Joint degrees: the future for agricultural higher education in the EU?

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in


Zaragoza: CIHEAM
Options Méditerranéennes: Série A. Séminaires Méditerranéens; n. 113

2015
pages 183-194

Article available online / Article disponible en ligne à l’adresse:

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Joint degrees: the future for agricultural higher education in the EU?

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Abstract. In this article, the example of the International Master of Rural Development (IMRD) is used to show how joint master degrees can be and are a tool to foster international cooperation between Higher Educational Institutes (HEIs) in the area of education. First potential models for joint degrees are defined, next the development of the IMRD course is presented as well as the challenges posed by joint degrees and how they can be overcome.

Keywords. Joint degrees – Higher education – Rural development.

I – Introduction

Double, multiple and joint degrees are promoted as an opportunity for international higher education cooperation. The International Master in Rural Development (IMRD) existing since 2004 is an example of such a joint master. By presenting the development of this master we illustrate the possibilities and challenges of joint masters. We argue that joint masters do indeed provide a high potential to train future specialists in agricultural and live sciences, in particular for international functions which become more and more common in a globalized world. The main advantage is that students get training from the best specialists in a discipline if the master is well constructed and get acquainted with different circumstances of agriculture and rural development. Due to the mobility requirements students are also obtaining those communicative and transferable skills required for international functions.

Of course joint degrees are not limited to master programs. In theory they can also be developed for undergraduate or bachelor programs and certainly are often applied for PhD degrees. However in practice, when discussing joint degrees mostly the graduate or master level is concerned. At undergraduate level at least in the EU, there is often a language barrier (unless the study of languages is concerned) and legislation allows less flexibility in terms of learning outcomes or courses to be followed. At PhD level double or joint degrees do not pose the same challenge as mostly university regulations allow to make contracts at an individual student level meaning that for each student separately a different ‘construction’ can be set up (specifying the individual program, the thesis and defence requirements and so on). This of course allows a lot
of flexibility and so these days a lot of joint PhD programs exist. Joint masters (and bachelors), however, do pose more challenges because they cannot be individually tailored but require a serious effort of defining common learning outcomes, entrance criteria, programmes and quality control systems. Joint masters have been promoted in Europe mainly under the Erasmus Mundus program. Different models are however possible.

In this article we mainly look at joint master programs. In section 2, we describe potential models and argue why we have developed the particular model used for IMRD. In section 3, we describe how IMRD is created and organised, and provide some data on its development since 2004. In section 4 some challenges are described and how they need and can be overcome. Finally we conclude in the discussion and conclusion section with some general remarks and recommendations for the further promotion, development and accreditation of joint masters programs.

II – Models for joint degrees

In discussing joint degrees there is a lot of confusion in terminology and the term joint degrees is often misused for situations where there is only credit exchange or where students only receive a degree from those universities where they have followed a substantial part of their curriculum. In general it concerns degrees in which students have studied in at least two different universities (mostly) belonging to a same consortium who have made a contract and have set forward the conditions under which students receive a particular degree. We make following distinction in definitions:

1. Single degree with curriculum exchange: this is the situation in which the student receives a degree of one single university but is allowed (or even pushed or obliged) to take courses in one (or sometimes more) partner university(es). These courses are mentioned in the diploma supplement, however without leading to a mentioning of the name of the other university on the diploma. So the student has only one diploma or degree which is only recognised and accredited in the country in which the university is situated. Formally these are not joint or multiple degrees but the student can at least indicate that he has studied in one or more other universities. Most universities apply this model for the student exchange contracts.

2. Double degrees: this is the situation in which the student follows a substantial part of his curriculum in (at least) two universities and receives two single diplomas signed separately by each of the universities. Often the student receives one certificate and diploma supplement mentioning his total curriculum and under which conditions the degree of the university is combined with the degree of the other university. So in the end the student has two diplomas or degrees with the advantage that each degree is separately recognised and accredited in the respective countries of origin. An example is the IMRD-Arkansas double degree (see further) but a lot of other examples exist.

