

BNEN Agreement Nr. 4
concerning an interuniversity programme
for an advanced/ specialised/complementary
“Master in Nuclear Engineering”
within the Framework of the Belgian Nuclear Higher Education Network (BNEN)

This Agreement is made between

1. Vrije Universiteit Brussel (VUB)
represented by Prof. Caroline Pauwels, Rector
2. Universiteit Gent (UGent)
represented by Prof. Rik Van de Walle, Rector
3. KU Leuven (University of Leuven)
represented by Prof. Luc Sels, Rector
4. Université de Liège (ULg)
represented by Prof. Albert Corhay, Rector
5. Université catholique de Louvain (UCL)
represented by Prof. Vincent Blondel, Rector
6. Université libre de Bruxelles (ULB)
represented by Prof. Yvon Englert, Rector,

hereafter jointly called "the Universities";

and:

Studiecentrum voor Kernenergie/Centre d'Etude de l'Energie Nucléaire, SCK•CEN, a public utility centre, which registered office is situated at Herrmann Debroxlaan 40-42, B-1160 Brussels, Belgium and laboratories at Boeretang 200, B-2400 Mol, represented for the purpose of the signature of this Agreement by Prof. Eric van Walle, Director-General and Prof. Derrick Gosselin, Chairman of the Board of Governors,

hereafter called “SCK•CEN”.

This agreement ("Agreement") replaces the agreement of 2006-2007, which in turn replaced the agreement of 2005, in its turn replacing the agreement of 2002.

The Universities and SCK•CEN are jointly called Consortium BNEN, and Partners.

Whereas

- the Partners are aware that on the European level and in view of the European Research Area a problem exists to keep up the expertise in the nuclear field and that

- the many efforts from the European Commission and the international agencies, such as the OECD/Nuclear Energy Agency (NEA), to obtain international collaborative programmes in nuclear science, have to be supported in Belgium.
- the nuclear industry, the regulator FANC and NIRAS/ONDRAF in Belgium need expertise and are willing to support a collaborative programme in Belgium;
 - in 2000, contacts with European colleagues have resulted in the creation of ENEN, the European Nuclear Education Network that became a non profit international organisation established on September 22, 2003. This organisation has received the support of the European Commission through several successive projects aiming at the preservation and further development of higher nuclear education and expertise. In particular, through ENEN, locally coordinated teaching activities such as those developed by BNEN receive European support and international recognition. For this purpose, ENEN organises among others quality assessments, specialised seminars linked to research, mobility actions of teachers and students, as well as studies around the improvement of teaching and training. In 2005-2006, the quality of the education offered under the BNEN agreement, considered as a pilot inter-university project, has been externally assessed. The results of this assessment were very positive;
 - it has been agreed upon by the Universities that it is of utmost importance for the nuclear safety and the energy provision of Belgium, that all academic expertise should be joined in one effort to establish one unique academic programme preparing the personnel for its future functioning in the nuclear industry, research centres and regulatory & supervisory bodies;
 - several formal audits/visitations of the BNEN programme have taken place, with positive outcome and resulting in obtaining the EUR-ACE accreditation by the Commission des Titres d'Ingénieur (CTI) in 2016;
 - the Partners have since 2002 worked together in a joint programme on nuclear science and technology, named "the Belgian Nuclear higher Education Network – BNEN", and have successfully cooperated up till now, hence their belief that this cooperation should be continued and strengthened as follows.

In view of:

On behalf of the Universities of the Flemish Community of Belgium:

- Codex Hoger Onderwijs, gecodificeerd bij Besluit van de Vlaamse Regering van 11 oktober 2013 tot codificatie van de decretale bepalingen betreffende het hoger onderwijs, bekrachtigd bij Decreet van 20 december 2013 tot bekrachtiging van de decretale bepalingen betreffende het hoger onderwijs, gecodificeerd op 11 oktober 2013, gepubliceerd in het Belgisch Staatsblad van 27 februari 2014, blz. 15.976 en volgende, en in het bijzonder de artikelen II.171-173.

On behalf of the Universities of the French Community of Belgium:

- Décret du 7 novembre 2013 définissant le paysage de l'enseignement supérieur et l'organisation académique des études.

Article 1 Scope

The Partners agree to pursue as the Consortium BNEN an interuniversity “master after master” programme “Master in Nuclear Engineering”, taught in English (“BNEN Programme”).

In the French Community it will be called the study programme of “Master de spécialisation en génie nucléaire”.

In the Flemish Community it will be called the study programme of Master of Science in Nuclear Engineering" (master after master).

