finance and Actuarial Science

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	27	27	26	35	5	15	6
% output after 1 year	15%	41%	12%	20%	0%	7%	0%
% output after 2 years	67%	85%	62%	80%	60%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 17. Strategic Management

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	127	118	120	68	23	77	31
% output after 1 year	11%	39%	49%	79%	61%	66%	58%
% output after 2 years	91%	87%	88%	97%	83%		

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 18. Supply Chain Management

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry moment	1	1	1	1	2	1	2
N	69	98	73	62	25	65	39
% output after 1 year	12%	67%	47%	77%	68%	60%	64%
% output after 2 years	87%	91%	90%	97%	100%	N.A.	N.A.

Entry moment 1: September

Entry moment 2: February (starting in 2013-2014)

## 19. Tax Economics

### Output

Cohort	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015		
Entry Moment	1	1	1	1	2	1	2
N	46	52	62	36	33	38	17
% output after 1 year	20%	6%	5%	22%	0%	3%	0%
% output after 2 years	72%	56%	47%	58%	55%		

Entry moment 1: September

Entry moment 2: February



## Student-teacher ratio of the Tilburg School of Economics and Management

2015*	
Number of students	5605
Teaching academic staff in fte	278,2
Student-teacher ratio	1:38

\* Source: Annual Report 2015 (Jaarverslag 2015)

### Teacher quality

#### 1. Business Economics

Degree	MA	PhD	UTQ*
Percentage	44%	56%	17%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

#### 2. Econometrics and Operation Research

Degree	MA	PhD	UTQ*
Percentage	24%	76%	12%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

#### 3. Economics

Degree	MA	PhD	UTQ*
Percentage	29%	71%	7%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

#### 4. Economics and Business Economics

Degree	MA	PhD	UTQ*
Percentage	37%	63%	13%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

#### 5. International Business Administration

Degree	MA	PhD	UTQ*
Percentage	37%	63%	23%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

#### 6. Tax Economics

Degree	MA	PhD	UTQ*
Percentage	52%	48%	22%

\*UTQ: University Teaching Qualification (Basiskwalificatie Onderwijs)



## 7. Accountancy

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	32%	68%	21%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 8. Econometrics and Mathematical Economics

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	6%	94%	6%

\*UTQ=Quality Teaching Qualification (Basiskwalificatie Onderwijs)

## 9. Economics

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	9%	91%	3%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 10. Finance

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	15%	85%	19%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 11. Information Management

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	23%	77%	8%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 12. International Management

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	17%	83%	50%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 13. Marketing Management

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	46%	55%	27%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 14. Marketing Research (Marketing Analytics)

<b>Degree</b>	<b>MA</b>	<b>PhD</b>	<b>UTQ*</b>
Percentage	38%	62%	19%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)



## 15. Operations Research and Management Science

Degree	MA	PhD	UTQ*
Percentage	0%	100%	20%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 16. Quantitative Finance and Actuarial Science

Degree	MA	PhD	UTQ*
Percentage	8%	92%	15%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 17. Strategic Management

Degree	MA	PhD	UTQ*
Percentage	24%	76%	38%

UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 18. Supply Chain Management

Degree	MA	PhD	UTQ*
Percentage	24%	76%	19%

\*UTQ=University Teaching Qualification (Basiskwalificatie Onderwijs)

## 19. Tax Economics

Degree	MA	PhD	UTQ*
Percentage	34%	66%	31%

\*UTQ=Quality Teaching Qualification (Basiskwalificatie Onderwijs)

## Number of contact hours per week

### 1. BSc Business Economics

Year	1	2	3
Contact hours	17	17	7

In Year 1, students choose one elective (6 ECTS): Tax Economics or Entrepreneurial Business Planning. The number of contact hours in Year 1 is either 448 (Tax Economics included) or 424 (Entrepreneurial Business Planning (included)).

In Year 3, Semester 1, students choose a minor and two electives. The contact hours in these courses are not included in the table. The same holds for the BSc thesis in Year 3, Semester 2.

### 2. BSc Econometrics and Operation Research

Year	1	2	3
Contact hours	16	15	14

Contact hours do not include office hours, web lectures, exams, or supervision for Modeling in Practice and the BSc Thesis. The numbers stated are averages over 28 weeks of teaching.

### 3. BSc Economics

Year	1	2	3-S1	3-S2
Contact hours	21	19	*	7-11**

Average number of contact hours over a period of 13 weeks per semester.

\* In Year 3, Semester 1, students choose elective courses from a wide range, including courses at universities abroad. It is therefore impossible to calculate the average number of contact hours for this semester.

\*\* In Year 3, Semester 2, students must choose three elective courses from a specified range of six courses. Depending upon the choice, the number of contact hours differs. The table shows the minimum and maximum number. This is excluding the contact hours with the supervisor for writing the Bachelor's thesis.