3. Multiple degrees: this is the same situation as above but in a system where there are more than two partners in the consortium. In this situation, the student gets two or, in particular cases or specified conditions, three or exceptionally more degrees from those universities of the consortium where he has followed a substantial part of his studies. This may result in situations that students who have studied in the same consortium of universities receive different degrees (e.g. student 1 receives the degrees of university 1 and 2, student 2 of university 1 and 3 and student 3 of university 2 and 3 depending on where each students has exactly studied). Also in this situation the degrees are mostly accompanied with an overarching document describing under which conditions which degrees are or can be obtained. So in both double or multiple degrees each separated university decides whether and under which conditions students receive its degree (e.g. in terms of admittance, number of credits to be taken at the university itself, conditions on the credits obtained in the partner universities…).
Joint degrees: real joint degrees are situations in which students are studying in a consortium of universities and can follow courses according to the rules of the consortium in the different partner universities but receives one single common degree undersigned by the different consortium partners (regardless of whether the student has been studying and obtained credits at the partner itself). An example of such degree is the IMRD degree. In this situation the consortium decides on common criteria in terms of admittance, program and other conditions and sets up a common system of quality control and student monitoring. The joint degree is recognised and accredited in at least one partner country but in most cases in each of the partner countries (see also further).

We think that the last system has a number of advantages and is also the model promoted by the EU. The reason why we have opted with IMRD for this system is that one single degree is created which has major advantages in terms of promotion and visibility for the employers. It also emphasizes that there exist a common framework and learning outcomes which have been obtained by all students because behind the degree there is one single set of objectives and outcomes. Further it allows to create larger consortia because it does not require that each single students has been in each of the partner universities and it creates also possibilities to combine the single joint degrees with the other models (credit exchange contract with occasional partners) or double degree contracts with partners who do not belong to the core consortium but with whom students are frequently exchanged (as is the case for the IMRD ATLANTIS or EKAFREE degree, see further).

Within the joint (or also double or multiple) degree model, still different operational models are possible. One mode of operations is that each consortium partner institutes offers more or less the same curriculum (or learning outcomes) and students can freely (or under specified conditions) opt in which universities they follow each separated building block of the curriculum (mostly organised per semester). In this mode of operations different students of the same batch/cohorts do not necessarily encounter each other (unless some common study activities are foreseen or obligatory, e.g., a common summer school between semesters or years). A second mode of operation quite often applied within Erasmus Mundus (EM) courses is that each university (or in a few cases more than one university) offers one of the building blocks of the common program and students of the same batch switch together over the building blocks or have a limited choice where they can follow each module (except for the thesis semester). This model is mostly adopted by consortia with a limited number of partners (3 to 5). Larger consortia like IMRD either opt for mode 1 or for an operational mode in which one (or a limited number of) partner(s) offer the basic module, after which students can (under specified conditions) select modules in the different partner institutes. It is this last model that IMRD has adopted as is described in the next section. In this last operational mode, consortia try to combine the advantages (both in terms of intake as in terms of common learning outcomes) of operational mode 2 with the flexibility and choice possibilities for students of operational mode 1.

III – The IMRD history and model

1. IMRD development

As already indicated in the introduction the IMRD course and degree is a 2 year master programme which has been created in 2004 at the start of the Erasmus Mundus Master program developed by the EU. However, the course did not came out of the blue as the core consortium partners were already cooperating for many years in student exchange, research and in particular the organisation of so called ‘intensive course programs’ (also financed by EU). Intensive course programs (IPs) were short courses (normally 2 to 3 weeks) organised by one of the con-

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1 The IMRD Consortium currently consists of 16 partner universities.

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sortium members in which teachers and students of the different partner universities were brought together to study together a particular problem or topic. The IMRD consortium partners had already a tradition of about 10 years to yearly organise a particular IP on rural development issues. The particularity of their model was that each year the problem of multifunctional agriculture or rural development was studied in a particular case study in one of the consortium partners. This resulted even in a book (Van Huylenbroeck and Durand, 2003) that has highly influenced the modern thinking on integrated rural development in Europe. Further the same (or at least the core) partners had worked together in an exchange program with some Brazilian universities and so also build up some expertise in teaching the EU rural development model to non-EU students.

So when in 2004 the first EM master courses call was launched by the EU, the IMRD consortium was in a good position to apply for the organisation of such an EM course. The consortium was directly successful in the first call and the first IMRD students’ batch started off in October, 2004.