It pertains to the study domain of “Ingenieurswetenschappen / Toegepaste wetenschappen” and “Sciences de l’ingénieur et technologie” such as defined in the above mentioned decrees of respectively the Flemish and the French Community, and covers 60 ECTS.

After successful completion of the programme the joint academic degree of “Master of Science in Nuclear Engineering / Master de spécialisation en génie nucléaire" will be awarded jointly on behalf of the Universities. The diploma will mention all institutes of higher education. The diploma supplement will mention all Partners of the Consortium BNEN.

Article 2 Admission Criteria

All admissions to the BNEN Programme are conditional and subject to a decision by the BNEN Academic Committee defined below in Article 4. The guidance rules applied by the BNEN Academic Committee are specified in Annex 1 to this Agreement. Annex 1 can be amended by the BNEN Academic Committee by unanimous vote, after consultation with SCK•CEN.

The clearance to access one or more security zones of SCK•CEN is delivered by the Federal Agency for Nuclear Control ("FANC") and must be obtained to take part in laboratory sessions of the BNEN Programme (as defined in article 3.3). This clearance by FANC is a precondition to the BNEN Programme and as such, all “admissions” given by the BNEN Academic Committee are conditional and thus “provisional”. The “provisional” admission will be automatically cancelled if clearance is not timely received by the student.

Article 3 Responsibilities

3.1. For the purpose of the BNEN Programme, the universities of the Flemish Community of Belgium (listed above under nrs. 1, 2, 3) act as individual institutions, but

they agree to organise the common programme and to issue a joint diploma together with all six university partners.

In accordance with the above mentioned Decree of the 7th of November 2013, the universities of the French Community of Belgium (listed above under nrs. 4, 5, 6), agree to jointly organise the common programme, through a "referent university", and to issue a joint diploma together with all six university partners.

The establishments authorised in the French Community of Belgium designate among them, ULB as the referent institution, from the start of the first admission campaign following the signature of this agreement on. In this capacity, ULB is responsible for centralising the administrative and academic management of both the programme and the students for all partners in the French Community of Belgium. The status of referent institution can be assigned to another institution when the agreement is renewed.

Each (referent) university shall provide the other universities, not later than 15 November, the list (including, as a minimum, the surnames, forenames and nationality of the students and the number of credits in the students' annual programme) of the students enrolled in the programme so that each institution can carry out an administrative registration. Each (referent) university commits to communicate, as soon as possible, any changes related to this list.

3.2. Students have the choice to enrol in one of the partner universities of the Flemish Community of Belgium or at the "referent university" of the French Community of Belgium.

3.3. In the implementation of the BNEN Programme mentioned in Article 1, the Universities, assisted herein by SCK•CEN, shall commit themselves to the BNEN Programme as outlined in Annex 2 to this Agreement. Amendments to this BNEN Programme can only be initiated by unanimous agreement of the members of the BNEN Academic Committee, as defined in Article 4. The BNEN Academic Committee takes the initiative to organise timely interuniversity consultation, in order to be able to submit the proposal of the altered BNEN Programme for approval, to the respective university authorities. Approved changes will be laid down in a revised version of the BNEN Programme.

3.4. The task of coordination of the quality assurance and accreditation will be assumed by the KU Leuven on behalf of the universities of the Flemish Community of Belgium. On behalf of the universities of the French Community of Belgium, the "referent university" will assume the required quality coordination actions.

3.5. The Universities (in their individual capacity or via the "referent university") will assume responsibility for all students they register for the BNEN Programme and will award to these students, on the condition of successful completion thereof, the degree as stated in Article 1, certified by a joint diploma on behalf of the Universities. The diploma will be signed by the Rector of each participating university and will be issued in three languages: French, Dutch and English.

3.6. The registration fee for the BNEN Programme is the official registration fee of the respective university at which the student registers.

3.7. All teaching assignments with regard to the different subjects of the BNEN Programme, will be assigned to members of the academic staff or to guest professors of a participating university appointed by their academic institution, subject to prior mandatory positive advice of the BNEN Steering Committee (as defined in Article 4). If necessary, teaching assignments can, also subject to prior mandatory positive advice of the Steering Committee, be assigned to persons not yet pertaining to the academic staff of one of the participating universities, provided that one of the participating universities commits itself to appoint or nominate this person within one of the categories of academic staff with teaching qualifications according to the university Decree it comes under, and in accordance with its own procedural rules. The affiliation of the instructors who are appointed at the time of signature of this Agreement are listed in Annex 3.

