

Besluit

Accreditatierapport en -besluit met een positieve beoordeling van de accreditatieaanvraag voor de opleiding International Master of Science in Fire Safety Engineering (joint degree) (master) van de Universiteit Gent in samenwerking met Lund University en The University of Edinburgh

datum

30 september 2013

onderwerp

Definitief

accreditatierapport en -besluit

(001688)

bijlage

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1. Inleiding

Bij brief van 29 maart 2013 heeft het instellingsbestuur van de Universiteit Gent te Gent een accreditatieaanvraag ingediend bij de Nederlands-Vlaamse Accreditatieorganisatie (NVAO) voor de opleiding International Master of Science in Fire Safety Engineering (master) die wordt georganiseerd te Gent (Universiteit Gent); Lund (Lund University) en Edinburgh (The University of Edinburgh). Deze aanvraag is ontvangen op 29 maart 2013 en ontvankelijk verklaard op 21 mei 2013.

De aanvraag betreft een *joint degree*-opleiding die wordt verzorgd door de Universiteit Gent, Lund University en The University of Edinburgh. Voor het gezamenlijk verzorgen van deze opleiding ontving het consortium in 2010 een subsidie van de Europese Commissie in het kader van de *Erasmus Mundus*-programma's.

De accreditatieaanvraag steunt op het visitatierapport van een externe beoordeling uitgevoerd door een visitatiecommissie ingesteld door de Vlaamse Universiteiten en Hogescholen Raad (Vluhr).

De visitatiecommissie kende de volgende samenstelling:

Voorzitter:

- Prof. dr. em. Dick van Campen, gewezen decaan faculteit werktuigbouwkunde, Technische Universiteit Eindhoven, gewezen Secretaris-Generaal International Union of Theoretical & Applied Mechanics.;

Leden:

- Prof. dr. em. René Van den Braembussche, Honorary professor von Karman Institute ;
- Ir. Jan Bens, Directeur-generaal van het Federaal Agentschap voor Nucleaire Controle ;
- Prof. dr. Jean-Marc Franssen, professor fire safety engineering, Université de Liège
- Prof. dr. Peter Van Petegem, gewoon hoogleraar onderwijskunde, Universiteit Antwerpen (onderwijsdeskundige);
- Dhr. Dieter Van Isterdael, masterstudent werktuigkunde-elektrotechniek Vrije Universiteit Brussel (student-lid).

Dhr. Jasper Stockmans en Dhr. Andreas Smets, stafmedewerkers van de Cel Kwaliteitszorg van de Vlaamse Interuniversitaire Raad (VLIR), traden op als projectbegeleider en secretaris voor deze visitatie.

De visitatie heeft plaatsgevonden op 3, 4 mei en 14 t/m 16 mei 2012. Het visitatierapport dateert van februari 2013.

2. Formele overwegingen

De NVAO komt tot de volgende vaststellingen:

- De externe beoordeling is opgesteld en onderbouwd overeenkomstig het toepasselijke Accreditatiekader bestaande opleidingen hoger onderwijs Vlaanderen van de NVAO en volgens de daarbij behorende beslisregels;
- De visitatiecommissie heeft voor de externe beoordeling het door de Vluhr vastgestelde visitatieprotocol gevolgd;
- De externe beoordeling verschaft inzicht in de samenstelling van de visitatiecommissie;
- De externe beoordeling bevat een onderzoek ten gronde naar de aanwezigheid van voldoende generieke kwaliteitswaarborgen.

Het *joint degree*-karakter van de gevisitteerde opleiding komt naar het oordeel van de NVAO voldoende tot uiting in het visitatierapport. Zo heeft de visitatiecommissie tijdens het visitatiebezoek op 3 en 4 mei 2012 in Gent van gedachten gewisseld met docenten en studenten van de opleiding. Toont de visitatiecommissie zich goed op de hoogte van de specialisaties van ieder van de instituten. Het aandeel van de verschillende deelnemende instellingen in het programma wordt in het rapport duidelijk omschreven. De faciliteiten van alle drie instellingen zijn onderwerp van beoordeling geweest. Er is sprake van een gezamenlijk opleidingsmanagement en de visitatiecommissie meldt dat zij duidelijke bewijzen heeft aangetroffen van een goede integratie van de drie deelnemende instellingen bij de organisatie van het programma. De visitatiecommissie argumenteert overtuigend waarom de samenwerking resulteert in een unieke combinatie van specialismen. Wel vindt de visitatiecommissie dat gestreefd kan worden naar meer standaardisatie in de toetsing.

