

**PROPOSTA DE MÀSTERS PRESENTATS A LA 3a  
CONVOCATÒRIA ERASMUS-MUNDUS  
EUROPEAN MASTERS IN STRUCTURAL AND  
GEOTECHNICAL ENGINEERING**

Acord núm. 145/2005 pel qual es ratifica la proposta de European Master in Structural and Geotechnical Engineering

- Document aprovat per la Comissió de Docència del Consell de Govern del dia 17/05/2005
- Document aprovat pel Consell de Govern del dia 27/05/2005

**DOCUMENT CG 9/05 2005**

Vicerektorat d'Ordenació Acadèmica  
Comissionat de l'Espai Europeu d'Educació Superior  
Maig 2005



**CONVOCATÒRIA ERASMUS MUNDUS**  
**Proposta ETSECCPB:**  
**European Masters in Structural and Geotechnical Engineering**

**1. Nom de la persona i la unitat de la UPC responsables del màster:**  
Prof. Esther Real Saladrigas, sotsdirectora de Relacions Internacionals de l'ETSECCPB  
**Posició en el consorci d'institucions europees:** participant.

**2. Institucions participants del consorci del màster:**

- Imperial College of Science, Technology and Medicine (UK)
- Ecole Nationale des Ponts et Chaussées (France)
- Budapest University of Technology and Economics (Hungary)
- Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona (Spain)

**3. Dades generals del programa:**

- Denominació del programa conjunt: "EMSGE: European Masters in Structural and Geotechnical Engineering"
- Any acadèmic d'implantació: 2005/06
- Durada del pla en crèdits europeus: 120 ECTS (2 cursos acadèmics)

**4. Extracte de les característiques del programa (descripció breu):**

- **Orientació, objectius i perfil professional del màster:**

*This course offered by a Consortium of Imperial College London, Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona (Universitat Politècnica de Catalunya), Ecole National des Ponts et Chaussées Paris, and the Budapest University of Technology and Economics, will offer high level education in geotechnical and structural engineering, two of the key disciplines within the sphere of the Built Environment. These Institutions are the leading technical universities in their respective countries, with many years experience of advanced teaching and leading-edge research. The course takes two years, one in each of two Institutions. The objective of the course is to provide the student with a high level of technical knowledge, and the skills required to exercise engineering judgment, in two of the key disciplines underpinning the construction, maintenance and improvement of our built environment, including buildings, bridges, roads, and other urban infrastructure. Students will chose either Geotechnics or Structures as a major subject and during the first year, will follow a programme of lectures, tutorials and assignments, and prepare for his/her major dissertation. The second year will be spent in another institution, following a programme which complements the major subject and covers the other one. Students will also complete a major dissertation. Studies will be in the language of the institution, except in the case of Budapest, where students have a choice. By the end of the course, the student will have mastered the technical expertise of his/her subject and*

*experienced high level education in two European countries, gaining experience of some of the different characteristics of engineering formation in Europe. He or she will be able to practice as an Engineer within the European and global domains and to bring the best of European educational practice to bear on issues of infrastructure, engineering design, urban development and sustainability.*

*The course will be taught alongside a number of existing Masters courses and will be integrated within the research and professional activities of each participating Institution within the Consortium. The initial enrolment to the course will be 10 students, apportioned evenly between Consortium members, and it is expected that this number will increase with time. Student will be awarded a double degree comprising the Masters degrees of the Institutions in which he/she studies, plus a Diploma Supplement giving details of the study programme and recognition of both qualifications.*

*Students will be selected on the basis of excellence in their first cycle degree, as demonstrated by transcripts, examination performance and references from teachers.*

▪ **Programa d'estudis i mobilitat acadèmica**

*When they enrol, students must select a programme of study which must be agreed by the Management Committee. They must choose two Institutions. They spend their first year in one (the 'home' Institution) and the second year in the other (the 'host' Institution). During the first year, they will specialise in either Geotechnics or Structural Engineering, following a taught programme of lectures, tutorials, assignments and examinations. They will also begin preparations for their major dissertation.*

*During the second year, they will move to their host Institution to follow a complementary set of studies in their specialist subject and also undertake work in the other discipline (i.e. Geotechnics if the specialisation is Structures and vice-versa). They will also complete their major dissertation. This can be in their specialist subject, but dissertations which include aspects of both structural and geotechnical engineering will be encouraged. The programme of studies will be chosen carefully to ensure that the students fulfil the requirements need to allow them to receive the Masters degree from each Institution.*

*The options available within the Consortium are shown in the table below, and it is on this basis that each student's programmes of studies will be drawn up.*

	Available subjects in the 1st year		Available subjects in the 2nd year	
	Minimum requirement 60 ECTS credits		Minimum requirement 60 ECTS credits	
	Name	Credits	Name	Credits
<b>Barcelona</b>	A: Structural analysis and design	18	A: Structural analysis and design	18
	B: Bridges	9	B: Bridges	9
	C: Construction	21	C: Construction	21
	D: Experimental techniques	16	D: Experimental techniques	16
	E: Materials	13	E: Materials	13
	F: Geotechnical	22	F: Geotechnical	22
	G: Flow in porous media	13.5	G: Flow in porous media	13.5
	H: Advanced numerical methods	18	H: Advanced numerical methods	18
	I: Finite element methods	13	I: Finite element methods	13
	J: Computational mechanics	17.5	J: Computational mechanics	17.5
	K: Elective Subjects	6	K: Elective Subjects	6
	Language for foreigners (English, French, Spanish)	8	Language for foreigners (English, French, Spanish)	8
	Tutored research assignment	12	Diploma Work	30
	Total	187	Total	205
<b>Budapest</b>	A: Steel Buildings	7	A: Steel Buildings	7
	B: Reinforced Concrete Buildings	7	B: Reinforced Concrete Buildings	7
	C: Analysis of Buildings	6	C: Analysis of Buildings	6
	D: Timber Structures	4	E: Steel and Composite Bridges	8
	E: Steel and Composite Bridges	8	I: Design of Civil Engineering Works	6
	F: Concrete Bridges and Civil Engineering Work	8	J: Concrete Technology and Insulations	4
	G. Analysis of Bridges and Engineering Structures	6	K: Design of Communal Buildings	4
	H: Advanced Foundation	9	L: Management of Engineering Projects	5
		I: Design of Civil Engineering Works	6	
		M: Language for foreigners (English, French,	8	