3.8. The students are subject to the general examination regulations of the respective university they are registered at insofar as they are not amended by specific examination regulations agreed upon by the Universities in view of this BNEN Programme as outlined in Annex 4 to this Agreement. The rules for awarding credits and for successful completion of the BNEN Programme are listed in Annex 4 and are applied by the BNEN Academic Committee, acting as formal Examination Committee (as defined below in Article 4). After decision, the results are communicated to the Universities and the students. Annex 4 can only be changed by unanimous agreement of the BNEN Academic Committee. Approved changes will be laid down in a revised version of Annex 4.

3.9. SCK•CEN shall provide facilities, office equipment as well as supplies and materials required for the completion of the BNEN Programme.

3.10. SCK•CEN shall nominate one co-ordinator of the Consortium BNEN who will interface with the Steering Committee, with the Universities, the professors and the students. SCK•CEN also runs the "BNEN Secretariat", coordinated by the BNEN administration manager ("BNEN Administration Manager").

3.11. The Universities commit themselves not to duplicate the BNEN Programme at the Master's level.

Article 4 BNEN Steering Committee, BNEN Teaching Committee, BNEN Academic Committee

4.1 The management of the interuniversity BNEN Programme shall be vested in a "BNEN Steering Committee" (SC).

As a general rule, the SC shall consist of one delegate of each Partner. Each Partner shall inform in writing the other Partners of the delegate it nominates as member of the SC and his or her proxy. Each Partner is free to replace its delegate or his or her proxy on the

condition of informing the other Partners in writing about the newly nominated delegate or his or her proxy.

The appointed delegate has the formal voting right. A delegate can be replaced by one proxy, who may cast the vote on behalf of the absent delegate. Proxies may participate in the SC meetings together with the appointed delegate, but the former will then only have an observer status and are not allowed to vote. The student delegate and the assistant delegate can be present at SC meetings on invitation, but without voting rights. The BNEN secretariat participates de-facto to the SC meetings.

4.2. The SC elects every two years, by formal (and secret, if requested) votes, a chairman ("Chairman") and a vice-chairman ("Vice-Chairman"). Election and re-election will only be accepted if obtained by majority of the Partners.

4.3. The university members of the SC, complemented with one delegate of the students and one delegate of the assistants, together create the "**BNEN Teaching Committee**". Both the students' and assistants' delegates can be replaced by one proxy. SCK•CEN will be invited as observer to BNEN Teaching Committee meetings.

4.4. The university members of the SC form the "**BNEN Academic Committee**", of which SCK•CEN is an observing member. The BNEN Academic Committee shall:

- 1) Agree on the acceptance of the students.
- 2) Look after and renew if necessary the rules to be applied by the BNEN Examination Committee, as described in Article 3, item 3.8.
- 3) Look after the contents of the BNEN Programme determined in Article 1 and if an amendment in the BNEN Programme is required, start the procedure mentioned in Article 3.3.
- 4) Decide on awarding exemptions to students.

4.5. The Steering Committee shall:

- 1) Manage the BNEN Programme and draft and agree on internal rules of the Consortium BNEN.
- 2) Review the objectives and tasks laid down in the Agreement and give general direction to the BNEN Administration manager.
- 3) Strive for external funding and sponsoring and decide on the redistribution of such funds received, taking into account specific costs that have to be covered, and possible retains of the receiving Party.

4.6. The SC shall meet as a matter of principle at least twice a year. The meetings will be convened by the Chairman. A special meeting will be held within a reasonable time after receipt of a written request from a minimum of three members of the SC or from the SCK•CEN co-ordinator, as defined in Article 3.10.

4.7. Each delegate member of the SC can bring one observing non-voting person (e.g. experts, ...) to the SC meetings, unless decided otherwise by the SC.

4.8. The SC shall operate and reach its decisions to the greatest extent possible by unanimous agreement. However when a formal vote is requested by a member or is part of the rules as outlined in this Agreement, each Partner shall have one vote. Voting will be organised by the Chairman and decisions of the SC will be adopted by a two-thirds majority of the votes cast, the quorum being 50% of all the members, except when unanimity is explicitly required.

The same procedures apply for the BNEN Teaching and Academic Committees.

4.9. The working language of the SC is the English language.

Article 5 Costs and financing

5.1. The Partners agree that the co-operation under this Agreement will be carried out without exchange of finances between the universities in which students can enrol in the programme, except as foreseen for the redistribution of external funding. The customary registration fees as well as the subsidy paid by the Flemish Departments of Education to the Universities within the framework of output subsidy (subsidy per student graduated) remain at the disposal of the respective university of the Flemish Community. In the French community, the exchange of finances between the referent university and the other universities obeys the specifications contained in Annex 5.