De NVAO is in het licht van het vorenstaande tot de slotsom gekomen dat de externe beoordeling over de voorliggende opleiding regelmatig en gedegen tot stand is gekomen.

3. Inhoudelijke overwegingen

De NVAO steunt haar inhoudelijke besluitvorming in hoofdzaak op de onderstaande elementen uit het visitatierapport.

Objectives

The panel is satisfied about the level and orientation of the objectives of the International Master of Science in Fire Safety Engineering (IMFSE). The panel is positive about the alignment of the objectives with the master's competences in the Flemish Higher Education Act (2003). The competences further were defined in the context of the Dublin-indicators, the European Qualification Framework for Lifelong Learning [EQF] and the 'Vlaamse Kwalificatiestructuur' [VKS]. The two-year master's programme aims at giving a fundamental scientific background in Fire Safety Engineering. The panel is positive about the way the aims and objectives of the programme focus on professional and academic competences.

Pagina 3 van 11 The panel observes that the goals define a high level master programme with a focussed orientation and it is positive about the way this is formulated in a clear and transparent manner. The programme clearly aims at an advanced insight into the domain and in recent developments in the discipline.

The generic goals are, according to the panel, adequately translated to the domain of Fire Safety Engineering. They meet the requirements of the (international) specifications in the field, as well as the needs of the professional field. By means of the use of the model curriculum of the International Association for Fire Safety Science (IAFSS), there is also a sufficient accordance with what is internationally expected from a programme in fire safety engineering.

The aims and objectives of the programme correspond with the requirements set by professional colleagues, both nationally and internationally, and the relevant professional field for a programme in the domain concerned. At Ghent University the focus is on general FSE, at Lund University on risk management and human behaviour, and at the University of Edinburgh on structural engineering.

There is also an agreement with the reference frame of the panel. However the panel finds the ambition of the programme in the context of strategic policy, to train students to become 'leading experts' in the field of FSE, too high and a premature goal for a 2-year programme and suggests reformulation to: 'recognized experts'. The management of the programme agrees.

The panel learned during the visit that the lecturers and the management of the staff have a clear image about the ambitions of the programme, but in some cases missed a clear and transparent formulation of the objectives.

Programme

The panel considers the curriculum as an adequate realisation of the intended learning outcomes of the programme. The programme is based upon the IAFSS model curriculum and links three world-class groups from different international universities. The panel sees that in this way, everything that is expected from a programme in fire safety engineering, is represented. The students also appreciate the contents of the curriculum in the light of enabling them to achieve the intended learning outcomes. In the context of future improvement, a slightly greater amount of attention can be given to the topic of extinguishment.

A competence matrix is used as an aid to verify whether the different goals are covered in the programme.

The panel is satisfied about the professional and academic orientation, within the scope of the programme. The panel appreciates the way the students develop their knowledge through the interaction between education and research and in a close contact with high-level researchers at the different faculties involved. The curriculum also corresponds with current developments.

The panel appreciates the fact that this programme is organised by European institutions, with high level academic expertise in the relevant domains. However, the current programme is more directly focussed on developing research competences in function of the application towards practical problems. In contrast with the close contact with the researchers, the panel sees a need to aim at a more intense involvement in the on-going research, especially in the context of the thesis.

Pagina 4 van 11 The panel appreciates the way the approach ensures the required links with the current relevant professional practice.