			Spanish)	
	J: Concrete Technology and Insulations	4	N: Elective Subjects (technical & non technical)	8
	K: Design of Communal Buildings	4	O: Diploma Work	30
	L: Management of Engineering Projects	5		
	M: Language for foreigners (English, French, Spanish)	8		
	N: Elective Subjects (technical & non technical)	8		
	Total	90	Total	93
<b>London</b>	A. Concrete Structures Core Subjects	15	A. Concrete Structures Core Subjects	15
	B: Steel Structures Core Subjects	15	B: Steel Structures Core Subjects	15
	C. Structural Design	10	C. Structural Design	10
	D. Soil Mechanics Core Subjects	15	D. Soil Mechanics Core Subjects	15
	E. Geotechnical Fieldwork	5	E. Geotechnical Fieldwork	5
	F: Geotechnical Laboratory Work	5	F: Geotechnical Laboratory Work	5
	G. Numerical and Analytical Methods	5	G. Numerical and Analytical Methods	5
	M: Language for foreigners (English, French, Spanish)	8	M: Language for foreigners (English, French, Spanish)	8
	N: Elective Subjects (technical & non technical)	30	N: Elective Subjects (technical & non technical)	30
	O. Diploma Work	30	O: Diploma Work	30
	Total	138	Total	138
<b>Paris</b>	C : Structural Design	15	C : Structural Design	12
	D : Soil Mechanics Core Subjects	15	D : Soil Mechanics Core Subjects	15
	F : Training course (Geotechnical Laboratory Work)	12	G : Numerical and Analytical Methods	12
	G : Numerical and Analytical Methods	9	M: Language for foreigners (English, French, Spanish)	8
	M: Language for foreigners (English, French, Spanish)	8	N: Elective Subjects (technical & non technical)	6
	N: Elective Subjects (technical)	12	O: Diploma Work	30
	Total	71	Total	83

*It is clear that the students have a wider range of choices about how to proceed through the consortium, depending on their choice of Institution. The section below describes how students will proceed through the course, depending on their choice of Home Institution.*

- **Imperial College**

*Students starting at Imperial will complete a taught programme of studies in the specialisation of his/her choice, lasting from October until March. Each technical specialisation will be equivalent to 60 ECTS, and will give some opportunity to choose technical elective subjects. Alternatively, students can replace 20% of the technical material with modules in Business Management or Sustainability. After the completion of the taught programme, the students will take examinations, and begin a period of preparation for his/her major project, which will be taken in another institution. While in the other institution, the student will study supplementary courses in his/her chosen specialisation, further courses in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and undertake a major dissertation.*

*Students coming to Imperial for their second year will build on the studies of the first year by taking additional courses in the chosen specialisation, will also take studies in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and complete a major dissertation.*

- **ETSECCPB**

*Students starting at ETSECCPB (UPC) will complete a taught programme of studies of which the main group of credits correspond to courses concerned with the core content of the scientific or technical field of the doctoral programme in Civil Engineering. The student may also obtain some credits in courses covered by other doctoral programs in the UPC, related with Structural and Geotechnical Engineering, as: Construction Engineering, Structural Engineering and Geotechnical Engineering. The student will also undertake a tutored research assignment period in one of the research lines of the structural unit of the programme. After the completion of the taught and tutored research programmes, the students will take examinations, and begin a period of preparation for his/her major project, which will be taken in another institution. While in the other institution, the student will study supplementary courses in his/her chosen specialisation, further courses in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and undertake a major project.*

*Students coming to ETSECCPB (UPC) for their second year will build on the studies of first year by taking additional courses in the chosen specialisation, will also take studies in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and complete a major project.*

- ENPC

*Students starting at ENPC will complete a taught programme of studies in Structural Design, Soil Mechanics, Numerical and Analytical Methods, lasting from October until March: obligatory subjects will be equivalent to 42 ECTS, and students will have to choose technical elective subjects (6 ECTS). After the completion of the taught programme, the students will have a training course, lasting two or three months, and which will be taken either in a Research Laboratory or in a Private Company. The students will have to write a report, and the training course and report will be equivalent to 12 ECTS. The students will reach this way the minimum requirement of 60 ECTS credits for their first year.*

*Students coming to ENPC for their second year will complete a taught programme of studies, lasting from October until January: inside this programme, they will complete a "joint base" (equivalent to 9 ECTS, obligatory subjects) and will have to choose technical elective subjects (minimum requirement 21 ECTS). After the completion of this taught programme (which is equivalent to 30 ECTS), the students will take examination, and begin a training course, lasting from four to six months, and which will be taken either in a Research Laboratory, or in a Research and Development Unit of a Private Company. The students will have to write a report during their training course, and to support an oral presentation of the report in front of an examination jury. Both report and oral presentation will be equivalent to 30 ECTS. Total ECTS for second year will also reach the minimum requirement of 60 ECTS credit.*

- BUTE

*Students starting at Budapest University of Technology and Economics will complete a taught programme of studies. The first semester is lasting from the middle of September until the middle of December followed by an examination period in January. The second semester lasts from the middle of February until the middle of May and is followed by an examination period in June. Each semester will be equivalent to 30 ECTS, and will give some opportunity to choose technical and non technical elective subjects and Language course for foreigners. After the completion of the taught programme, the students will take examinations.*

*Students coming to Budapest for their second year will build on the studies of the first year by taking additional courses from the middle of September until the middle of December followed by an examination period in January. The semester will be equivalent to 30 ECTS, and will give some opportunity to choose technical and non technical elective subjects and Language course for foreigners. The fourth semester (from the middle of February until the middle of May) is the period of preparation for diploma project (30 credits) in the chosen specialisation eg. Buildings, Bridges and/or Geotechnics. In June the student will take her/his final exam and defend the diploma project.*



The table below summarises the combinations of languages which are available and the titles of the Degrees which students will be awarded.