5.2. Operational costs and advertising will be covered by external funds if available. External funds may originate from actors in nuclear industry, regulatory & supervisory bodies.

5.3. SCK•CEN shall be entitled to revenues obtained from external funding and sponsoring, after deliberation and decision of the SC, provided the funding agency agrees.

Article 6 Liabilities, insurance and social security

6.1. Each Partner shall be solely liable for any loss incurred by, or damage or injury to, third parties, resulting from its own actions in the execution of this Agreement. The individual Universities will assume responsibility also as to the requirements of insurance for all students they register for the BNEN Programme. In each university, the students enrolled as regular students or administratively enrolled are also covered by liability and bodily injury insurance policies during their commute to and from class.

6.2. Each Partner shall be fully responsible for the performance of any part of its share of the Agreement and for the requirements of insurance and social security obligations for its personnel, involved herein.

6.3. With respect to any injury to any person or any damage to any property of any person occurring at any establishment of any of the Partners in the course or arising out of the execution of this Agreement, the Partner at whose establishment the injury or damage occurs, shall be solely responsible for the payment of compensation to such extent as this Partner is legally liable for such injury or damage. This article shall not apply with respect to any such injury or damage, the causing of which is attributable to any act of a servant or agent of any of the Partners, committed with the intention of causing harm to any person or property or with reckless disregard for the consequences of its act.

Article 7 No joint venture or agency

Nothing in this Agreement shall be deemed to create a joint venture or agency between the Partners of BNEN.

Article 8 Entry into force, changes and termination

8.1. This Agreement shall come into force as of September 14, 2017 onwards and shall continue for an indefinite term.

8.2. This Agreement shall be evaluated on a regular basis. The results of the evaluation are submitted to all of the Partners. Necessary changes to the agreement can be negotiated at will and will be laid down in an annex by this agreement.

8.3. Subject to notice before 31 December of year n given by registered letter to the SC, each Partner may terminate the Agreement from the next academic year onwards, without prejudice to any obligation incurred before the day of termination.

Article 9 Choice of law and dispute settlement

This Agreement shall be governed by and construed in accordance with the laws of Belgium, excluding its conflict of law provisions.

In particular shall this Agreement be governed by all laws and regulations applicable to University courses, in the Belgian Communities.

The settlement of any difference or conflict arising from or in connection with this Agreement shall be attempted by an amicable effort from the Partners.

Should such an amicable settlement not be possible, the Courts of Brussels shall have competency to decide on the dispute(s) which remain(s) unresolved.

Article 10 Language

This Agreement is made in English, which language shall govern all documents, notices and meetings relating to this Agreement.

Article 11 Annexes

This Agreement contains five annexes

Annex 1: BNEN admission criteria

Annex 2: BNEN Programme

Annex 3: BNEN Teaching assignments

Annex 4: Common criteria for passing course units and for succeeding the BNEN Programme

Annex 5: Exchange of finances between the universities of the French Community

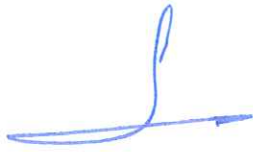
Annex 6 : Diploma template

Approved by



Prof. Caroline Pauwels
Rector VUB
date:





Prof. Rik Van de Walle
Rector UGent
date: 31/01/2018



UNIVERSITEIT
GENT

**Signatory page relating to the BNEN Agreement Nr. 4
concerning an interuniversity programme
for an advanced/ specialised/complementary
“Master in Nuclear Engineering”
within the Framework of the Belgian Nuclear Higher Education Network (BNEN)
between KU Leuven/UGent/VUB on the one hand, and
ULiège/UCL/ULB on the other hand**

Agreement approved by

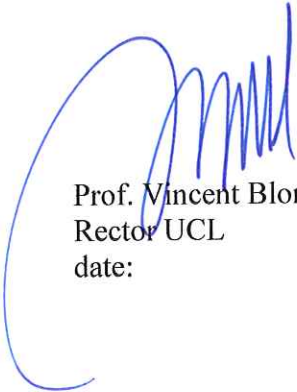


Prof. Luc Sels
Rector KU Leuven
date: 22/12/2017

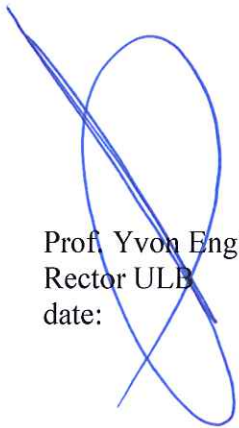




Prof. Albert Corhay
Rector ULg
date:

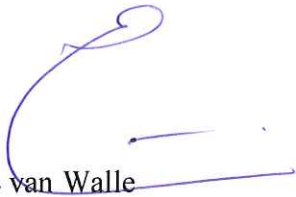


Prof. Vincent Blondel
Rector UCL
date:

A handwritten signature in blue ink, consisting of a large, stylized loop that crosses itself, with a long, thin stroke extending upwards and to the left.