Although difficulties can arise as a result of the cooperation between the different institutes, the consisting groups have succeeded to compose a coherent programme. Students are also satisfied about the curriculum and its coherence in terms of content. The students also appreciate the fact that there is an adequate alignment between the courses and the practical work, and the fact that there are effective efforts to avoid overlap in the programme. On the other hand, concerning elective courses the panel notes that there is room for further improvement.

The panel appreciates the fact that there is attention to study time measurements, but more care should be taken regarding the accuracy and reliability of the study time measurements. In this context, more detailed measurement of the actual study time in relation to the estimated study time should be made. The panel appreciates the fact that in this context plans are made towards a more reliable measurement of the study time.

The actual duration of the programme corresponds globally with the statutory standards, but the study-load will depend in a certain amount on the qualifications obtained by the students prior to entering the programme, however it is of the opinion that the programme is never overburdening.

The educational concept is in line with the formulated objectives, and also corresponds with the study methods. In addition to the classical ex- cathedra lessons, the following formats are used: lab exercises, computer exercises, group work, projects and company visits. The teaching staff appears to consider the active involvement of the students of high importance. Besides the way ex cathedra lessons and exercises seem to adequately complement each other, the panel suggests to aim for a higher degree of variation. Nevertheless, the panel is positive about the way the different approaches complement each other in function of the location.

Concerning the study material, the panel is satisfied. In most cases slides are used as educational resources, complemented with references, syllabi and/or handbooks. Also, extensive use is made of the electronic learning environment Minerva.

By means of evaluations, tests and examinations, the students are assessed in an adequate manner which is insightful to them to determine whether they have achieved the intended learning outcomes. The panel understands that via the combined institutes and accompanying traditions, an adequate complementarity is reached and a sufficient variation is present in the evaluation methods of the global programme. However, the panel believes that a further increase of this variation could prove further benefits. The evaluation methods are transparent: the students clearly seem to be aware of what is expected and they can always ask for feedback on their results. The organisation of the exams is communicated well in advance by e-mail. Concerning the organisation of the evaluation, the panel is positive, despite the extra difficulty that goes with the interuniversity organisation. However, the panel wishes to draw attention to the approach concerning the evaluation criteria. The panel understands that there are different evaluation rules at the different locations. Although the panel suggests to take measures to achieve a higher degree of standardisation of the evaluation in the different institutes.

Pagina 5 van 11 At the time of visit, no master's thesis had been finished and evaluated yet, but the panel does not see indications that any serious problems will arise. The master's thesis is scheduled in the fourth semester. However, it is expected that students engage in preparatory activities before the start of the fourth semester. Typical preparatory work is a literature study. The panel is satisfied about the requirements towards the students, concerning the content and the level of the master's thesis. It is also in the intention of the management of the programme to require an intense work of the students, that reflects a general critical-reflective and/or research attitude. Concerning the preparation and the guidance of the thesis, the panel is confident about the procedures. Overall, the panel is satisfied about the preparation of the thesis, however a more balanced spread of the preparation and guidance, could prove to have some benefits. Currently the greatest share of the work is concentrated in the last 6 months. The students are also satisfied about the guidance by the AAP- and ZAP members. However, the panel missed a certain degree of formalisation in the guidance. Especially in the light of the cooperation between the different universities, the panel advises to aim at a higher degree of standardisation.

There is a large variety in entrance qualifications. Still the programme is structured in such a way that students appear to arrive at comparable levels of qualifications. This approach is complemented with a detailed procedure concerning admission to the programme. In addition, there is a ranking of the candidates, based on quality: only applicants of whom the management of the programme judges they can successfully participate in the IMFSE programme, are admitted. The panel values this detailed procedure and states that in the light of the results it is also effective. The panel formulates some suggestions for improvement concerning the assessment of proficiency in English and the assessment of previously acquired competences.

Staff

The panel assesses the staff as qualified to ensure that the aims and objectives of the programme, in terms of content, didactics and organisation, are achieved. Also, concerning the human resources policy (including recruitment, determining of tasks, appointments and promotions) the panel is satisfied.