Working language	1st year	2nd year	Degrees	
	Institute	Institute		
English	Budapest (English)	London (English)	MSc CE Major in Structural Engineering	Master of Science
	London (English)	Budapest (English)	Master of Science	MSc CE Major in Structural Engineering
English & French	Budapest (English)	Paris (French)	MSc CE Major in Structural Engineering	DNM en Géotechnique
	Paris (French)	Budapest (English)	DNM en Géotechnique	MSc CE Major in Structural Engineering
	London (English)	Paris (French)	Master of Science	DNM en Géotechnique
	Paris (French)	London (English)	DNM en Géotechnique	Master of Science
English & Spanish	Budapest (English)	Barcelona (Spanish)	MSc CE Major in Structural Engineering	DEA in Civil Engineering
	Barcelona (Spanish)	Budapest (English)	DEA in Civil Engineering	MSc CE Major in Structural Engineering
	London (English)	Barcelona (Spanish)	Master of Science	DEA in Civil Engineering
	Barcelona (Spanish)	London (English)	DEA in Civil Engineering	Master of Science
French & Spanish	Paris (French)	Barcelona (Spanish)	DNM en Géotechnique	DEA in Civil Engineering
	Barcelona (Spanish)	Paris (French)	DEA in Civil Engineering	DNM en Géotechnique

Barcelona DEA in Civil Engineering

Budapest MSc CE Major in Structural Engineering

London Master of Science  
Paris DNM en Géotechnique

- **Organització docent: unitats de la UPC que participen en el desenvolupament del programa.**

Departament d'Enginyeria de la Construcció

Departament de Resistència de Materials i Estructures en l'Enginyeria

Departament de Matemàtica Aplicada III

Departament d'Enginyeria del Terreny i Cartogràfica

Departament d'Enginyeria Hidràulica, Marítima i Ambiental

Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona

- **Requisits bàsics d'accés i perfil de l'estudiantat.**

*Applications will be made to the Consortium Coordinator and will comprise the following: (i) application form, (ii) curriculum vitae, (iii) copies of relevant certificates, (iv) preferred study programme, including choice of home and host Institution, and (v) three references. These documents will be submitted as hard copies, by post. Applicants will also be asked to submit transcripts of their degrees, stating subjects taken and marks obtained (if the documents are not written in English, a translation of their contents will be requested). The key criteria for admission are that the student must offer a qualification that allows him/her to enter the existing Masters course of the home institution, must demonstrate academic excellence, as proved by transcripts and references, must demonstrate linguistic competence, and must be able to show that he/she is able and willing to benefit from the programme of study. The potential student*

*must also be able to demonstrate, to the satisfaction of the home Institution, the ability to pay the appropriate fees and to be able to afford the typical living costs*

*To benefit from their studies, it is essential that all students possess an adequate command of the languages in which they intend to study. Applicants will therefore be asked to submit any documents that attest to this. In the case of English for example, evidence of a score of at least 230 (computer-based exam) or 570 (paper-based exam) in the TOEFL test, a score of 6 or more obtained with IELTS, a degree obtained in an English speaking country, etc, will be required, with similar documentation for other languages within the Consortium.*

*Within two weeks of the deadline for submission of applications, the Management Committee of the Consortium, comprising at least one member from each Institution, will meet to select candidates. If required, the applicant or referees may be contacted to obtain further information. As a general rule, applicants will not be interviewed. The Executive Committee will also meet regularly to manage and monitor the activities of the Masters Course.*

- **Condicions per a l'obtenció del títol; acords respecte a la titulació (doble o conjunta), i denominació del títol que emetrà la UPC.**

Name of institution	Title of degree awarded for this Masters Course by this institution	Type of degree awarded
Imperial College London	Master of Science	Double Degree
Universitat Politècnica de Catalunya, ETSECCPB	DEA in Civil Engineering	Double Degree
Ecole Nationale des Ponts et Chaussées	Master Mécanique et Génie Civil	Double Degree
Budapest University of Technology and Economics	MSc in Structural Engineering	Double Degree

## **5. Previsió de recursos necessaris per a la posada en marxa del programa fins a la plena implantació:**

Els recursos propis de cada centre.



Education and Culture

**Erasmus Mundus**

Reserved for the Commission

Number

Date of Postmark

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# **ERASMUS MUNDUS PROGRAMME**

## **Application Form for Action 1: ERASMUS MUNDUS MASTERS COURSES**

You are applying for:

- An Erasmus Mundus Masters Course without a preparatory year
- An Erasmus Mundus Masters Course including a preparatory year

**CLOSING DATE FOR SUBMISSION:**

**31 MAY 2005  
(as per postmark)**

## Important instructions and information regarding the application and selection procedure

- Before completing the form, please read the relevant sections in the *Erasmus Mundus Call for Proposals EAC/04/05* and the *Administrative and Financial Handbook for Erasmus Mundus Projects*. Further information can be found on the Erasmus Mundus website: [http://europa.eu.int/comm/education/programmes/mundus/index\\_en.html](http://europa.eu.int/comm/education/programmes/mundus/index_en.html).
- Please note that even if you apply for an Erasmus Mundus Masters Course including a preparatory year, your application – if successful - would be selected for five years. You are therefore required to answer all questions under Section 2 of the application form.
- Your proposal will be assessed on the basis of the elements included in this application only. You can include web site references in your application, but the assessment of your proposal will not be based on additional technical information found on a web site and not contained within the application.
- Applicants should use as application language the operational language of communication between the institutions involved in the Masters Course.
- The application must be typewritten or word-processed using a computer, character size 11 pt minimum.
- The original of the application must bear the original signature of the legal representative of the co-ordinating institution and the original stamp of this institution.
- The application must be accompanied by copies of letters from the appropriate authorities of each institution participating in the Masters Course, confirming their agreement with the application as submitted.
- Applications must be sent by post **and** e-mail by the closing date. The paper copy is authentic. Applications sent by e-mail only or sent by fax will not be accepted. Annexes which are not available electronically need not be sent by e-mail.
- The signed original of the application and 2 copies thereof must be sent in the same envelope **by 31 May 2005 (as per postmark)** to:

European Commission  
Directorate-General for Education and Culture  
Directorate B – Unit B/6  
Bureau: B -- 7 06/32  
B-1049 Brussels  
E-Mail: EAC-Erasmus-Mundus@cec.eu.int  
Fax: (+32) (2) 296.32.33

Because of the tight timing for the assessment of applications, you are requested to send your application **by rapid mail so that it reaches the Commission no later than 7 June 2005**.