### 4. BSc Economics and Business Economics

Year	1	2	3
Contact hours	18	17	11

### 5. BSc International Business Administration

Year	1	2	3
Contact hours	16	13	6

Contact hours are exclusive of assessment hours.

Year 3:

- Semester 1 is excluded, because the students can choose to study abroad, take a minor and/or elective courses. The number of contact hours depends on the choices of the students.
- In Semester 2, the number of contact hours for the Bachelor's Thesis is excluded as well.

### 6. BSc Tax Economics

Year	1	2	3
Contact hours	17	14	9

### 7. MSc Accountancy

Contact hours per week:	10
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2 courses per study unit x 2 meetings per week (lectures, tutorials) x 2.5 hours (on average)

### 8. MSc Econometrics and Mathematical Economics

Between 12 hours (four semester courses) and 18 hours (three unit courses) per week in the student's first semester; between 6 hours (two semester courses) and 15 hours (two unit courses and one semester course) per week in the student's second semester.



## 9. MSc programme Economics

Contact hours per week:	13
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Contact hours are calculated as the average contact hours per week over the period in which lectures are given (23 weeks). Actual numbers may vary between students because of different electives.

## 10. MSc Finance

Contact hours per week:	12 to 20
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In semester 1, there are typically 20 contact hours (5 courses with 4 hours of lectures per week each); in semester 2, study unit 3 has typically 12 lecture hours (2 courses of 6 hours of lectures per week) and allows time for thesis preparation. Study unit 4 has no lecture hours but consists of full-time thesis writing, with one-on-one meetings with the thesis supervisor.

## 11. MSc Information Management

Contact hours per week:	8
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MSc Thesis is not included. The students have approximately 140 contact hours in the program, the program has 3 study units of 7 weeks each; in one of these study units, the students also have to prepare for the thesis. 140 contact hours have to be spread over approximately 18 weeks -> 8 contact hours per week.

## 12. MSc International Management

Unit	1	2	3	4
Contact hours	12	8	12	1

The fourth unit is reserved for thesis writing (possibly in combination with an internship), contact hours consist of meetings with the thesis supervisor.

## 13. MSc Marketing Management

Contact hours per week:	between 8 and 16
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Around 16 hours a week in students' first unit (3 compulsory courses), and between 8 and 12 hours in students' second and third unit. These hours do not include MSc thesis meetings. Students are advised not to choose the electives offered in the fourth unit, to allow for sufficient time to work on the thesis. Consequently, there are no contact hours in the fourth unit. Note also that the number of contact hours a week is dependent on the electives chosen, and on the stage of the course (some courses have many contact hours in the beginning, and less towards the end, to grant students enough time to work on their assignments).

## 14. MSc Marketing Research (Marketing Analytics)

Contact hours per week:	between 8 and 16
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These hours do not include meetings for the Master's thesis. Students are advised not to choose the electives offered in the fourth unit, to allow sufficient time to work on the thesis. Consequently, there are no contact hours in the fourth unit. Note also that the number of contact hours per week is dependent on the electives chosen, and on the stage of the course (some courses have many contact hours at the beginning, and less towards the end, to give students enough time to work on their assignments).

## 15. MSc Operations Research and Management Science

Between 12 hours (four semester courses) and 18 hours (three unit courses) per week in the student's first semester; between 6 hours (two semester courses) and 15 hours (two unit courses and one semester course) per week in the student's second semester. Students typically follow courses worth 24-30 ECTS (four/five courses) in their first semester, and 30-36 ECTS (two/three courses plus Master's thesis) in their second semester. The number of hours per week can vary between students due to different choices of mandatory electives and free electives. On average, a semester course has three contact hours per week for 14 weeks, while a unit course has 6 contact hours per week for seven weeks.

## 16. MSc Quantitative Finance and Actuarial Science

Between 12 hours (four semester courses) and 18 hours (three unit courses) per week in the student's first semester; between 6 hours (two semester courses) and 15 hours (two unit courses and one semester course) per week in the student's second semester. Students typically follow courses worth 24-30 ECTS (four/five courses) in their first semester, and 30-36 ECTS (two/three courses plus Master's thesis) in their second semester. The number of hours per week can vary between students due to different choices of mandatory electives and free electives. On average a semester course has three contact hours per week for 14 weeks, while a unit course has 6 contact hours per week for seven weeks.

## 17. MSc Strategic Management

Contact hours per week:	12
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## 18. MSc Supply Chain Management

Contact hours per week:	for September entrants: 7 to 14 for February entrants: 7 to 12
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These numbers relate to the average number of contact hours for the least intensive versus the most intensive unit. The number of contact hours differs between September and February entrants because contact hours are contingent on the electives chosen.