The panel understands that the interuniversity cooperation potentially generates some difficulties, obstructing the pursuit of a good human resources policy, but it is confident that the consequences of these difficulties are limited. Still, a high degree of vigilance will remain necessary. In conclusion, the panel assesses the staff as qualified for the substantive, educational and organisational realisation of the curriculum.

The academic and professional quality of the staff is clearly adequate. The academic orientation is top-level on an international scale. Some of the lecturers in IMFSE have been involved in large national and international research programmes or have even been coordinating large research consortia. The panel studied the list of publications of the staff, and learned that the teaching is principally provided by top-researchers who clearly contribute on a high level to the development of the discipline. Also, a large amount of international contacts exist with the other leading groups. The cooperation between the different involved universities, results in a broad range of specialisations among the staff with research, educational or education-supporting tasks, covering the whole domain. Many members of the teaching staff are conducting research in collaboration with the industry.

Pagina 6 van 11 The programme is taught by 17 lecturers (nine from Ghent, six from Edinburgh and three from Lund). The panel is of the opinion that sufficient staff is deployed to realise the intended quality of the programme, but wants to address the fact that the programme depends to a large extent on one person, which generates a not to be underestimated vulnerability. Due to the involvement of staff from external funding, the situation seems to be in control, but this also generates a certain vulnerability. In proportion to the number of students, the quantity of the staff is adequate. It may even seem that the size of the workforce is relatively high compared to the number of students, but the courses are also attended by students of the postgraduate studies in Fire Safety Engineering.

Facilities and Support

The panel is positive about the facilities. The combined availability at the different universities is aligned to the realisation of the curriculum. The lecture halls, the practical rooms and the laboratories, at Ghent University, are up to date and also result in the satisfaction of the students. Concerning certain aspects the panel noticed that there is a certain variation across the involved universities. In the first place, there seems to be a problem concerning the accessibility of the facilities in Ghent. The panel is concerned that the infrastructure is closed on evenings and weekends (the computer, library and self-study facilities). This aspect deserves serious attention in the context of the very international character of the programme and student population. Next to the accessibility of the facilities at Ghent University, the panel also learned from the students that there is a problem concerning the housing of the students in Edinburgh. The students complained about the fact that it is very difficult to find housing, during their stay in Edinburgh.

The tutoring and the provision of information to students are, according to the panel, adequate in view of study progress, and geared to the students' needs. The information provision for incoming students is also adequate. The panel states that students are clearly informed about the programme, concerning both the content and the practical implications. The very clear website of the programme and the practical guide, deserve to be appreciated by the panel. However, in the context of the international organisation, the approach leaves room for improvement, especially concerning logistic features, as mentioned above.

During the programme, students can get individual guidance regarding their choice of study and there is sufficient practical support and guidance on job-perspectives. The approach to this seems to be aligned to the master level, in which independent work of the students is an important feature.

Concerning the guidance on flexible learning paths and the mediation function (mediation of conflicts concerning the exams), the panel is satisfied. Still, these forms of guidance deserve continuous vigilance in the light of the complex organisation at the different locations.

Internal Quality Assurance

Each partner university has already established a local quality assurance plan. Because of this, it is not feasible to harmonise the individual QA plans of all participating universities. Instead, a QA plan, acting on a global level, is introduced, in addition to the different existing local plans. The global IMFSE Programme Steering Committee (PSC) has an important task to establish the over- all quality assurance, relying on input from all consortium partners. The global PSC, chaired by the IMFSE coordinator, consists of two staff members from each partner university.

Pagina 7 van 11 The local PSC's assist the global PSC, advising on modifications of the programme contents and monitoring the courses in terms of evaluations and marks achieved by students.

For the IMFSE programme, an important aspect regarding QA concerns the presence of an External Examiner (EE). The EE is asked annually to comment on the processes used and the overall standards applied in the conduct of the assessment and examination of the students. Any comments made in the EE report must be commented on in annual Quality Assurance reporting, ensuring that the appropriate changes are implemented in the following academic year.

As the IMFSE programme only started in 2010, it is too early to evaluate whether the formulated objectives are met, but the panel is very hopeful, both concerning the degree to which past targets were achieved, as concerning the degree to which the targets for the future are founded.