Prof. Yvon Englert
Rector ULB
date:

And for SCK•CEN



Prof. Eric van Walle
Director-General

date: 21/21/18

Prof. Derrick Gosselin
Chairman of the Board of Governors of SCK•CEN

date: 24/2/18



S.O. Ir. Sigrid Jourdain
Managing director

Annex 1 to the BNEN Agreement Nr. 4

BNEN Admission Criteria (valid as of 2016-2017)

The BNEN Programme has a limited capacity of enrollment, as lab sessions are organised at the premises of the SCK•CEN research center, using its experimental facilities. Consequently, all admissions are conditional and subject to a decision by the BNEN Academic Committee. Admission to the BNEN Programme can be considered for the following possibly eligible cases:

- the holders of an academic degree of “master en sciences de l'ingénieur, orientation Ingénieur civil” from the “Communauté française de Belgique” or an academic degree of “Master of Science in de ingenieurswetenschappen (burgerlijk ingenieur)” from the “Vlaamse Gemeenschap van België” or “Master of Science in Engineering”, given a sufficient scientific/technical background required for the BNEN courses, whereby the BNEN Academic Committee may impose additional background courses (for a maximum number of 15 ECTS), taking into account the contents of the curriculum already completed;
- the holders of an academic degree similar and considered equivalent to those mentioned above, under the same conditions;
- the holders of an academic degree similar and considered equivalent to those mentioned above, delivered by the Royal Military School, under the same conditions.
- the holders of an academic degree of “master en sciences industrielles ou de MA en sciences de l'ingénieur industriel” from the “Communauté française de Belgique” or an academic degree of “Master of Science in de industriële wetenschappen” (industriële ingenieur) from the “Vlaamse Gemeenschap van België”, whereby the BNEN Academic Committee will impose an additional set of background courses (for a maximum number of 60 ECTS), taking into account the contents of the curriculum already completed, and whereby previously relevant background courses may be valorised and accepted for credit transfer:¹
 - If the student registers in an institution of the “Communauté française de Belgique”, these additional credits are then part of the « master de

¹ As an example, typical “make up programmes” amount to about 30 ECTS for applicants with an electro-mechanical background. For applicants with a different background, like ICT, the “make up programme” may be close to 60 ECTS.

spécialisation » the student will enroll in and they are a prerequisite for the regular BNEN Programme of 60 ECTS.

- If the student registers in an institution of the “Vlaamse Gemeenschap van België”, these additional credits are part of a preparatory “make up” programme, before possibly being admitted to the BNEN Programme of 60 ECTS.
- the holders of an academic degree of “master en sciences chimiques, physiques, mathématiques ou informatiques” or “master en sciences de l'ingénieur orientation bioingénieur” from the “Communauté française de Belgique”, or an academic degree of “Master of Science in de chemie, Master of Science in de fysica, Master of Science in de wiskunde of Master of Science in de informatica” or “Master of Science in de bio-ingenieurswetenschappen (bio-ingenieur)” from the “Vlaamse Gemeenschap van België”, or holders of the equivalent academic degree in the English language, or an academic degree similar and equivalent to those just mentioned, whereby the BNEN Academic Committee will impose an additional set of background courses (for a maximum number of 60 ECTS), taking into account the contents of the curriculum already completed, and whereby previously relevant background courses may be valorised and accepted for credit transfer:²
- If the student registers in an institution of the “Communauté française de Belgique”, these additional credits are then part of the « master de spécialisation » will enroll in student and they are a prerequisite for the regular BNEN Programme of 60 ECTS.
 - If the student registers in an institution of the “Vlaamse Gemeenschap van België”, these additional credits are part of a preparatory “make up” programme, before possibly being admitted to the BNEN Programme of 60 ECTS.
- the holders of a foreign academic degree judged similar to the academic degrees delivered by either the “Communauté française de Belgique” or the “Vlaamse Gemeenschap van België”, mentioned in the above items, under the same conditions (i.e. basic master programme of at least 300 ECTS and depending on the acquired background in the curriculum and the level of abstraction) and according to the prescriptions of the respective decrees.