## 19. MSc Tax Economics

Contact hours per week:	14
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## APPENDIX 6: PROGRAMME OF THE SITE VISIT

### **Sunday February 12**

**Location: Hotel Auberge du Bonheur**

<b>Time</b>	<b>Activity</b>
16.00 - 17.30	PRT meeting

<b>Time</b>	<b>Activity</b>
17.30 - 18.00	PRT meets project managers accreditation

### **Project Managers Accreditation**

Yvonne de Vries, TiSEM

Judith Dieleman, TIAS

<b>Time</b>	<b>Activity</b>
18.00 - 20.30	Dinner PRT with Deans and Vice Deans Education TiSEM and TIAS and project managers accreditation

### **Participants from TiSEM**

<b>Name</b>	<b>Additional information</b>
Lex Meijdam	Dean Professor of Economics
Philip Joos	Vice Dean of Education Professor of Accountancy
Yvonne de Vries	Project Manager Accreditation
Mira Gorris	Accreditation Officer

### **Participants from TIAS**

<b>Name</b>	<b>Additional information</b>
Kees Koedijk	Dean and Director Professor of Financial Management
Jenke ter Horst	Vice Dean Professor of Finance
Edith Hooge	Vice Dean Professor Boards and Governance in Education
Judith Dieleman	Policy Advisor

### **Monday February 13**

#### **Locations:**

- Sessions: Room T 013 (TIAS building)
- Base room: TZ 1
- Lunch: Faculty Club
- Cocktail hour: Faculty Club
- Dinner: Hotel

<b>Time</b>	<b>Activity</b>
08.00 - 08.30	Meeting with rector Tilburg University Emile Aarts

08.30 - 09.00	PRT to settle down in meeting room T 013 and Introduction to base room TZ 1
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<b>Time</b>	<b>Activity</b>
09.00 - 09.45	PRT meets Leadership team TiSEM Dean, Vice Dean of Education, Vice Dean of Research, Director

### Leadership team TiSEM

<b>Name</b>	<b>Additional information</b>
Lex Meijdam	Dean Professor of Economics
Philip Joos	Vice Dean of Education Professor of Accountancy
Geert Duysters	Vice Dean of Research Professor of Entrepreneurship
Mat van Essen	Managing Director
Thijs Kramer	Student member Management Team Student BSc Econometrics and Operational Research

<b>Time</b>	<b>Activity</b>
09.45 - 10.30	PRT meets Vice Dean of Education, Associate Dean BSc Programs and Associate Dean Internationalization

### Participants

<b>Name</b>	<b>Additional information</b>
Philip Joos	Vice Dean of Education Professor of Accountancy
Bart Vos	Associate Dean of BSc programs Professor of Purchasing Management
Niels Noorderhaven	Associate Dean of Internationalization Professor of International Management

<b>Time</b>	<b>Activity</b>
10.30 - 10.45	Break

<b>Time</b>	<b>Activity</b>
10.45 - 11.45	PRT meets Academic Directors BSc programs TiSEM

### Academic Directors MSc programs

All Academic Directors also teach courses in their own (and) other programs

<b>Name</b>	<b>Additional information</b>
Astrid Kramer	Academic Director BSc in Business Economics, Assistant Professor of Management
Dirk Brounen	Academic Director BSc in Economics and Business Economics Professor of Real Estate Economics
Louis Raes	Academic Director BSc in Economics and Business Economics Assistant Professor of Economics
Cees Peters	Academic Director BSc in Tax Economics Assistant Professor of International Tax Governance
Vincent Wiegerinck	Academic Director BSc in International Business Administration Senior Lecturer of Marketing
Bas van Groezen	Academic Director BSc in Economics Assistant Professor of (Macro) Economics
Edwin van Dam	Academic Director BSc in Econometrics and Operations Research Professor of Mathematics and Operations Research

<b>Time</b>	<b>Activity</b>
11.45 - 12.45	PRT meets Academic Directors MSc programs TiSEM

### Academic Directors BSc programs

All Academic Directors also teach courses in their own (and other) programs

<b>Name</b>	<b>Additional information</b>
Stephan Hollander	Academic Director MSc in Accountancy Associate Professor of Accountancy
Frank de Jong	Academic Director MSc in Finance Professor of Financial Markets and Risk Management
Anick Bosmans	Academic Director MSc in Marketing Management and Marketing Analytics Assistant Professor of Marketing
Wendy van der Valk	Academic Director MSc in Supply Chain Management Assistant Professor of Supply Chain Management
Aswin van Oijen	Academic Director MSc in Strategic Management Associate Professor of Strategy and Organization
Anja De Waegenare	Academic Director MSc in EME, ORMS and QFAS Professor of Actuarial Science and Accounting
Jeroen Kuilman	Academic Director MSc in International Management Associate Professor of Entrepreneurship and Organization Theory
Hans Weigand	Academic Director MSc in Information Management Associate Professor of Information Management
Sjak Smulders	Academic Director MSc in Economics Professor of Economics
Cees Peters	Academic Director MSc in Tax Economics Assistant Professor of International Tax Governance