- A paper copy **and** an electronic copy of the original application must be sent by 31 May 2005 to the appropriate National Structure in each of the countries which are participating in the Masters Course. The list of National Structures appears in the *Erasmus Mundus Call for Proposals EAC/04/05* and on the website indicated above.
- All applications will receive an acknowledgement slip.
- Applications will be judged against the eligibility, selection and award criteria set out in the *Erasmus Mundus Call for Proposals EAC/04/05*.
- Applicants will be notified about the outcome of the selection in writing in September 2005. A copy of the notification letter will be sent to the National Structures concerned.
- In accordance with standard Commission practice, the information provided in your application may be used for the purposes of evaluating the Erasmus Mundus programme. The relevant data protection regulations will be respected.
- Any questions relating to this proposal should be addressed to the address indicated above.

## SECTION 1 - IDENTIFICATION

### 1. Title of the Masters Course

Please use a maximum of 12 words; start with an acronym or abbreviation, if applicable.

EMSGE: EUROPEAN MASTERS IN STRUCTURAL AND GEOTECHNICAL ENGINEERING

If your title is not in English, French or German, please provide a translation into any of the three languages.

### 2. Summary description of the Masters Course (maximum 500 words)

Please identify clearly the following aspects of your Masters Course:

- Objectives of the Masters Course, qualifications obtained, duration, language(s) of instruction, size of student population, professor / student ratio;
- Summary of study programme;
- List of higher education institutions involved in the Masters consortium<sup>1</sup>, including locations and mobility arrangements;
- Precise degree awarded (by which institutions and recognised in which countries);
- Admission criteria.

If your application is successful, this summary will be used as the official description of the Masters Course. It will be part of your grant agreement and published on the internet. You are therefore kindly requested to formulate it very carefully and to provide this summary in English, French or German.

This course offered by a Consortium of Imperial College London, UP Barcelona, UP Madrid, Ecole National des Ponts et Chausees Paris, and the Budapest University of Technology and Economics, will offer high level education in geotechnical and structural engineering, two of the key disciplines within the sphere of the Built Environment. These Institutions are the leading technical universities in their respective countries, with many years experience of advanced teaching and leading-edge research. The course takes two years, one in each of two Institutions. The objective of the course is to provide the student with a high level of technical knowledge, and the skills required to exercise engineering judgment, in two of the key disciplines underpinning the construction, maintenance and improvement of our built environment, including buildings, bridges, roads, and other urban infrastructure. Students will choose either Geotechnics or Structures as a major subject and during the first year, will follow a programme of lectures, tutorials and assignments, and prepare for his/her major dissertation. The second year will be spent in another institution, following a programme which complements the major subject and covers the other one. Students will also complete a major dissertation. Studies will be in the language of the institution, except in the case of Budapest, where students have a choice. By the end of the course, the student will have mastered the technical expertise of his/her subject and experienced high level education in two European countries, gaining experience of some of the different characteristics of engineering formation in Europe. He or she will be able to practice as an Engineer within the European and global domains and to bring the best of European educational practice to bear on issues of infrastructure, engineering design, urban development and sustainability.

The course will be taught alongside a number of existing Masters courses and will be integrated within the research and professional activities of each participating Institution within the Consortium. The initial enrolment to the course will be 10 students, apportioned evenly between Consortium members, and it is expected that this number will increase with time. Student will be awarded a double degree comprising the Masters degrees of the Institutions in which he/she studies, plus a Diploma Supplement giving details of the study programme and recognition of both qualifications.

<sup>1</sup> The consortium is the group of higher education institutions involved in the Masters Course.

Students will be selected on the basis of excellence in their first cycle degree, as demonstrated by transcripts, examination performance and references from teachers.

### 3. Languages

Language in which you would like the grant agreement to be issued and correspondence with the Commission to be conducted.	
To facilitate co-operation with your partners, you are advised to enter the language most commonly used for communication within the consortium.	
1 <sup>st</sup> preference	2 <sup>nd</sup> preference
<input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> French	<input type="checkbox"/> German <input type="checkbox"/> English <input checked="" type="checkbox"/> French

### 4. Financial support from the European Community

Please note that according to the new financial regulation applicable to the general budget of the European Communities, one project may not receive more than one grant from the budget of the European Communities. In other words, if you are to be selected to receive an Erasmus Mundus grant for a given Masters Course, you must not receive a grant from another Community programme for the same Masters Course and funding period.

Is this Masters Course, or any aspect thereof or any larger project to which it may belong, currently being supported under another European Community programme?

<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes. Please specify the programme(s), date(s), type(s) of activity and, if possible, agreement number(s):

Is this Masters Course, or any aspect thereof or any larger project to which it may belong, currently the subject of any other application for support from the European Community?

<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes. Please specify the programme(s) and provide the amount(s) requested:

### 5. Previous applications for Erasmus Mundus Masters Courses

Please provide the following information for statistical purposes.

Are you resubmitting an application which has not been selected under previous Erasmus Mundus calls for proposals?

<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes. It was submitted under the first call for proposals (deadline 31 May 2004). Its reference number was: A1&2-2004 -
<input type="checkbox"/> Yes. It was submitted under the second call for proposals (deadline 31 October 2004). Its reference number was: A1-2005 -
If yes, has the composition of the consortium changed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No. Possible comments: The scope of the course has changed, focussing on structural and geotechnical engineering rather than civil engineering as a whole





## 6. Co-ordinating institution of the Masters consortium

The co-ordinating institution is also the applicant institution. To fill in this part, please use country codes and region codes indicated in Annex 1.

### 6.1 Legal Representative

This is the person legally authorised to sign the application and the grant agreement on behalf of the co-ordinating institution.