The consortium started off at that moment with 7 universities, consisting of 4 core partners (Ghent University (BE), Agrocampus Rennes (later Agrocampus Ouest) (FR), Humboldt University of Berlin (GE) and UCO (University of Cordoba (ES)) who agreed to award and sign the joint degree and three universities (Slovak University of Agriculture in Nitra (SK); University of Pisa (IT) and Wageningen University (NE) who for legal reasons could not (yet) sign the joint degree (at least not under the definition as given in section 1). We must admit that due to the short preparation time and lack of experience the learning outcomes and course program at that moment were loosely defined. The program was a five modules programme consisting of four semesters and one summer case study. Students could start at each of the four core partner institutes, take semester 2 and 3 in each of the 7 universities on condition that they could follow courses in the national language (or English for Gent and Berlin), follow the only fixed module, being one of the two organised case studies (Nitra or Pisa), and defended their master thesis in one of the four core partner institutes. The courses students could select were all the courses given in social sciences in each of the partner institutes, and besides the obligatory case study the only other obligation was to study in at least two partner institutes other than the partner in which they had followed the case study. So the course was loosely defined and no real common learning outcomes recorded. There was a common selection of students and for quality monitoring reasons also an obligation that in the examination board of the master thesis at least one professor should be present of a partner university different than the one where the defence takes place. The two weeks case study module (5 ECTS) was made obligatory because of the strong positive experience with the IPs organised before, and the wish of all partners that students should also obtain some practical and applicative skills besides the academic competences.

The first three years (cohorts) IMRD was organised under these conditions. It allowed the partners to know each other’s program better and to experience the strong and weaker points of the selected organisation. The weakest point (also acknowledged by students) was that students did not know each other as the only time they really met (at least half of the batch) was during the two weeks case study besides being occasionally together in a same university for one semester. But even when they studied at the same university, this did not mean that they were following the same courses as the selection of courses was completely free. Therefore from the fourth batch on (starting in academic year 2008) we better defined the learning outcomes and obliged students to follow the same introductory semester module (organised by Ghent University). Further we also defined better the semester modules organised by the each partner (focussing on the strong research points of each partner) in order to increase the academic quality. Alongside the case study was enlarged from 2 weeks to 1 month (10 ECTS) in order to increase the

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acquaintance of applicative skills. Also, and due to the existing possibility (and even strong requirement) to increase the consortium with non-EU country partners, the consortium was gradually increased with partners from South America (ESPOL, Ecuador), South Africa (University of Pretoria), India (University of Agricultural Science, Bangalore), and China (China Agricultural University and Nanjing Agricultural University). The idea behind this enlargement was to foster more on the comparative study between different rural development models and agricultural policies and to allow also EU students to get better acquainted with non-EU rural situations. To allow this, the programme has from 2008 been structured as visualised in Fig. 1.

![Fig. 1. IMRD Mobility Scheme 2008-2014.](image)

From 2008, the course program was thus more targeted and also better streamlined, facilitating a lot the intake and monitoring of students, the quality control and the overall administration. Because the main objective shifted from studying the EU rural development policy towards comparative study of worldwide agricultural rural development objectives, challenges and policies, we also enlarged the consortium with (originally two, later only one) US partners when the occasion was presented to apply for the so called Atlantis program. This was done in a double degree construction because for this program the requirement was that students should study at least for 8 months or 40 ECTS at either side of the Atlantic. At that moment, the strong flexibility of the IMRD construction became eminent. By having a single degree at EU side (and not the multiple degree construction of most other so called joint degree programs under EM) we were able to flexibly enter the Atlantis program by simply matching the EU IMRD degree with the US degrees of Arkansas University as well as originally also of Florida University. This last partner did not want to continue its engagement when the funding stopped in 2013 for the Atlantis program (while Arkansas University did, and entered the IMRD consortium). In the meantime also UCO, for particular reasons, decided to leave the consortium. In 2013 we welcomed a Vietnamese University in our consortium (Can Tho University; more specifically its Mekong Delta Research Institute) as it was our desire (after earlier good experiences in China) to organize (in particular for the EU students) a case study outside the EU. In 2014 we were also successful in setting up a similar
construction as in the Atlantis case with three universities in South Korea, called the EKAFREE degree\(^3\). This brings the present number of partners at 16 with 6 at EU side, 6 non-EU partners in IMRD, 1 ATLANTIS partner and 3 South Korean universities\(^4\).