Either way, the attitude towards improvement is, according to the panel, clearly responsive and well above average. Clearly, the outcomes of the evaluation form the basis for verifiable measures for improvement. The students also praised the fast response that was given to their feedback. The management of the programme seems to be aware of the positive points and the working points of the programme, and this awareness also results in the right initiatives.

The panel also appreciates the quality of the self-assessment report, although she is of the opinion that it is too extensive in size. The panel was satisfied with the openness during the visit.

Concerning the involvement of the staff, the students, the alumni and the relevant professional field, the panel sees a great potential in the form of an enthusiastic staff towards assurance and improvement of the quality. The panel appreciates the fact that there is an umbrella committee, in which the different involved institutes are represented. However, the panel notes that the work in this context is not finished yet. Further follow-up will be needed to obtain an active involvement in the internal quality assurance system and a lively culture towards quality assurance and improvement. The panel understands that the organisation in three different universities complicates this matter, also in combination with the young age of the programme, but sees a great potential in the context of the growth of a healthy quality assurance culture.

The panel concludes with stating that there is a great potential in the light of the involvement of all relevant parties, but points out to the fact that this is still a work in progress. However, the panel understands that the fact that, so far, no students have yet graduated from this young programme, complicates the matter of ensuring the link between professionals and the internal quality assurance system of the programme. Hence, the panel strongly suggests, to apply the same proactive attitude towards the involvement of the alumni, as soon as the first students have graduated.

Results

The panel is hopeful about the degree to which the objectives will be achieved. The panel notes however that, so far, no students have graduated from the programme. Also, at the time of the present evaluation, no master's thesis has been evaluated yet.

Pagina 8 van 11 But the panel sees no indications that the intended level will not be reached. In the light of: the top-level staff, the positive complementarity of the different facilities and the adequate programme, the students should be able to reach the intended level. As mentioned above, the panel is satisfied about the requirements towards the students concerning the intended level, the content and the concept of the master's thesis. The academic level meets the standards. In view of future improvement, the professional aspect will need further attention.

In the context of the realisations in terms of internationalisation, the panel is evidently very satisfied, given the very international character of the programme.

In general terms, the preliminary success rate is somewhat lower than for 'regular' master programmes. Of the 21 incoming students, 14 pass without severe difficulties, albeit that some need re-sits to succeed courses. The panel realises that the relatively low success rate in terms of students passing the courses may partly be due to practical adjustment issues. Indeed, for international students, the administrative problems, housing, study accommodation and integration in a new environment are sometimes hampering study progress. However, the panel is of the opinion that the programme's success rate is acceptable.

Given the fact that at the time of the site visit no students graduated yet, there is not yet a clear image in the context of pass rates, student advancement and average study duration and assessment. However, the panel believes that the policy of the study programme with respect to the study progress, should in principle be sufficient in view of limiting delays in study progress as much as possible. But again, these notes can, so far, only be regarded as presumptions.

Conclusie

De NVAO is in het licht van het vorenstaande tot de slotsom gekomen dat het eindoordeel van de commissie deugdelijk is gemotiveerd. De NVAO kan zich dan ook aansluiten bij de bevindingen en overwegingen voor alle facetten en onderwerpen, zoals verwoord in het visitatierapport. De eindconclusie uit het visitatierapport wordt gevolgd.

De tabel geeft per onderwerp en per facet het oordeel van de visitatiecommissie weer.

