



Prof. Dr. Barna Mezey  
Eötvös Loránd Tudományegyetem  
Faculty of Informatics  
Egyetem tér, 1-3.  
HU - 1053 Budapest  
**Hungary**

Brussels, 11 July 2011  
ARES(2011) 743747

**Re: Erasmus Mundus Action 1.A - Joint Masters Courses - Call for Proposals  
EACEA/41/10**

**Title: High Assurance Software**

**Ref.: 520153-1-2011-1-HU-ERA MUNDUS-EMMC**

*(Please quote this number in all correspondence)*

Dear Prof. Dr. Barna Mezey,

You have submitted a proposal under Action 1.A in the framework of the Erasmus Mundus Call for proposals EACEA/41/10.

I regret to inform you that your proposal has not been selected.

The Agency received 177 proposals under Action 1.A – Joint Masters Courses. 30 of these proposals were selected for funding, and 1 is on the reserve list. All eligible proposals were assessed with the assistance of independent academic experts on the basis of the selection and award criteria listed in the Call for proposals.

The selection decision is based on the quality of the proposal, its relative position in comparison with the other proposals received and the budget available as well as the respective selection procedure.

The table below provides you with an indication of the overall and relative quality of your proposal which was included under Group II

Group		Number (% of eligible proposals)
I	Proposals of very good quality (score higher than 75 points out of 100)	53 proposals (31%)
II	Proposals of good quality (score between 60 and 75 points out of 100)	71 proposals (42%)
III	Proposals of weak quality (score less than 60 points out of 100)	46 proposals (27%)
Ineligible proposals		7 proposals (4% of all proposals received)

Enclosed you will find the consolidated version of the two independent academic experts' assessments of your proposal. Please take account of the fact that most of the assessments were written by non-native speakers and that the Agency cannot comment on these independent assessments.

A new Erasmus Mundus Action 1 Call for proposals will be published by the end of 2011 with a deadline of 30 April 2012. Should you wish to submit a new proposal, I recommend you to consult the EACEA website in order to be informed about the publication of the relevant application documents.

([http://eacea.ec.europa.eu/erasmus\\_mundus/funding/higher\\_education\\_institutions\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/funding/higher_education_institutions_en.php))

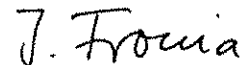
You may also contact the Erasmus Mundus National Structure located in your country in order to be provided with assistance and support in the preparation of a new proposal.

([http://ec.europa.eu/education/erasmus-mundus/doc1515\\_en.htm](http://ec.europa.eu/education/erasmus-mundus/doc1515_en.htm))

I take the opportunity to thank you for the interest you have shown in the programme and the work you have invested in preparing your proposal.

Should you require any further information, please contact us through our functional mailbox [EACEA-Erasmus-Mundus@ec.europa.eu](mailto:EACEA-Erasmus-Mundus@ec.europa.eu).

Sincerely Yours,



Joachim Fronia  
Head of Unit

**Annex:** Comments and recommendations from the independent academic experts who assessed your proposal.

Proposal number:	520153-EM-1-2011-1-HU-ERA MUNDUS-EMMC
Proposal title:	High Assurance Software
Coordinator:	Prof. Dr. Zoltán Horváth
Applicant organisation:	Eötvös Loránd Tudományegyetem

<b>Award Criteria</b>
A.1 Academic quality - Course content (30 % of the max. score)
<p>The proposal is based on the observation that there is an important and growing need for reliable software, which is indeed convincing and of high societal impact. The objective of the proposed Master's programme is to answer this need, through mathematical models for formal development and proof. However, the proposed tools and methodologies, and therefore training, are described in general terms and it is not clear how in practice this will be helpful. It is difficult, for example, to evaluate whether the proposed methodology is still in a development stage in research labs, or ready to be practically used in an industrial context. The need for an EMMC course of this kind is not sufficiently evident in the proposal. Added value is not very clear. The proposal indicates a lack of EMMC Masters courses, and other Masters courses, with a similar focus. However, there are many universities where the sub-topics mentioned in HAS are taught as part of software engineering Masters, including various specialised Masters with high overlap, especially in safety critical systems, security and other related subject areas. The content of the EMMC is described through a set of module titles, mobility pathways, and events such as summer school. However the choice of the classes is not explained in relation with the programme objectives, nor is the complementarity of the teaching offered in the different institutions developed. The learning outcomes appear justified in terms of providing graduates with advanced software development skills with an emphasis on quality, assurance and reliability.</p> <p>The employability in numerous companies developing software is high, as for any computer scientist.</p> <p>However it is not explained how the training of the EMMC will give advantages to the students on the job market over other computer science students. Moreover, opportunities to pursue in PhD programmes are cited but not elaborated and without examples. The consortium is composed of high level educational institutions, experienced in international research projects. They offer different elective modules, in accordance with their specialties. The academic staffs, however, are not cited. The partners show significant ongoing collaboration with the professional sector, are involved in faculty advisory boards and in proposing research and employment opportunities to the students. However, the proposal does not mention any direct participation of their industrial partners in the proposed EMMC, and suggestions of placements and employment prospects are</p>

neither qualified nor quantified.