12.45 - 13.45	Lunch PRT in Faculty Club
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<b>Time</b>	<b>Activity</b>
13.45 - 14.30	PRT meets support staff TiSEM

### Support staff

<b>Name</b>	<b>Additional information</b>
Gerwin Pols	Head of Education Support Team TiSEM
Linda van Klink	Team leader of Research Support Team TiSEM Policy Advisor Research and International Affairs TiSEM
Yvonne de Vries	Policy Advisor Education, Education Support Team TiSEM Project Manager Accreditation TiSEM
Natascha van Enckevort	Program Coordinator BSc Business Economics, Education Support Team TiSEM
Mira Gorris	Program Coordinator MSc Accountancy, Education Support Team TiSEM Accreditation Officer TiSEM
Simone Hofland	Career Services Officer, Office of Student Development Tilburg University
Linda van der Tuijn	Project Manager/Policy Advisor International Office Tilburg University

14.30 - 14.45	Break
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<b>Time</b>	<b>Activity</b>
14.45 - 15.30	PRT meets Dean and Vice Deans TIAS

#### **Participants**

<b>Name</b>	<b>Additional information</b>
Kees Koedijk	Dean and Director Professor of Financial Management
Jenke ter Horst	Vice Dean Professor of Finance
Edith Hooge	Vice Dean Professor Boards and Governance in Education
Frans de Roon	Associate Dean Executive Masters Professor of Finance
Gert-Jan Vermeer	Manager Finance & Control

<b>Time</b>	<b>Activity</b>
15.30 - 16.15	PRT meets Division Directors, Associate Deans, and Policy Advisers Business & Society and Quality Assurance TIAS

#### **Participants**

<b>Name</b>	<b>Additional information</b>
Edwin Gerritsen	Division Director Executive Masters
Miranda Bol	Director Company Specific Programs
Tim de Leeuw	Division Director PhD Associate Professor
Frans de Roon	Associate Dean Executive Masters Professor of Finance
Dirk Brounen	Associate Dean Research & Development Professor of Real Estate
Nardo van der Meer	Director HealthLAB Professor of Healthcare Management
Menno Maas	Associate Dean Business Development Adjunct Professor of Real Estate Development
Mirjam Minderman	Policy Adviser / Lecturer Business and Society
Judith Dieleman	Policy Adviser Educational Quality

16.15 - 16.30	Break
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<b>Time</b>	<b>Activity</b>
16.30 - 17.30	PRT meets Academic Directors TIAS

#### **Academic Directors TIAS**

<b>Name</b>	<b>Additional information</b>
Peter van der Voort	Executive Master of Health Administration (MHA) Professor of Health Care
Eric Dooms	International Fulltime Master of Business Administration (MBA) Associate Professor of Strategy
Marc Vermeulen	Executive Master of Public and Non-Profit Management (MPM), Executive Master of Management in Education (MME) Professor of Educational Sociology
Ton de Kok	Executive Master of Operations and Supply Chain Excellence (MOS) Professor Operations Management
Frans de Roon	Executive Master in Finance (MiF), Executive Master of Business Valuation (MBV) Professor of Finance
Toni Sfirtsis	Executive Master of Management in Organization (MMO), Executive Master in Marketing (MM) Professor of Strategy & Innovation
Ingrid Janssen	Executive Master of Real Estate (MRE) Associate Professor of Real Estate

Nicolette van Gestel	Preparation Module (VOMO) Professor of New Modes of Governance in Social Security and Employment Services
Chris de Neubourg	PhD Programs Professor of Public Policy and Management

Time	Activity
17.30 - 18.30	PRT meets Support Staff TIAS: program managers, support services and career services, facilities, tutoring, student information services, etc.

#### Participants

Name	Additional information
Ingrid LaFlamme	Program Manager Executive Master of IT-Auditing
Leanne Westerink	Program Manager Master of Science in Business Administration (MScBA)
Gretchen van der Spek	Director Alumni Relations - Head of Career Development
Hanny Breel	Manager Marketing & Communications and Program Advice
Marjolein Kooren,	HR Manager
Marianne Appeldoorn	Projectmanager LMS
Bonnie van Engelen	Manager Faculty & Education Office/ Policy Advisor
Marijn Veijgen	Information Analyst

Time	Activity
18.30 - 19.30	Cocktail hour: PRT meets Advisory Board TiSEM and Advisory Board TIAS, industry partners etc. in Faculty Club