Full legal name of the institution in the national language	Imperial College of Science, Technology and Medicine		
Acronym of the institution, if applicable	ICSTM		
Full name of the institution in English (formal or informal translation)	Imperial College London		
Country code	UK	Region code	UK11
Type of institution	EDU.4	Erasmus University Charter N°	UK London 015
Website	http://www.imperial.ac.uk		
<b>Legal representative</b> of the institution:	Family name First name	Ewins David	Title (e.g. Prof., Dr., etc.) Prof
Department / Unit	Division of International and External Academic Relations		
Official function within the institution	Pro Rector for International Relations	Sex	<input type="checkbox"/> F (female) <input checked="" type="checkbox"/> M (male)
Legal address of the institution: Street & Street Number Post Code & Town Country	Imperial College London 410 Faculty Building South Kensington, London SW7 2AZ		
Phone (including country and area code)	+44 / 207 / 5949852		
Fax (including country and area code)	+44 / 207 / 5944002		
E-mail	d.ewins@imperial.ac.uk		
Is the institution able to recover VAT?			

### 6.2 Co-ordinator

This is the manager of the Masters Course. All correspondence relating to the Masters Course will be addressed to this person.

Family name First name	Kerr Colin	Title (e.g. Prof., Dr., etc.)	Mr
Institution (only if different from point 6.1 above) / Department	Department of Civil and Environmental Engineering		
Official function within the institution	Departmental Administrator	Sex	<input type="checkbox"/> F (female) <input checked="" type="checkbox"/> M (male)
Correspondence address (only if different from point 6.1 above): Street & Street Number Post Code & Town Country	Department of Civil and Environmental Engineering Skempton Building, South Kensington LONDON SW7 2AZ		
Phone (including country and area code)	+44 / 207 / 5946044		
Fax (including country and area code)	+44 / 207 / 2252716		
E-mail	c.j.kerr@imperial.ac.uk		

### 6.3 Person in charge of finance

Family name First name	Cannon Tony	Title (e.g. Prof., Dr., etc.)	Mr
Department / Unit	Finance Division		
Official function within the institution	Director of Finance	Sex	<input type="checkbox"/> F (female) <input checked="" type="checkbox"/> M (male)
Correspondence address (only if different from point 6.1 above): Street & Street Number Post Code & Town Country	Imperial College London 210 Faculty Building LONDON SW7 2AZ		
Phone (including country and area code)	+44 / 207 / 5948696		
Fax (including country and area code)	+44 / 207 / 5948720		
E-mail	a.cannon@imperial.ac.uk		

### 6.4 Financial identification

Please complete and sign the form in Annex 2 and attach it to your application.

## 7. Partner institutions of the Masters consortium

- To fill in this part, please use the country codes and region codes indicated in Annex 1.
- The minimum number of partners required is two.
- Add numbers and copies of this page, if necessary.

### Partner institution No 1

Full legal name of the institution in the national language	Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona (Universitat Politècnica de Catalunya)				
Acronym of the institution, if applicable	ETSECCPB - UPC	Erasmus University Charter N°	E Barcelo 03		
Full name of the institution in English (formal or informal translation)	Civil Engineering School of Barcelona (Technical University of Catalonia)				
Type of institution	EDU.4	Country code	E	Region code	ES51
Department / Unit	Civil Engineering School				
Contact person	Family Name: Real		Function: Professor		
	First Name: Ester		Male <input type="checkbox"/> Female x <input type="checkbox"/>		
Address: Street & Street Number Post Code & Town Country	c/ Jordi Girona 08034 Barcelona SPAIN				
Phone (including country and area code)	+ / /				
Fax (including country and area code)	+ / /				
E-mail	@				
Website	http:// www-camins.upc.es				
Is the institution able to recover VAT?	No				

### Partner institution No 2

Full legal name of the institution in the national language	Universidad Politecnica de Madrid				
Acronym of the institution, if applicable	ETSICCP - UPM	Erasmus University Charter N°	E Madrid 05		
Full name of the institution in English (formal or informal translation)	Polytechnic University of Madrid				
Type of institution	EDU.4	Country code	ES	Region code	ES3
Department / Unit	Escuela Tecnica Superior de Ingenieros de Caminos, Canales y Puerto				
Contact person	Family Name: Juan Aracil		Function: Subdirector, Relaciones Internacionales		
	First Name: Jose Luis		Male X <input type="checkbox"/> Female <input type="checkbox"/>		
Address: Street & Street Number Post Code & Town Country	Cuidad Universitaria 28040 Madrid SPAIN				
Phone (including country and area code)	+ 34 / 913 / 366734				
Fax (including country and area code)	+ 34 / 917 / 345436				
E-mail	<a href="mailto:Sd53@caminos.upm.es">Sd53@caminos.upm.es</a>				
Website	http:// <a href="http://www.upm.es">www.upm.es</a>				
Is the institution able to recover VAT?	No				

**Partner institution No 3**

Full legal name of the institution in the national language	Ecole Nationale des Ponts et Chausees			
Acronym of the institution, if applicable	ENPC	Erasmus University Charter N°	F Paris 085	
Full name of the institution in English (formal or informal translation)	Ecole Nationale des Ponts etc Chausees, Paris			
Type of institution	EDU.4	Country code	FR	Region code FR1
Department / Unit	Direction Generale			
Contact person	Family Name: Cammarota		Function: Head of International Affairs	
	First Name: Marie Ange		Male <input type="checkbox"/> Female X <input type="checkbox"/>	
Address: Street & Street Number Post Code & Town Country	6 – 8 Avenue Blaise Pascal, Cite Descartes, Champs-sur-Marne 77455 Marne la Vallee, Cedex 2 FRANCE			
Phone (including country and area code)	+ 33 / 1 / 64 15 34 90			
Fax (including country and area code)	+ 33 / 1 / 64 15 34 99			
E-mail	<a href="mailto:cammarota@mail.enpc.fr">cammarota@mail.enpc.fr</a>			
Website	<a href="http://www.enpc.fr">http:// www.enpc.fr</a>			
Is the institution able to recover VAT?	YES			