The clearance to access one or more security zones of SCK•CEN is delivered by the Federal Agency for Nuclear Control (FANC) and must be obtained to take part in laboratory sessions of the BNEN Programme. **This clearance by FANC is a**

² As an example, typical “make up programmes” amount to about 30 ECTS for applicants with a physics background. For applicants with a different background, like informatics, the “make up programme” may be closer to 60 ECTS.

precondition to the BNEN Programme and as such, all “admissions” given by the BNEN Academic Committee are conditional and thus “provisional”. The “provisional” admission will be automatically cancelled if this clearance is not timely received by the student.

ANNEX 2 to the BNEN Agreement Nr.4

BNEN Programme (valid as of 2014-2015)

The current BNEN Programme has the following structure:

- **Compulsory modules:** 31 ECTS
- **Elective modules:** 9 ECTS (three courses to be chosen)
- **Master thesis:** 20 ECTS

The detailed course programme is as follows:

| BNEN | ECTS |
|--------------------------------------------------------------------|------|
| Compulsory modules (31 ECTS) | |
| <i>Nuclear energy: introduction</i> | 3 |
| <i>Introduction to nuclear physics and measurements</i> | 3 |
| <i>Radiation protection</i> | 3 |
| <i>Nuclear reactor theory</i> | 6 |
| <i>Nuclear thermal hydraulics</i> | 5 |
| <i>Safety of nuclear power plants</i> | 5 |
| <i>Nuclear fuel cycle</i> | 3 |
| <i>Nuclear materials</i> | 3 |
| | |
| Elective modules (9 ECTS, to be chosen from the list below) | |
| <i>Advanced nuclear reactor physics and technology</i> | 3 |
| <i>Advanced nuclear materials</i> | 3 |
| <i>Advanced radiation protection/radiation ecology</i> | 3 |
| <i>Advanced courses of the nuclear fuel cycle</i> | 3 |
| <i>Nuclear and radiological risk governance</i> | 3 |
| <i>Advanced course elective topic</i> | 3 |
| | |
| Total course load new situation | 40 |
| | |
| Master thesis (20 ECTS) | 20 |
| | |
| TOTAL | 60 |

The compulsory courses cover the main foci of nuclear engineering. By introducing the option of at least three elective courses, the BNEN students have the possibility to choose

either a direction more into 'electric power generation' or either into 'radioprotection/radioecology /...'

The proposed courses alone do not meet the requirements for the accreditation as Class I Expert (Class I facilities – nuclear reactors) by the nuclear Regulator (Federal Agency for Nuclear Control; FANC). To achieve accreditation, the Scientific Council of FANC accepts that the credits of the master thesis (20 ECTS) could also be counted for the accreditation, provided that the topic covers either 'Radioprotection' or 'Nuclear Safety' subjects. In that case, a student graduating from the standard BNEN Programme (60 ECTS) could also be recognised as Class I Expert.

The specific Teaching Assignments are listed in Annex 3 to this Agreement.

ANNEX 3 to the BNEN Agreement Nr.4

BNEN teaching assignments (valid as of 2014-2015)

| BNEN | ECTS | KU Leuven | UGent | VUB | ULB | ULg | UCL |
|--------------------------------------------------------------------|-----------|-----------|-----------|----------|----------|----------|-----------|
| Compulsory modules (31 ECTS) | | | | | | | |
| Nuclear energy: introduction | 3 | 3 | | | | | |
| Introduction to nuclear physics and measurements | 3 | | | | 3 | | |
| Radiation protection | 3 | | 3 | | | | |
| Nuclear reactor theory | 6 | 2 | 2 | 2 | | | |
| Nuclear thermal hydraulics | 5 | | | | | | 5 |
| Safety of nuclear power plants | 5 | | 3 | | 2 | | |
| Nuclear fuel cycle | 3 | | | | | 3 | |
| Nuclear materials | 3 | 2 | | | | 1 | |
| Elective modules (9 ECTS, to be chosen from the list below) | | | | | | | |
| Advanced nuclear reactor physics and technology | 3 | | | | | | 3 |
| Advanced nuclear materials | 3 | 2 | | | | 1 | |
| Advanced radiation protection/radiation ecology | 3 | | 3 | | | | |
| Advanced courses of the nuclear fuel cycle | 3 | | | | | 3 | |
| Nuclear and radiological risk governance | 3 | | 1 | | | | 2 |
| Advanced course elective topic | 3 | | | 3 | | | |
| Total commitment Courses | | 9 | 12 | 5 | 5 | 8 | 10 |
| Master thesis (20 ECTS) | 20 | 5 | 5 | 5 | 5 | 5 | 5 |

ANNEX 4 to the BNEN Agreement Nr.4

Common criteria for passing course units and for succeeding the BNEN Programme (general rules applied since 2007-2008)

As a general rule, the criteria below are rigidly applied. However, in exceptional circumstances, the Examination Committee has the prerogative to deviate from these criteria. A deviation from the criteria below will be justified on a case-by-case basis.