#### Participants from TiSEM

Name	Company/organization and position
Eric Engesaeth	Advisory Council TiSEM Korn Ferry Hay Group, Head of Executive Pay and Governance Netherlands & Senior Client Partner
Ab Gilhaus	Advisory Council TiSEM DLL Rabobank Group, Chief Risk Officer
Rob Zandbergen	Advisory Council TiSEM USG People, CEO
Huub Dekkers	Chair Alumni Committee TiSEM Director Education PwC Consulting
Ron Berndsén	DNB, Head of Market Infrastructure Policy Department, Endowed Chair of Financial Market Infrastructures and Systemic Risk at Tilburg University
Eduard Ponds	APG, Head Research and Policy Endowed Chair of Economics of Collective Pension Plans at Tilburg University
Theo Poolen	Dutch Tax Authorities, Director Quality
Maureen Vermeij	CZ, Director Internal Audit
Leon Jansen	BDO, Partner Audit and Assurance
Ivo Kuiper	Kempen Capital Management, Senior Investment Strategist
Marcel Dreef	Quintiq Supply Chain Planning and Optimization, Director
Pepijn Bos	City of Tilburg, Policy adviser Economics and Labor Market

#### Participants from TIAS

Name	Company/organization and position
Theo de Raad	Chairman Supervisory Board TIAS
Willemien Bisschot	Member Supervisory Board TIAS
Josette Dijkhuizen	Member Business & Society Advisory Board TIAS; Entrepreneurship consultant/ Maastricht School of Management, Krachtbedrijf
Margriet van der Sluis	Partner GovernanceLAB Senior Adviser/ BMC Advies
Tak Lam	Partner FinanceLAB AMVEST



Olof Suttorp	Partner HealthLAB Amphia Hospital
Anko van Hoepen	Member Advisory Board MPM/MME (Executive Master in Public and Non-Profit Management / Management in Education) Vice Chair/ PO-Raad (Dutch Council for Primary Education)
Jan Tjerk Boonstra	Member Advisory Board MScBA Principal/ Human Capital Group
Hanneke Toebes	Member Advisory Board MHA (Executive Master of Health Administration) Director/ Care & Quality Institute
Bart de Volder	Member Advisory Board MiF/MBV (Executive Master in Finance / Business Valuation) Consultant/ ESJ Corporate Finance
Bie de Grave	Member Advisory Board MBA Trusted Advisor Management Development/ Apini BVBA
Otwin Günther	Member Advisory Board MOS (Executive Master of Operations and Supply Chain Excellence) Managing Director/ De Voogt Naval Architects

20.00	Dinner PRT in hotel
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## **Tuesday February 14**

### **Location**

- Open visiting hour: hotel
- Sessions: Room T 013 (TIAS building)
- Lunch: Faculty Club
- Dinner: Hotel

<b>Time</b>	<b>Activity</b>
08.00 - 09.00	Open Visiting Hour in hotel

Information on participants: Mark Delmartino

09.00 - 09.15	Transfer to meeting room T 013
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<b>Time</b>	<b>Activity</b>
09.15 - 10.00	PRT meets BSc students TISEM (including members Education Committees)

### **Students BSc programs**

<b>Name</b>	<b>Additional information</b>
Jack Arkesteijn	BSc International Business Administration Year 1
Robert Beckett	BSc Economics Year 1
Julia Klimaszewska	BSc Econometrics and Operations Research Year 2
Boi van der Vleuten	BSc Tax Economics Year 2
Laura Trommelen	BSc Business Economics Year 3
Odette Mutsaers	BSc Economics and Business Economics Year 3 Member of Education Committee Economics
Semra Woldemikael	International Business Administration Year 3

<b>Time</b>	<b>Activity</b>
10.00 - 11.00	PRT meets MSc and Research MSc students

### Students MSc programs and Research Masters

<b>Name</b>	<b>Additional information</b>
Iris Mulkens	MSc Financial Management and MSc Strategic Management
Jurriaan Vogel	MSc Information Management
Laurens Lamper	MSc Supply Chain Management
Michiel Hennevelt	MSc Tax Economics
Alex Niklas	MSc Strategic Management
Thomas Kohlbacher	MSc Quantitative Finance and Actuarial Science and MSc Econometrics and Mathematical Economics
Michelle Meijer	MSc International Management
David Bedari	MSc Accountancy
Gleb Gertsman	Research Master in Business
Ernst Roos	Research Master in Business
Pintao Lyu	Research Master in Economics
Hugo van Buggenum	Research Master in Economics

11.00 - 11.15	Break
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<b>Time</b>	<b>Activity</b>
11.15 - 12.00	PRT meets junior staff TISEM (including members Education Committees)