**Partner institution No 4**

Full legal name of the institution in the national language	Budapesti Műszaki és Gazdaságtudományi Egyetem			
Acronym of the institution, if applicable	BME	Erasmus University Charter N°	46968-K-1-2002-1-HU-Erasmus-EUC-1	
Full name of the institution in English (formal or informal translation)	Budapest University of Technology and Economics			
Type of institution	University	Country code	36	Region code 1
Department / Unit	Faculty of Civil Engineering			
Contact person	Family Name: Farkas		Function: dr.	
	First Name: György		Male x Female <input type="checkbox"/>	
Address: Street & Street Number Post Code & Town Country	Műegyetem rakpart 3. Budapest 1111 Hungary			
Phone (including country and area code)	+ 35 / 1 / 4633531			
Fax (including country and area code)	+ 36 / 1 / 4633530			
E-mail	<a href="mailto:farkas@vbt.bme.hu">farkas@vbt.bme.hu</a>			
Website	<a href="http://www.bme.hu">http:// www.bme.hu</a>			
Is the institution able to recover VAT?	no			

## SECTION 2 - DESCRIPTION OF THE ERASMUS MUNDUS MASTERS COURSE

- Please describe the following aspects of your Masters Course, using the same order and numbering as given in the list of questions.
- You are invited to read the relevant chapters of the *Erasmus Mundus Call for Proposals EAC/04/05* carefully, before filling in this section.
- Please enclose supporting documents only where these have a direct and material bearing on your application.
- Please respect the maximum length of text indicated, excluding supporting documents.

### 1. GENERAL INFORMATION ON THE MASTERS COURSE

#### 1.1 General discipline

- Agricultural sciences
- Architecture, urban and regional planning
- Art and design
- Business studies, management sciences
- Communication and information sciences
- Education, teacher training
- Engineering, technology
- Geography, geology
- Humanities
- Languages and philological sciences
- Law
- Mathematics, informatics
- Medical sciences
- Natural sciences
- Social sciences
- Other:

**Specific discipline** (if further specification is useful):

#### 1.2 Duration and ECTS credits

The full-degree programme covers:

- one year (60 ECTS credits)<sup>2</sup>
- one year and        months (        ECTS credits)
- two years (120 ECTS credits)<sup>2</sup>

#### 1.3 Student population and number of staff involved in the Masters Course:

#### 1.4 Final degree delivered

- joint
- double
- multiple

<sup>2</sup> If your Masters Course carries more than the standard credits, please indicate how many and provide further details under point 2.2.

## 2. DETAILED DESCRIPTION OF THE MASTERS COURSE (max. 15 pages excluding annexes e.g. CVs, etc.)

### Study programme and recognition

- 2.1 Describe the objectives of the Masters Course. Describe how the Masters Course contributes towards university excellence and European competitiveness.

The essence of civil engineering is the building of structures and artefacts for the benefit of mankind and the location of these on or under the ground. This course will provide the very best students with a high level, multi-faceted training in structural and geotechnical engineering based on expertise held in some of the most powerful and influential institutions of higher education in Europe. The course will equip European and non-European students with the skills of analysis, assessment and design of structures and a fundamental understanding of the mechanics and behaviour of the ground. Building on this, a number of specialist options of particular relevance and current concern will be available, including topics such as environmental geotechnics, redevelopment of contaminated land, landfill engineering and the design of structures under extreme loading, (blast, earthquake etc). A combination of a deep understanding of core engineering principles coupled with up to date knowledge of key engineering technologies will prepare student to play a vital role as leaders of the Civil Engineering Profession in the 21<sup>st</sup> Century.

The course will build on existing excellence in the consortium members by combining the best features of engineering formation from across Europe and exposing students to different traditions and approaches to engineering problem-solving. It will also provide a high level cadre of top professionals able to take a leading role in the Profession within and beyond Europe.

- 2.2 Describe the structure and the content of the study programme in detail indicating the value of each part of the programme in ECTS credits. Describe the role of each institution within the consortium in course delivery indicating which part of the programme is delivered by which institution.

When they enrol, students must select a programme of study which must be agreed by the Management Committee. They must choose two Institutions. They spend their first year in one (the 'home' Institution) and the second year in the other (the 'host' Institution). During the first year, they will specialise in either Geotechnics or Structural Engineering, following a taught programme of lectures, tutorials, assignments and examinations. They will also begin preparations for their major dissertation. During the second year, they will move to their host Institution to follow a complementary set of studies in their specialist subject and also undertake work in the other discipline (i.e. Geotechnics if the specialisation is Structures, and vice-versa). They will also complete their major dissertation. This can be in their specialist subject, but dissertations which include aspects of both structural and geotechnical engineering will be encouraged. The programme of studies will be chosen carefully to ensure that the students fulfil the requirements need to allow them to receive the Masters degree from each Institution. The options available within the Consortium are shown in the table below, and it is on this basis that each student's programmes of studies will be drawn up.

	Available subjects in the 1st year		Available subjects in the 2nd year	
	Minimum requirement 60 ECTS credits		Minimum requirement 60 ECTS credits	
	Name	Credits	Name	
<b>Barcelona</b>	A: Structural analysis and design	18	A: Structural analysis and design	
	B: Bridges	9	B: Bridges	
	C: Construction	21	C: Construction	
	D: Experimental techniques	16	D: Experimental techniques	
	E: Materials	13	E: Materials	
	F: Geotechnical	22	F: Geotechnical	
	G: Flow in porous media	13.5	G: Flow in porous media	
	H: Advanced numerical methods	18	H: Advanced numerical methods	
	I: Finite element methods	13	I: Finite element methods	
	J: Computational mechanics	17.5	J: Computational mechanics	
	K: Elective Subjects	6	K: Elective Subjects	
	Language for foreigners (English, French, Spanish)	8	Language for foreigners (English, French, Spanish)	