The IMRD program also passed successfully 3 accreditation exercises (two by EAALS (ICA) and one by the VLUHR (Flanders) as well as the EU (EACEA) Quality Review in 2014, who gave the consortium access to the Erasmus+ financing under the Erasmus Mundus Joint Master Degrees Action. Because of the enlargement of the consortium, we slightly modified our program starting from the 2015-2016 intake on by adding the requirement that students should be inscribed for the last two semesters (thus for the whole second year) at the institute where they will work on and defend their thesis. This extra requirement is also installed to guarantee that students are well supervised during their thesis year, and follow courses related to their dissertation topic. Of course students can still go for field work for their thesis to another country or university. Hence the present structure of IMRD is as follows (Fig. 2).

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### Fig. 2. IMRD Mobility Scheme starting academic year 2015-2016.

#### 2. IMRD figures

The above development and model proved to be successful, flexible and strongly appealing for top students worldwide. The success can be seen both in terms of applications and enrolled number of students (as well as in terms of student comments during and after their studies. Since 2004, the IMRD programmes has welcomed students from over 67 different countries, and although the amount of EM scholarships was decreasing on a yearly base, the number of starting students roughly remained equal, but the numbers of strongly interested applicants starting the application process increased on a yearly basis (Table 1).

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\(^3\) EU-Korea Agricultural, Food and Resource Economics Experts Building Project. The Korean partners are Korea University, Seoul National University, Chungbuk National University.

\(^4\) Since 2008 all EU partners have become core partners and are signing the joint degree diploma. All except Wageningen University due to a conflict with national law regulations; and who consequently does not participate in the ATLANTIS and EKAFREE double degree constructions.
The success and quality of the program itself also becomes apparent in the positions of our alumni and the number afterwards selected for a PhD or who are working for high level (inter)national organisations (Fig. 3).

### Table 1. Application and student numbers IMRD by session

<table>
<thead>
<tr>
<th>Cohorte (years)</th>
<th>Number of applicants</th>
<th>Number of admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Female</td>
</tr>
<tr>
<td>Session (13-15)</td>
<td>(676)</td>
<td>364</td>
</tr>
<tr>
<td>Session (12-14)</td>
<td>(1213)</td>
<td>432</td>
</tr>
<tr>
<td>Session (11-13)</td>
<td>(557)</td>
<td>377</td>
</tr>
<tr>
<td>Session (10-12)</td>
<td>(461)</td>
<td>337</td>
</tr>
<tr>
<td>Session (9-11)</td>
<td>(361)</td>
<td>305</td>
</tr>
<tr>
<td>Session (8-10)</td>
<td>403</td>
<td>103</td>
</tr>
<tr>
<td>Session (7-9)</td>
<td>411</td>
<td>115</td>
</tr>
<tr>
<td>Session (6-8)</td>
<td>374</td>
<td>109</td>
</tr>
<tr>
<td>Session (5-7)</td>
<td>238</td>
<td>82</td>
</tr>
<tr>
<td>Session (4-6)</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Note: (Application incomplete) complete.
Note: (Academically accepted) started the course.

The success and quality of the program itself also becomes apparent in the positions of our alumni and the number afterwards selected for a PhD or who are working for high level (inter)national organisations (Fig. 3).

![Professional activity of the IMRD Alumni](image)

**IV – Challenges**

Setting up and running joint master degree programs poses a lot of challenges which we can divide in following categories:

1. International student intake and mobility requirements.
2. Harmonising rules of different partner institutes and quality monitoring.
3. The changing course curriculum at the partners.