### Junior staff

<b>Name</b>	<b>Additional information</b>
Anne Balter	Assistant Professor on a tenure track Department of Econometrics and Operations Research Joined TISEM in 2016 Teaches courses in: – BSc in Econometrics and Operations Research – MSc in QFAS, MSc in ORMS and MSc in EME
Hannes Datta	Assistant Professor on a tenure track Department of Marketing Teacher of the year 2016 Tilburg University Teaches courses in: – BSc In Business Economics – BSc in International Business Administration – MSc in Marketing Management and MSc in Marketing Analytics
Elena Golovko	Assistant Professor (with tenure) Department of Management Teaches courses in: – BSc in International Business Administration (until 2015-2016) – MSc in Strategic Management
Mart van Hulten	Lecturer Department of Tax Economics Teaches courses in: – BSc in Tax Economics – MSc in Tax Economics
Nicola Pavanini	Assistant Professor on a tenure track Department of Finance Joined TISEM in 2016 Teaches courses in MSc in Finance
Sofie Vandenbogaerde	Lecturer Department of Accountancy Teaches courses in: – BSc in Business Economics – BSc in Economics and Business Economics – BSc in International Business Administration – MSc in Accountancy



	Thesis Coordinator Member of the Education Committee BSc and MSc programs in Business
Loes Verstegen	PhD candidate Department of Economics Thesis expected in 2017 Teaches courses in: <ul style="list-style-type: none"> <li>- BSc Economics and Business Economics</li> <li>- MSc in Economics</li> <li>- MSc in QFAS, MSc in ORMS and MSc in EME</li> </ul>

Time	Activity
12.00 - 12.45	PRT meets senior staff TiSEM (including members program committees)

### Senior staff members

Name	Additional information
Harald Benink	Professor of Banking and Finance Chairman Education Committee BSc and MSc programs in Economics Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in International Business Administration</li> <li>- BSc in Economics</li> <li>- MSc in Economics</li> </ul>
Bob van den Brand	Associate Professor of Accountancy Development of the I-Star Teaching Method Teacher of the year 2014 Tilburg University Teaches courses in BSc in Business Economics
Bart Dierynck	Associate Professor of Accountancy Member of Faculty Council of TiSEM Teaches courses in: <ul style="list-style-type: none"> <li>- MSc in International Management</li> <li>- MSc in Accountancy</li> </ul>
Peter Essers	Professor of Tax Law Fiscal Institute Tilburg University Member of Assessment Committee on Career Decisions TiSEM Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in Tax Economics</li> <li>- MSc in Tax Economics</li> </ul>
Inge Geyskens	Professor of Marketing Department of Marketing Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in Business Economics</li> <li>- BSc in International Business Administration</li> <li>- MSc in Marketing Management and MSc in Marketing Analytics</li> </ul>
Anne-Françoise Rutkowski	Professor of Information Management Coordinator international programs in MSc Information Management Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in International Business Administration</li> <li>- MSc in Information Management</li> </ul>
James Small	Scientific Director of Tilburg Center of Entrepreneurship Senior Lecturer Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in International Business Administration</li> <li>- BSc in Business Economics</li> <li>- MSc in Strategic Management</li> </ul>
Oliver Spalt	Professor of Behavioral Finance Thesis Coordinator MSc in Finance Teaches courses in MSc in Finance
Bas Werker	Professor of Finance and Econometrics Netspar research coordinator Teaches courses in: <ul style="list-style-type: none"> <li>- BSc in Econometrics and Operations Research</li> <li>- MSc in EME, MSc in QFAS and MSc in ORMS</li> </ul>



<b>Time</b>	<b>Activity</b>
12.45 - 13.45	Lunch PRT (internal) Short presentation new Utrecht campus by Menno Maas + campus tour TIAS by Gretchen van der Spek

<b>Time</b>	<b>Activity</b>
13.45 - 14.30	PRT meets Examination Committees TiSEM and TIAS

#### **Participants Examination Committee TiSEM**

<b>Name</b>	<b>Additional information</b>
Herbert Hamers	Chairman Examination Committee TiSEM Professor of Game Theory and Operations Research
Eric Kemmeren	Vice chairman Examination Committee TiSEM Professor of International Tax Law
Marieke Quant	Member Examination Committee TiSEM Assistant Professor department of Econometrics and Operations Research
Susan van Soest	Education Specialist TiSEM, Project Manager assessment plans and specification tables (no member of Examination Committee)

#### **Participants Examination Committee TIAS**

<b>Name</b>	<b>Additional information</b>
Bob van den Brand	Chairman Examination Committee TIAS Associate professor of Financial Accounting
Theo Poiesz	Member Examination Committee TIAS Professor of Economic Psychology, Health Care Marketing
Bas van de Lest	External Member Examination Committee TIAS Project manager at ACM - Autoriteit Consument & Markt
Marc Vermeulen	Representative Review committee Professor of Educational Sociology

<b>Time</b>	<b>Activity</b>
14.30 - 15.15	PRT meets program directors and staff of 2 research masters TiSEM