	Tutored research assignment	12	Diploma Work
	Total	187	
<b>Budapest</b>	A: Steel Buildings	7	A: Steel Buildings
	B: Reinforced Concrete Buildings	7	B: Reinforced Concrete Buildings
	C: Analysis of Buildings	6	C: Analysis of Buildings
	D: Timber Structures	4	E: Steel and Composite Bridges
	E: Steel and Composite Bridges	8	I: Design of Civil Engineering Works
	F: Concrete Bridges and Civil Engineering Work	8	J: Concrete Technology and Insulations
	G: Analysis of Bridges and Engineering Structures	6	K: Design of Communal Buildings
	H: Advanced Foundation	9	L: Management of Engineering Projects
	I: Design of Civil Engineering Works	6	M: Language for foreigners (English, French, Spanish)
	J: Concrete Technology and Insulations	4	N: Elective Subjects (technical & non technical)
	K: Design of Communal Buildings	4	O: Diploma Work
	L: Management of Engineering Projects	5	
	M: Language for foreigners (English, French, Spanish)	8	
	N: Elective Subjects (technical & non technical)	8	
	Total	90	
<b>London</b>	A. Concrete Structures Core Subjects	15	A. Concrete Structures Core Subjects
	B: Steel Structures Core Subjects	15	B: Steel Structures Core Subjects
	C. Structural Design	10	C. Structural Design
	D. Soil Mechanics Core Subjects	15	D. Soil Mechanics Core Subjects
	E. Geotechnical Fieldwork	5	E. Geotechnical Fieldwork
	F: Geotechnical Laboratory Work	5	F: Geotechnical Laboratory Work
	G. Numerical and Analytical Methods	5	G. Numerical and Analytical Methods
	M: Language for foreigners (English, French, Spanish)	8	M: Language for foreigners (English, French, Spanish)
	N: Elective Subjects (technical & non technical)	30	N: Elective Subjects (technical & non technical)
	O. Diploma Work	30	O: Diploma Work
	Total	138	
<b>Paris</b>	C : Structural Design	15	C : Structural Design
	D : Soil Mechanics Core Subjects	15	D : Soil Mechanics Core Subjects
	F : Training course (Geotechnical Laboratory Work)	12	G : Numerical and Analytical Methods
	G : Numerical and Analytical Methods	9	M: Language for foreigners (English, French, Spanish)
	M: Language for foreigners (English, French, Spanish)	8	N: Elective Subjects (technical & non technical)
	N: Elective Subjects (technical)	12	O: Diploma Work
Total	71		

It is clear that the students have a wider range of choices about how to proceed through the consortium, depending on their choice of Institution. The section below describes how students will proceed through the course, depending on their choice of Home Institution.

#### Imperial College

Students starting at Imperial will complete a taught programme of studies in the specialisation of his/her choice, lasting from October until March. Each technical specialisation will be equivalent to 60 ECTS, and will give some opportunity to choose technical elective subjects. Alternatively, students can replace 20% of the technical material with modules in Business Management or Sustainability. After the completion of the taught programme, the students will take

examinations, and begin a period of preparation for his/her major project, which will be taken in another institution. While in the other institution, the student will study supplementary courses in his/her chosen specialisation, further courses in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and undertake a major dissertation..

Students coming to Imperial for their second year will build on the studies of the first year by taking additional courses in the chosen specialisation, will also take studies in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and complete a major dissertation.

#### Barcelona

Students starting at ETSECCPB (UPC) will complete a taught programme of studies of which the main group of credits correspond to courses concerned with the core content of the scientific or technical field of the doctoral programme in Civil Engineering. The student may also obtain some credits in courses covered by other doctoral programs in the UPC, related with Structural and Geotechnical Engineering, as: Construction Engineering, Structural Engineering and Geotechnical Engineering. The student will also undertake a tutored research assignment period in one of the research lines of the structural unit of the programme. After the completion of the taught and tutored research programmes, the students will take examinations, and begin a period of preparation for his/her major project, which will be taken in another institution. While in the other institution, the student will study supplementary courses in his/her chosen specialisation, further courses in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and undertake a major project.

Students coming to ETSECCPB (UPC) for their second year will build on the studies of first year by taking additional courses in the chosen specialisation, will also take studies in the complementary discipline (geotechnics if the specialisation is structural, and vice versa) and complete a major project.

#### Madrid

Details to follow

#### ENPC

Students starting at ENPC will complete a taught programme of studies in Structural Design, Soil Mechanics, Numerical and Analytical Methods, lasting from October until March: obligatory subjects will be equivalent to 42 ECTS, and students will have to choose technical elective subjects (6 ECTS). After the completion of the taught programme, the students will have a training course, lasting two or three months, and which will be taken either in a Research Laboratory or in a Private Company. The students will have to write a report, and the training course and report will be equivalent to 12 ECTS. The students will reach this way the minimum requirement of 60 ECTS credits for their first year.

Students coming to ENPC for their second year will complete a taught programme of studies, lasting from October until January: inside this programme, they will complete a "joint base" (equivalent to 9 ECTS, obligatory subjects) and will have to choose technical elective subjects (minimum requirement 21 ECTS). After the completion of this taught programme (which is equivalent to 30 ECTS), the students will take examination, and begin a training course, lasting from four to six months, and which will be taken either in a Research Laboratory, or in a Research and Development Unit of a Private Company. The students will have to write a report during their training course, and to support an oral presentation of the report in front of an examination jury. Both report and oral presentation will be equivalent to 30 ECTS. Total ECTS for second year will also reach the minimum requirement of 60 ECTS credit.

#### BUTE

Students starting at Budapest University of Technology and Economics will complete a taught programme of studies. The first semester is lasting from the middle of September until the middle of December followed by an examination period in January. The second semester lasts from the middle of February until the middle of May and is followed by an examination period in June. Each semester will be equivalent to 30 ECTS, and will give some opportunity to choose technical and non technical elective subjects and Language course for foreigners. After the completion of the taught programme, the students will take examinations.



Students coming to Budapest for their second year will build on the studies of the first year by taking additional courses from the middle of September until the middle of December followed by an examination period in January. The semester will be equivalent to 30 ECTS, and will give some opportunity to choose technical and non technical elective subjects and Language course for foreigners. The fourth semester (from the middle of February until the middle of May) is the period of preparation for diploma project (30 credits) in the chosen specialisation eg. Buildings, Bridges and/or Geotechnics. In June the student will take her/his final exam and defend the diploma project.