| ONDERWERP | ORDEEL | FACET | ORDEEL |
|-----------------------------------|--------|--|--------|
| 1 Doelstellingen opleiding | V | 1.1 niveau en oriëntatie | V |
| | | 1.2 domeinspecifieke eisen | G |
| 2 Programma | V | 2.1 eisen gerichtheid | G |
| | | 2.2 relatie doelstellingen - programma | V |
| | | 2.3 samenhang programma | V |
| | | 2.4 studielast | V |
| | | 2.5 toelatingsvoorwaarden | V |
| | | 2.6 studieomvang | OK |
| | | 2.7 afstemming vormgeving - inhoud | V |
| | | 2.8 beoordeling en toetsing | V |
| | | 2.9 masterproef | V |
| 3 Inzet van personeel | V | 3.1 eisen gerichtheid | G |
| | | 3.2 kwantiteit | V |
| | | 3.3 kwaliteit | V |
| 4 Voorzieningen | V | 4.1 materiële voorzieningen | V |
| | | 4.2 studiebegeleiding | V |
| 5 Interne kwaliteitszorg | V | 5.1 evaluatie resultaten | V |
| | | 5.2 maatregelen tot verbetering | G |
| | | 5.3 betrokkenheid | V |
| 6 Resultaten | V | 6.1 gerealiseerd niveau | V |
| | | 6.2 onderwijsrendement | V |

Eindoordeel: positief

De onderstaande tabel geeft per onderwerp het globaal oordeel van de NVAO weer.

| ONDERWERP | OORDEEL |
|--------------------------|---------|
| 1 Doelstellingen | V |
| 2 Programma | V |
| 3 Inzet personeel | V |
| 4 Voorzieningen | V |
| 5 Interne kwaliteitszorg | V |
| 6 Resultaten | V |

Eindoordeel: positief

6. Besluit¹

betreffende de accreditatie van de International Master of Science in Fire Safety Engineering (master) van de Universiteit Gent in samenwerking met Lund University en The University of Edinburgh.

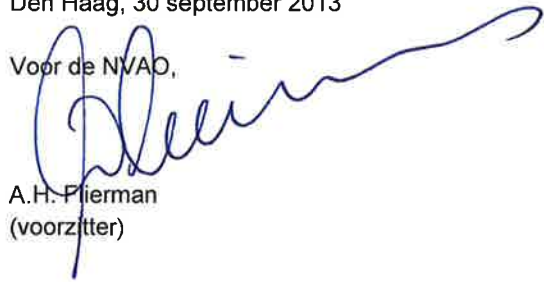
De NVAO,
Na beraadslaging,
Besluit:

Met toepassing van het decreet van 4 april 2003 betreffende de herstructurering van het hoger onderwijs in Vlaanderen, wordt het accreditatierapport en –besluit met positief eindoordeel voor de *joint-degree* opleiding International Master of Science in Fire Safety Engineering (master) van de Universiteit Gent goedgekeurd en wordt de opleiding geaccrediteerd. Het betreft een opleiding zonder afstudeerrichtingen die wordt georganiseerd te Gent (Universiteit Gent); Lund (Lund University) en Edinburgh (The University of Edinburgh).

De in het eerste lid bedoelde accreditatie geldt vanaf de aanvang van het academiejaar 2013-2014 tot en met het einde van het academiejaar 2020-2021.

Den Haag, 30 september 2013

Voor de NVAO,


A.H. Pijerman
(voorzitter)

¹ Conform de bepalingen vermeld in de handleiding accreditatie kan een instelling opmerkingen en bezwaren formuleren op het ontwerp van accreditatierapport. Bij e-mail van 23 september 2013 heeft de instelling gereageerd op het ontwerp van accreditatierapport. Dit heeft geleid tot enkele aanpassingen in het accreditatierapport.

| | |
|--|---|
| – naam instelling | Universiteit Gent |
| – adres instelling: | Sint-Pietersnieuwstraat 25 9000 GENT BELGIË |
| | University of Edinburgh Lund University |
| – aard instelling | ambtshalve geregistreerd |
| – graad, kwalificatie, specificatie Engineering | International Master of Science in Fire Safety |
| – niveau en oriëntatie | master |
| – studieomvang | 120 studiepunten |
| – opleidingsvarianten | |
| – afstudeerrichtingen: | geen |
| – studietraject voor werkstudenten: | nee |
| – vestiging opleiding | Gent, Lund, Edinburgh |
| – onderwijstaal | Engels |
| – (delen van) studiegebieden | Toegepaste wetenschappen |
| – bijkomende titel | burgerlijk ingenieur |