#### **Participants for Research Masters**

<b>Name</b>	<b>Additional information</b>
Geert Duysters	Vice Dean of Research Professor of Entrepreneurship
Bart Bronnenberg	Director of Graduate Studies in Business Professor of Marketing Teaches courses in: – Research Master in Business – MSc Marketing Management and MSc in Marketing Analytics
Arthur van Soest	Director of Graduate Studies in Economics Professor of Econometrics Teaches courses in: – Research Master in Economics – MSc in EME, MSc in QFAS and MSc in ORMS – BSc in Econometrics and Operations Research
Burak Uras	Educational Coordinator Research Master in Economics Assistant Professor of Economics Teaches courses in: – Research Master in Economics – MSc in Economics
Barbara Deleersnyder	Educational Coordinator Research Master in Business track Marketing Associate Professor of Marketing Teaches courses in: – Research Master in Business – MSc in Marketing Management and MSc in Marketing Analytics



Bart Dierynck	Educational Coordinator Research Master in Business track Accountancy Associate Professor of Accountancy Teaches courses in: – Research Master in Business – MSc in Accountancy – MSc in International Management
Sigrid Suetens	Associate Professor of Economics Teaches courses in Research Master in Economics

Time	Activity
15.15 - 15.30	Break

Time	Activity
15.30 - 16.30	PRT meets students TIAS

### Students TIAS

Name	Additional information
Jeroen van Woerden	Executive Master of Marketing (MM) Managing Director/ Kemira Chemicals
Joost Gijsbers	Executive Master of Operations and Supply Chain Excellence (MOS) Program Manager/ Friesland Campina
Benedicta de Fretes	Full-time International MSc in Business Administration (MScBA) President Commissioner/ PT. Aduna Mulia Indonesia
Therry van der Burgt	Executive Master of Information Management (MIM) Solution Architect/ Rijkswaterstaat CIV
Erik de Cock	Executive Master of IT-Auditing (EMITA) General Management/ USG People
Marc Raaijmakers	Executive Master of Management in Education (MME) Director Hospitality Department/ Koning Willem I College
Robert Versteeg	Executive Master of Management and Organization (MMO) Chief of Staff, Head of HR & MarCom/ Witlox Van den Boomen
Frédérique van Berkestijn	Executive Master of Health Administration (MHA) Medisch hoofd klinische zorg/ Wilhelmina kinderziekenhuis
Ernst Peeman	Executive Master of Real Estate (MRE) Business Controller/ Blauwhoed Groep b.v.
Hayati Arman Gezer	Executive Master in Finance / of Business Valuation (MiF/MBV) Business Controller/Transformation Manager / Philips Electronics Nederland B.V.
Pascal Böni	Executive PhD Chairman & CEO Remaco AG

Time	Activity
16.30 - 17.30	PRT meets staff TIAS

### Staff TIAS

Name	Additional information
Arco van de Ven	Bestuurlijke Informatievoorziening/ Administratieve Organisatie, (BIV/ AO)
Filip Caeldries	Associate Dean Company Specific Programs
Roger Bougie	Associate Professor for Business and Society
Toni Sfirsis	Professor of Strategy & Innovation
Carla Koen	Professor of Technology Management and Entrepreneurship
Roemer Visser	Executive Professor, experienced Leadership development coach
Theo Poiesz	Professor of Economic Psychology, Health Care Marketing
Freek Aertsen	Academic Director Executive Master of Operations and Supply Chain Management (MOS)

<b>Time</b>	<b>Activity</b>
17.30 - 17.45	Break

<b>Time</b>	<b>Activity</b>
17.45 - 18.15	PRT meets alumni TiSEM

#### **Alumni TiSEM**

<b>Name</b>	<b>Program TiSEM, Current organization and position</b>
Mathijs van den Kieboom	Alumnus MSc in Supply Chain Management 2015 Fabory, Product Manager
Irene Laureijs	Alumnus MSc in Economics 2016 FNV Labor Union, Social Economic Policy Advisor
Renata Rabovic	Alumnus Research master in Economics 2013 Tilburg University, PhD candidate
Niels Zuurbier	MSc in Tax Economics 2016 and MSc Information Management 2017 Deloitte, Tax Management Consulting Analyst
Renée van Poppel	Alumnus MSc in Strategic Management 2016 Supply Value, Consultant
Bas Nuijten	Alumnus MSc International Management 2014 Finch Beak, Consultant
Yvet Roest	Alumnus MSc in Marketing Management 2014 Mondelēz International, Junior Brand Manager Milka
Popke Rein Munniksma	Alumnus MSc in Information Management 2005 CogNIAM Finance, Chief Executive Officer
Thijs Bock	Alumnus MSc in Accountancy 2015 BDO, Assistant Accountant