4. Centralised follow-up of “on the road” students.

5. Sustainability and the creation of a lively alumni network.

Challenge 1 has to do with the international student population that is aimed for. As such this is
a real strength and asset for the program as within an international student community, students
learn a lot of each other. Besides the academic information, the personal skills of students are
challenged and improved by the contacts they have among each other inside and outside the
classroom. Of course it requires a whole organisation to attract the students from different coun-
tries both in terms of making publicity for the degree program, the evaluation of prospective stu-
dents due to different study standards in different countries, visa and entry problems (exempli-
fied due to the high mobility requirements and the lack of a harmonised European visa policy)
and of course also different expectations and study habits due to different study systems over the
world, intensified by the fact that in general IMRD students are older than students in regular pro-
grams. The mobility stipulations also require a lot from students as they cannot easily settle in
one country. This poses problems like finding housing for only a few months, applying each time
for visa, a lot of monitoring on their progress, not always easy communication between the cen-
tral secretariat and students at different places.

But not only the international student community though also the international profile of the pro-
gram poses challenges going from harmonisation of academic calendars (e.g., in IMRD the prob-
lem of the specific academic calendar of Germany which does not fit well with that of other part-
ners), over different evaluation systems in the different partners (it took us more than 5 years to
come to a non-contested conversion able of exam scores), to different rules and regulations and
different learning culture. Therefore a lot of efforts have to be put in finding a balance between har-
monising rules where required and flexibility where needed. A problem in this respect as compared
with regular programs is the lack of enforcement power of the coordinating university on its part-
ers e.g. in cases where there is a need for harmonising rules; or when a university decides to
change the course curriculum of a faculty/department/study, and the offered courses (attached to
learning outcomes) of the joint degree program are under threat In a lot of cases there is depend-
ency on goodwill of partners to adapt their regulation or at least offer/provide the necessary flexi-
bility within their own system. In order to tackle these challenges, it is imperative that the joint
degree has a regulatory institution (within IMRD called the Management Board) which regularly
meets and consists of representatives of all partners who openly discuss various issues and possi-
bable – out of the box – solutions. The factual cohesion of this institution will define the success of
the joint degree. Fortunately, over the years trust is being built up, but still (e.g. in cases of changes
of persons at the central level) this sometimes poses problems in particularly because also rules
of the funding agencies may change (see the different rules of the EM program over the years).

This lack of authority in harmonising rules poses also particular problems in the setting up of a qual-
ity monitoring program, because for evaluations a joint degree program is of course bound by qual-
ity monitoring rules of the different institutions. Therefore in the quality monitoring process of IMRD
we have put as first level the different institutional monitoring bodies in particular with respect to the
individual courses as at that level it is very difficult to intervene from the program board level. The
second level is then the overall program coherence and quality which is the level where the board
can intervene. This requires a central monitoring instrument. IMRD has for this purpose developed
an own quality monitoring tool in which students and alumni are at regular basis asked to give their
opinion on the program, the different parts of the program and their coherence. This has proven to
be very useful as an add-on to the individual institutional quality monitoring because it is only at pro-
gram level that problems of overlap of courses, coherence in learning outcomes, balances in the
evaluation systems, etc., can be detected. This system already induced several changes and adap-
tations of the curriculum. We made also extensive use of the quality monitoring tool that has been developed at EU level for international course programs (EMQA).

Joint programs pose also particular problems at the external quality control or accreditation level. The problem is here that when accredited by national agencies, these agencies have no or very limited experiences with programs that require extensive mobility and try to impose their national quality standards. But even when international accreditation agencies are used (like EAALS in the IMRD case), practice has shown that these agencies are not really familiar with the daily practice of joint degree programs and sometimes have difficulties understanding the challenges such programs pose in terms of quality monitoring and exerting authority on other institutes. Examples of these are a.o., the requirement of having one course catalogue where in practice course catalogues of the different institutions have different rules or the inability of accreditation commissions to really understand (the rather complicated but good working) conversion table. Sometimes we had the impression that even these agencies which try to promote international educational cooperation are less cooperative than national accreditation agencies. A particular challenge in this respect is the recognition of joint master programs in still rather organised national labour markets. It remains e.g. difficult for IMRD to attract students from countries where the ‘engineering’ title is still protected or highly valued because the master programme, although embedded in institutions that offer regular (bioscience) engineering degrees, has not obtained the right to give an engineering tile to its alumni (due to particular legislation on this in the different countries).