Article 1 (criteria for passing course units)

A student shall be deemed to have succeeded in a course unit if **at least 10 out of 20 points** or a 'pass' assessment has been awarded.

In both cases a **credit certificate** shall be delivered to the student, unless the enrolment fee was not paid on time or fraud has been established.

In case a student is allowed and decides to retake an examination, the last result that was obtained always overwrites the earlier results, regardless of the value of the new result.

Article 2 (weighting)

In order to establish the **percentage** obtained for the BNEN year of study, the individual course results are weighted by the number of ECTS characteristic of that course and/or master project work or thesis.

The BNEN Teaching Committee, at its discretion, can decide to adjust or modify the ECTS allocation of the particular courses and master project work or thesis in general, or for individual students in case those students request credit transfer from earlier course work or from exchange courses. If changes have occurred compared to the previous year, the new arrangement shall be made public at the start of the academic year.

Article 3 (criteria for obtaining the BNEN degree)

All courses are graded with marks out of 20; i.e., each result is expressed as x/20 with 0. i.e. x .le. 20. A grade less than 10/20 is referred to as a 'failing grade'.

Definition:

For each failing grade for a course, the number of 'fail points' is defined as the number of points below 10/20. E.g., a score of 08/20 amounts to two 'fail points'.

If applicable, the number of 'fail points' for several courses is added together to obtain the total number of 'fail points'. E.g., a score of 08/20 for one course and 09/20 for another course amounts to three 'fail points'.

A student shall be deemed to have passed the complete BNEN year of study when one of the following two conditions has been met:

a) s/he has passed all courses of the year of study (10/20 or 'pass'); i.e., a **percentage of 50%** suffices if all courses have been passed successfully.

b) in case of course failure (other than the master thesis/project), a maximum of two scores of 09/20 can be 'pardoned' by the Examination Board, on the condition that every 'fail point' is 'overcompensated' by 2 %-pts in the average percentage score. This means that the Examination Board is willing to award the degree even in the following cases:
student has one 09/20 but at least 52 % on average;
student has two 09/20 but at least 54 % on average.

c) in case of course failure (other than the master thesis/project), a maximum of one score of 08/20 can be 'pardoned' by the Examination Board, on the condition that every 'fail point' is 'overcompensated' by 2 %-pts in the average percentage score. This means that the Examination Board is willing to award the degree even in the following case:
student has one 08/20 but at least 54 % on average.

d) as a rule, in case of a total of more than 2 'fail points' (i.e., the accumulation of all marks short of 10), students will not be 'pardoned'.

e) for the master project/thesis a minimum score of 10/20 is always required.

In exceptional circumstances the Examination Board may decide to award a pass to a student who failed to meet the criteria set forth in the present examination regulation. Each member of the Examination Board or the ombudsperson may request a secret vote. If the Examination Board decides (whether by secret vote or not) to award a pass to the student in such a case, it shall justify its decision by citing the special circumstances that prompted the decision.

In the case of students who follow a part-time or personalised itinerary arranged according to a programme of several study years, the Examination Board shall only take a decision on whether a student has passed or succeeded if the latter has obtained results for all the course units of one year of study.

For students not satisfying the requirements to pass as laid down in this Article 3, the decision will be recorded as "credits not validated".

Credits of individual courses are awarded according to the rules that apply at the university where the student is registered.

Article 4 (special examination board decisions)

The BNEN examination board may establish that a student:

- is guilty of irregular conduct and decide to impose one of the sanctions as described in the examination regulation of the university of registration.

- has not participated in all exams and has therefore submitted an **incomplete result**, in which case a decision is made to postpone a final judgement on said student. On the transcript, the decision will be recorded as “*credits not validated*”.

Article 5 (criteria to obtain a Master's degree and levels of achievement)

The student who has passed the BNEN year of study obtains the degree of Master in Nuclear Engineering – Master de spécialisation en génie nucléaire.

Students who have a reduced study load and whose programme of study is divided differently in time, shall obtain the degree of Master when they have passed each of the course units of their programme of study, albeit taking into account the conditions set out in Article 3.

A student obtaining the degree of Master shall be awarded with the following levels of achievement:

- *satisfaction* (cum fructum), if the student passes according to the rules laid down in Article 3;

- *distinction* (cum laude), on condition that 68% of the marks have been obtained and that all course units received a mark of at least 10/20;

- *great distinction* (magna cum laude), on condition that 77% of the marks have been obtained and that all course units received a mark of at least 10/20;

- *greatest distinction* (summa cum laude), on condition that 86% of the marks have been obtained and that all course units received a mark of at least 10/20;

For each 9/20 or in case of an 8/20; two and four percentage points, respectively, are added to the above mentioned requirements for levels of achievement.