<b>Time</b>	<b>Activity</b>
18.15 - 18.45	PRT meets alumni TIAS

#### **Alumni TIAS**

<b>Name</b>	<b>Program, Current position and organization</b>
Susanne Lambregts-Winters	Alumnus Executive Master of Marketing (MM) Marketing Communication Advisor/ Brabantse Ontwikkelings Maatschappij
Mike Hamilton	Alumnus Executive Master of IT-Auditing (EMITA) IT-Auditor/ Adviser/ Hamilton IT Audit & Advisory
Jesscia de Lange	Alumnus Executive Master in Public and Non-Profit Management (MPM) Policy Advisor / The Netherlands Coastguard
Job Hoevenaars	Alumnus Global Executive MBA (IMM) CEO/ Schuurman BV
Paul Mencke	Alumnus Executive Master of Business Valuation (MBV) Partner/ Govers Accountants
Ammara Naeem	Alumnus Full-Time Master of Business Administration (FT MBA) Employer Brand MBA Project/ Booking.com
Bart van de Garde	Executive Master of Business Administration (EMBA) Manager IT-Development/ Bol.com
Bart-Fedde Heinsius	FT International Master of Business Administration (MScBA) EMEA Sales Manager/ Bomi Group - Healthcare Logistics



Time	Activity
19.30	Dinner PRT and work on report in hotel

### **Wednesday February 15**

#### **Locations:**

- 8.30 -11.30: Hotel and/or meeting room(s) TIAS building
- 12.00-13.00: Meeting room T 013 (TIAS building)
- 13.00 Lunch in Faculty Club

Time	Activity
08.30 – 11.30	PRT works on report
08.30 – 11.30	Possible "recall" of TiSEM or TIAS if still issues to be resolved.
11.30 – 12.00	PRT internal meeting

Time	Activity
12.00 – 13.00	PRT has a final session with Deans of both schools, Vice Deans and the Rector

#### **Participants**

Rector: Emile Aarts

#### **Participants from TiSEM**

Name	Additional information
Lex Meijdam	Dean Professor of Economics
Philip Joos	Vice Dean of Education Professor of Accountancy
Geert Duysters	Vice Dean of Research Professor of Entrepreneurship
Yvonne de Vries	Project Manager Accreditation

#### **Participants from TIAS**

Name	Additional information
Kees Koedijk	Dean and Director Professor of Financial Management
Jenke ter Horst	Vice Dean Professor of Finance
Edith Hooge	Vice Dean Professor of Boards and Governance in Education
Judith Dieleman	Policy Advisor

Time	Activity
13.00	Lunch PRT in Faculty Club and departure

## APPENDIX 7: THESES AND DOCUMENTS STUDIED BY THE PANEL

Prior to the site visit, the expert committee studied the theses of the students with the following student numbers:

<i>(1) BSc Business Economics</i>					
157620	160051	174185	255401	284239	
624630	818376	933571			
<i>(2) BSc Econometrics and Operation Research</i>					
151908	569651	636251	703887	773313	
<i>(3) BSc Economics</i>					
140043	428146	566914	919555	996185	
<i>(4) BSc Economics and Business Economics</i>					
104412	251643	316649	427858	517397	
<i>(5) BSc International Business Administration</i>					
144147	152461	160365	210603	312979	
727362	774734	934367			
<i>(6) BSc Tax Economics</i>					
119982	258577	308531	461311	503559	
<i>(7) MSc Accountancy</i>					
116852	162578	212206	521376	972747	
<i>(8) MSc Econometrics and Mathematical Economics</i>					
206568	355296	602052	676385	919482	
<i>(9) MSc Economics</i>					
107530	302418	387324	389742	517260	652974
<i>(10) MSc programme Finance</i>					
278380	410717	433271	457446	633961	
<i>(11) MSc Information Management</i>					
307207	458243	512339	729281	805641	
<i>(12) MSc International Management</i>					
293079	356944	588344	731550	811123	
<i>(13) MSc Marketing Management</i>					
373563	379305	809852	939480	986740	
<i>(14) MSc Marketing Research (Marketing Analytics)</i>					
203290	217712	267949	427174	971672	
<i>(15) MSc Operations Research and Management Science</i>					
118358	427903	584243	672902	838628	
<i>(16) MSc Quantitative Finance and Actuarial Science</i>					
118110	318292	624989	661067	874381	



*(17) MSc Strategic Management*

220004	244914	387065	433138	858571
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*(18) MSc Supply Chain Management*

151142	151255	483361	613801	624849
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*(19) MSc Tax Economics*

107178	438573	518100	533991	989677
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Prior to the site visit, the panel received following documents produced by the Tilburg School of Economics and Management:

- AACSB Continuous Improvement Review Report 2016-2017
- Appendices to the Continuous Improvement Review Report 2016-2017
- Self-evaluation reports BSc programmes, November 2016
- Self-evaluation reports MSc programmes, November 2016
- General appendices for the self-evaluation reports BSc and MSc programmes, November 2016
- Assessment plans for each of the 6 BSc programmes
- Assessment plans for each of the 13 MSc programmes

Moreover, the panel had access to other school-wide and programme-specific materials in a dedicated section ('base-room') of the university's electronic learning environment.