Joint degree constructions furthermore come with a high administrative load as students are (constantly) on the move and need to be closely followed-up to guarantee they are aware of and respect the mobility and academic (i.e. obtain all set learning outcomes) requirements. Especially within large consortia like IMRD this is an intensive task. Within IMRD a Central Secretariat has been created for this purpose. With students often spread over various partners and continents (with different time zones) at the same time, written communication and the well-informing of the students becomes a major part of the program administration.

Finally, the most difficult challenge remains the sustainability of joint degree programs. The required mobility makes this kind of programs of course expensive in comparison with regular national programs, not only for students but also for the organizers. As long as support can be obtained from the EM program, the central secretariat costs can be recovered, but even then it remains a financial challenge to run the program. The rather high entrance fees often prove to be a barrier for national students, in particular because in a lot of countries studying is either for free (e.g., Germany) or fees are rather low as compared to what these joint programs need to ask (also because they are often not supported in the same way by the national educational subsidies). Most joint masters existing are also due to the EM policy oriented towards non-EU students posing the problem of dependency on scholarship programs as it is not so easy to attract good self sponsoring students (in particular in a global market that we are less familiar with than with our own national markets). Engineering and hard sciences programs may often join forces with sponsors of the private industry, but for soft (social) sciences these possibilities are extremely limited. In this sense a lively and active alumni network could be a major asset; not only as sources of possible – small – donations, though also as the group of lobbyist towards their employers and professional connections. The fact however that EM alumni come from many different countries, proves if very hard for an effective alumni organisations to be created that actually meets and delivers. IMRD has therefore set up an own scholarship program at least to match with the new requirements of the EM+ program. We hope that in this way the sustainability is increased but joint programs remain in general highly dependent on finding external scholarships for prospective students.
V – Discussion and conclusions

In this paper we have tried based on the IMRD experience to elaborate on the opportunities and challenges posed by joint degree programs in particular at master level. We think joint degree programs are an excellent tool for increasing cooperation among higher educational institutes. The reason is that in comparison with normal exchange programs, or even double or multiple degree programs, institutes are forced to think and act in a harmonised way. This makes that such programs are in general really programs of excellence because they can bring together not only the best knowledge of the different partner institutes, but also the best experience in terms of training and education. As joint degrees force the institutes to reflect on common learning outcomes, quality monitoring systems and so on regardless of national habits, a more international spirit is created. In the present educational world which is still highly dominated by national programs this poses of course a lot of difficulties; but the existing joint programs have not only already taken away some of the previous existing barriers (e.g., degrees signed by different institutes) but also lifted up the quality of education in a number of institutes by making the educational authorities of institutions involved into reflection of their own rules and standards. Therefore we advocate the further spread of joint degree programs and hope that they become the standard in future rather than the exception because it is clear that joint degree program alumni are much better trained to act in a globalized world than most of the national degree program alumni.

Acknowledgments

IMRD acknowledge the support of the EM1, 2 and + action program for joint master degrees as well as the support of its partner institutions.