#### A.2 Course integration (25% of the max. score)

The EMMC is based on a common set of courses, which will be taught equally in all institutions. The proposal mentions numerous and intense previous collaboration between the partners, which will probably help to build a truly integrated programme. However, this core integration is not supported by a sufficiently formal description, and the necessary organisational level of integration for joint operation, management and administration is not sufficiently addressed. There will be full recognition of the training at each institution by the other partners without further procedure. The students will receive two diplomas from the two universities in which they have been enrolled. Accreditation procedures are still under way at some partners. Double or joint diplomas are not envisaged. A Diploma supplement will be awarded, as mentioned in another section of the proposal. The application and selection procedure is based on pre-selection by the coordinator and interview of 75 students in a 3-day long procedure by videoconference. This is rather intense but will allow the consortium to select the best students. However, criteria for selection are not discussed and the procedure seems quite arbitrary at the moment. Equal rights, gender equality, and admission of people with disabilities are clearly addressed.

Each partner will organise for examination and grading. A Joint Examination Committee will take the final decision of awarding the diploma for each student at the end of his/her curriculum. The use of ECTS to translate from local schemes is mentioned but the translation table is not shown. The student participation costs are clearly stated and derived from declared fees for Masters at each institution. However, the underlying costs (costs of running the course) are not elaborated, and the costs of operating the joint-programme are not explicitly taken into account.

#### A.3 Course management, visibility and sustainability measures (20 % of the max. score)

The programme is managed by the coordinator and three committees with specific tasks and involving all partners. All decisions will be taken jointly and discussions will be possible between physical meetings through videoconferences. Rules for conflict resolution are not specified. There is no procedure for the selection and validation of research topics for the Master's thesis. Specific actions such as networking with industry and academia or promotion are not attributed to responsible persons or groups. The financial contribution of the partners is limited to provision of staff and training and research buildings and equipment. The budget is roughly presented without numbers. The lump sum will be attributed mainly to the coordinator, indicating that this partner will assure most of the management tasks. Tuition fees will be distributed among the partners to cover their expenses but it is not said on what bases these expenses will be counted. The overall estimated implementation costs of the course and partners' complementary funding are missing. The consortium intends to develop the programme and to continue it after the end of European funding. The sustainability plan clearly enumerates a shift towards self-funded students over a realistic period. Possible sources of financial support are identified but there is no supporting data to show current level of self-funding students on Masters courses at partner institutions. The usual means for promotion such as website, brochures, networking, etc will be used. Associated partners are also willing to participate to the promotion but they do not specify by what means.

#### A.4 Students' services and facilities (15% of the max. score)

The information to the students prior to their enrolment will be made available on a web site. No actions is directly orientated to the students, though mail or sending paper documents are foreseen. A Student Agreement has been prepared and addresses all relevant questions related to courses,

examination rights and responsibilities. Services will be offered by the partners international offices and seem of good quality although not very detailed and unevenly described across partners. There will be a dedicated time upon student arrival to answer specific questions and provide assistance to the students in their installation.

Special needs will be considered. The insurance coverage will be provided by a private company which covers EM requirements. All classes will be taught in English, and English courses will be offered for language improvement. National languages classes will also be offered and are included in the tuition fees.

They will be valorised in the diploma but not with ECTS counts. Networking will be supported by the creation of a specific alumni association, forums, and student conferences. There is no indication of participation of the professional sector, which would be very valuable for the students and their future career.

A.5 Quality assurance and evaluation (10 % of the max. score)

The internal evaluation methodology is well-elaborated and based on questionnaires addressed to the different types of participants (students, lecturers and industry). The points to be addressed are listed and are appropriate for a good evaluation of the programme content. However, there is no evaluation of the implementation, management and organisation of the programme. The external quality assurance is based on existing schemes in place at the different institutions, and the use of feedback from visiting scholars, industrial partners, and consortium partner institutions. However, no committee is set up to conduct independent quality assurance with clear tasks and questions to address.

Other comments on the proposal

The proposal addresses the issue of software reliability, which is an original and innovative field of global importance. However the need for a specialised EMMC course on this topic is not sufficiently evidenced and other Master's programmes offer similar modules. The very able partnership has stable collaboration in place and already teaches the course content. Yet prospects for research and employment are not supported by evidence of demand or by previous success. Arrangements for links to professional and industrial sectors are not well defined. The course itself, while having a set of useful and relevant modules, lacks evident integration, especially at the organisational level. The national degrees to be awarded are only approved in 2 of 4 partner countries at present, and so preparedness is low. Joint mechanisms for the selection and examination of the students are not sufficiently clear and appear somewhat arbitrary and lacking transparency. The overall estimated implementation costs of the course and partners' complementary funding are missing. Promotion and sustainability are not much developed and are not reflecting a strong commitment of the partners to continue the programme after the end of the EU funding.

Despite the shortcomings mentioned, there are many strengths in the proposal that can be seen in the detailed comments. In general, however, it lacks clear arguments to explain the added value, programme structure and consortium complementarity. Management and organisation aspects are weak on some points and sound more than intentions than thought mechanisms. As a result the programme does not appear to be well-integrated. The demonstration of quality of the proposed programme is too often based on declarations of intention rather than facts and records.