ANNEX 5 to the BNEN Agreement Nr.4

Exchange of finances between the universities of the French Community

In the French Community, account shall be taken, for the financing, of the students eligible for subsidy, enrolled in the Programme referred to in this Convention, in accordance with the provisions of the Decree of 11 April 2014.

The internal revenue generated by the programme consists of

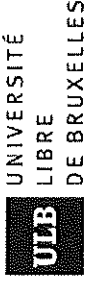
- registration fees (normal and supplementary fees),
- subsidies from the French Community (variable allocation, compensation for grant holders' special fees and reduced fees),
- CCD grants (training costs and international courses).

The partners agree on the modalities of revenue distribution, taking into account the respective involvement of each institution in the program.

The referent shall deduct 5% of management fees and the balance shall be distributed among the institutions of the French Community in proportion to the number of course credits they organise.

ANNEX 6 to the BNEN Agreement Nr.4
Diploma template

See the following pages.



COMMUNAUTE FRANCAISE DE BELGIQUE

Sciences de l'ing nieur et technologie

We, Rector of the KU Leuven, UGent and VUB, upon the nomination of the relevant Board of Examiners hereby

Vu le d cret du 7 novembre 2013 d finissant le paysage de l'enseignement sup rieur et l'organisation acad mique des  tudes;

Nous, Pr sident-e, Secr taire et Membres du jury charg  de conf rer le grade acad mique concern , d clarons que

Name Surname

born in City (Country) on date of Birth has been awarded the degree of

Master of Nuclear Engineering Master of Science (MSc)

Pr nom NOM

N -e   Ville (PAYS), le Date a obtenu en l'ann e acad mique xxxx-xxxx le grade acad mique de

Master de sp cialisation en G nie nucl aire

Cum xxx

Avec mention

This degree is situated in the field of Engineering, with a weight of 60 credits and complies with the accreditation and recognition regulations stipulated by the Code of Higher Education, coordinated on 11 October 2013. The awarded qualification is situated on level 7 according to the Flemish Qualification Structure (VKS), as stipulated in the decree of 30 April 2009 regarding the Flemish qualification structure.

In testimony thereof we have awarded him/her this degree in accordance with the requirements of the above mentioned Code, in particular article II.171, §1, §2 and §3.

Date

Rector KU Leuven

Rector VUB

Rector UGent

Le/La Pr sident-e du jury

Le/la Secr taire du jury

Les Recteurs ou leurs d l gu s

Le/La Titulaire

The diploma and the diploma supplement are inextricably linked and form one integral entity. Only diplomas printed on paper containing KU Leuven's watermark and hologram and the Rector's signature are legally valid. The side containing the hologram is the original side. The other side is a reproduction.

Un suppl ment est annex  au pr sent d cret. Il affecte notamment la r alit  des empochonnements du pr sent dipl me, suivi par l' tudiant-e, les conditions d'acc s aux  tudes et les  valuations sanctionn es par le grade acad mique conf r .



Wij, rector van de KU Leuven, UGent en VUB, verklaren, op advies van de bevoegde examencommissie, dat

Voornaam Naam

geboren te Stad (Land) op geboortedatum
de graad heeft behaald van

Master in de nucleaire techniek
Master of Science (MSc)

Cum xxx

Deze opleiding situeert zich in het studiegebied Toegepaste Wetenschappen, heeft een studievolumen van 60 studiepunten en voldoet aan de accreditatie- en erkenningsvoorschriften zoals bepaald in de Codex Hoger Onderwijs, gecodificeerd op 11 oktober 2013. De toelatingssituatie situeert zich op niveau 7 volgens de Vlaamse Kwalificatiestructuur (VKS), zoals vermeld in het decreet van 30 april 2009.

Derhalve kennen wij hem dit diploma toe, conform de hierboven vermelde Codex, inzonderheid artikel II.171, §1, §2 en §3.

Datum

Rector KU Leuven

Rector VUB

Rector UGent

Het diploma en het bijhorende diplomasupplement zijn onlosmakelijk met elkaar verbonden en zijn één geheel. Alleen diploma's gedrukt op papier met KU Leuven-watermerk en het KU Leuven-hologram en de handtekening van de rector zijn rechtsgeeldig. De zijde die het hologram bevat geldt als de originele zijde, de andere zijde geldt als een vertaling.