References

## Annex 1. IMRD learning outcomes

<table>
<thead>
<tr>
<th>On a successful completion of the programme, students are due to their high level academic and multi-disciplinary training and multi-cultural experience, able to:</th>
<th>Dublin descriptor 2nd cycle</th>
<th>EQF Level 7</th>
<th>CM-UGent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand different socio-economic concepts, theories and multi-disciplinary approaches with respect to rural economies and rural development</td>
<td>Knowledge and understanding</td>
<td>Specialised knowledge and ability to apply and extend: advanced knowledge</td>
<td>CM 1</td>
</tr>
<tr>
<td>2. Have profound insights in different rural development realities, and be able to compare rural development issues, approaches and policies within an international context. Specific for the ATLANTIS track: comparison between rural economies and agricultural policies in EU/US</td>
<td>Knowledge and understanding</td>
<td>Specialised knowledge and ability to apply and extend: advanced knowledge</td>
<td>CM 1</td>
</tr>
<tr>
<td>3. Apply theories and methodological approaches to characterise and analyse the economic and social problems of rural areas, food and agricultural chains, natural resource management, national and international agriculture.</td>
<td>Knowledge and understanding</td>
<td>Specialised knowledge and ability to apply and extend: advanced knowledge</td>
<td>CM 1 + CM 2</td>
</tr>
<tr>
<td>4. Design and implement adequate instruments, methods, models and innovative tools to analyse, evaluate and to solve problems related to agriculture, food chain and natural resource-management, and to rural development and countryside stewardship</td>
<td>Apply knowledge and understanding</td>
<td>Specialised knowledge and ability to apply and extend: constructive and innovative use of standard methods</td>
<td>CM 1 + CM 2</td>
</tr>
<tr>
<td>5. Design, implement and monitor national and international agro-food policies, rural institutions and rural development programs</td>
<td>Apply knowledge and understanding</td>
<td>Specialised knowledge and ability to apply and extend: constructive and innovative use of standard methods</td>
<td>CM 1 + CM 2</td>
</tr>
<tr>
<td>6. Construct innovative tools and instruments for the (multifunctional) development of rural areas</td>
<td>Apply knowledge and understanding</td>
<td>Scientific competence: demonstrate creativity</td>
<td>CM 2 + CM 3</td>
</tr>
<tr>
<td>7. Design and assess research in the domain of rural development, formulating a problem statement and operationalizing objectives and research questions within an adequate research plan</td>
<td>Formulate judgments</td>
<td>Scientific competence: design research</td>
<td>CM 2</td>
</tr>
<tr>
<td>8. Select and apply appropriate research methods and techniques to collect and analyse data from literature and empirical research in the domain of rural development</td>
<td>Formulate judgments</td>
<td>Scientific competence: select and apply appropriate techniques</td>
<td>CM 2</td>
</tr>
<tr>
<td>On a successful completion of the programme, students are due to their high level academic and multi-disciplinary training and multi-cultural experience, able to:</td>
<td>Dublin descriptor 2nd cycle</td>
<td>EQF Level 7</td>
<td>CM-U Gent</td>
</tr>
<tr>
<td>---</td>
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<tr>
<td>9. Critically reflect on topical rural development issues, and on ethical and value driven aspects of research and intervention strategies</td>
<td>Formulate judgments</td>
<td>Societal competence: awareness of the relation between research-society and integrate ethics and values in actions</td>
<td>CM 5</td>
</tr>
<tr>
<td>10. Work in an integrated internationally composed team dealing with rural development and food production challenges, interacting respectfully with diverse others and developing a global perspective</td>
<td>Apply knowledge and understanding</td>
<td>Collaborate and communications: collaboration in multidisciplinary environment</td>
<td>CM 4</td>
</tr>
<tr>
<td>11. Dialogue and professionally interact with different actors and stakeholders of the socio-professional world (food sector, NGOs, rural organisations, rural administration, universities and research institutes)</td>
<td>Communication skills</td>
<td>Collaborate and communications: professional communication skills</td>
<td>CM 4</td>
</tr>
<tr>
<td>12. Communicate convincingly (written, oral, using appropriate tools) about (own) research findings and project results and their underpinning rationale</td>
<td>Communication skills</td>
<td>Collaborate and communications: professional communication skills</td>
<td>CM 4</td>
</tr>
<tr>
<td>13. Effectively and appropriately use good language, communication and behavioural skills in different language and cultural environments</td>
<td>Communication skills</td>
<td>Collaborate and communications: professional communication skills – other language and culture</td>
<td>CM 4</td>
</tr>
<tr>
<td>14. Design and plan own learning processes based on continuous reflection (individually and in discussion with others) upon personal knowledge, skills, attitudes and functioning</td>
<td>Learning skills</td>
<td>Intellectual competence: attitude of lifelong learning, show continuous willingness to develop new ideas and processes</td>
<td>CM 3</td>
</tr>
<tr>
<td>15. Self-Directed Learning: work independently; take initiative and manage a project through to completion</td>
<td>Learning skills</td>
<td>Professional competence: independently deal with research and complex problems</td>
<td>CM 3</td>
</tr>
<tr>
<td>16. Independently perform scientific research in the domain of rural development. Give proof of a clear international orientation</td>
<td>Formulate judgements</td>
<td>Professional competence</td>
<td>CM 6</td>
</tr>
</tbody>
</table>