The table below summarises the combinations of languages which are available and the titles of the Degrees which students will be awarded.

Working language	1st year		2nd year		Degrees	
	Institute	Institute	Institute	Institute		
English	Budapest (English)	London (English)		MSc CE Major in Structural Engineering		Master of Science
	London (English)	Budapest (English)		Master of Science		MSc CE Major in Structural Engineering
English & French	Budapest (English)	Paris (French)		MSc CE Major in Structural Engineering		DNM en Géotechnique
	Paris (French)	Budapest (English)		DNM en Géotechnique		MSc CE Major in Structural Engineering
	London (English)	Paris (French)		Master of Science		DNM en Géotechnique
	Paris (French)	London (English)		DNM en Géotechnique		Master of Science
English & Spanish	Budapest (English)	Barcelona (Spanish)		MSc CE Major in Structural Engineering		DEA in Civil Engineering
	Barcelona (Spanish)	Budapest (English)		DEA in Civil Engineering		MSc CE Major in Structural Engineering
	London (English)	Barcelona (Spanish)		Master of Science		DEA in Civil Engineering
	Barcelona (Spanish)	London (English)		DEA in Civil Engineering		Master of Science
French & Spanish	Paris (French)	Barcelona (Spanish)		DNM en Géotechnique		DEA in Civil Engineering
	Barcelona (Spanish)	Paris (French)		DEA in Civil Engineering		DNM en Géotechnique

Barcelona    DEA in Civil Engineering  
 Budapest    MSc CE Major in Structural Engineering  
 London        Master of Science  
 Paris         DNM en Géotechnique

### 2.3 Describe the acquired competencies and the learning outcomes of the Masters Course.

Students will acquire competence in engineering science, numeracy, analytical techniques, data interpretation and in making engineering judgements. A key learning outcome will be an understanding of engineering principles and how these underpin engineering design and problem solving. This will require the student to be able to assess data, make judgements and understand the implications for society of the work of an engineer. Another will be an understanding of state-of-the art technologies designed to deal with current engineering problems. Throughout, there will be an emphasis on study skills and critical thinking skills. In addition, students will gain an appreciation of professional context of engineering, in particular by have the opportunity to study management and the concept and practice of engineering for sustainability. Students will also acquire higher level generic competences resulting from their study in two different environments. These will include:

- Ability to operate at a professional level in at least two different linguistic and cultural environments
- Ability to compare and contrast the context in which engineering operates in more than one country
- Ability to communicate professionally and socially in more than one language/culture

At the end of the course, successful student will be extremely well versed in their professional discipline and will be expected to be able to:

- Interact with professionals in at least two different professional engineering cultures

- Identify and appreciate the strengths and weaknesses of different modes of engineering formation within Europe
- Participate at a high level in the European and global job markets
- Bring the best of European education to bear when operating as a professional in his/her's country of origin

2.4 List the partner institutions awarding the final degree and describe the title and the type of the final degree awarded by filling in the table below. Add further rows to the table, if necessary. Describe the role of each partner institution in the degree-awarding arrangements. Indicate if all successful students (European and third-country) receive the same final degree.

Name of institution	Title of degree awarded for this Masters Course by this institution	Type of degree awarded	Date and reference of formal approval of degree (Provide details of approval procedures under point 2.5)
Imperial College London	Master of Science	X double <input type="checkbox"/> multiple <input type="checkbox"/> joint	
Universitat Politècnica de Catalunya	DEA in Civil Engineering	X <input type="checkbox"/> double <input type="checkbox"/> multiple <input type="checkbox"/> joint	
Universidad Politécnica de Madrid		X <input type="checkbox"/> double <input type="checkbox"/> multiple <input type="checkbox"/> joint	
Ecole Nationale des Ponts et Chaussées	Master Mécanique et Génie Civil	X Double Degree	The Diploma received habilitation from French Ministry on February 14, 2005 under Number : 20041858.
Budapest University of Technology and Economics	MSc in Structural Engineering		

2.5 Describe the policy and the legal procedures within the Masters consortium for the recognition of programme components and the programme as a whole. Provide details of legal approval procedures for those partner institutions which deliver the joint, double or multiple degree. Provide proof that the degree is officially recognised by the countries concerned.<sup>3</sup>

2.6 Indicate if the Diploma Supplement is used by the Masters consortium.

A Diploma Supplement will be awarded to each successful student in addition to the two degrees of the Institutions which the student attends. This will be an important feature, giving a precise description of the academic components studied and the competencies acquired during the course. It will be drawn up in such a way as to make interpretation and comparability across countries as easy as possible and to make it easier for the student to gain access to work and further study opportunities abroad.

2.7 Indicate if the Masters Course has been newly created or if it has already existed.

The Masters Course has been constructed by careful combination of existing material, bringing together complimentary modules/components from across the consortium, to offer a coherent programme in structural and geotechnical engineering. This has proved possible because of the considerable wealth of experience of student exchanges and research collaboration built up within the consortium over many years, and the many years experience consortium members have of offering high quality second cycle education within their own countries. All partners within the consortium have recently undertaken extensive updating of their teaching programmes, and in structuring the course, we have taken the best components available in each and combined them in such a way as to offer students a unique opportunity. .

<sup>3</sup> You are advised to check with your Erasmus Mundus National Structure whether they can provide a model for the proof you have to submit in your national context.

## Teaching staff

- 2.8 Describe the professional and academic experience of the teaching staff who will deliver the core parts of the study programme. Enclose summary CVs of a maximum of 2 pages for each of the persons concerned in an annex.<sup>4</sup>

The teaching staff involved in this course are all highly qualified and are amongst the best in their fields anywhere in the world. They are very experienced teachers, most are also active in research and most are also closely linked to professional practice by virtue of their involvement in consultancy, technical committees (including Eurocode committees) and professional bodies. Summary CVs are attached in Annexe A. **Check that this is the right Annexe**

- 2.8 Describe the availability and presence of teaching staff for enrolled students.

Each EM student will be assigned a dedicated tutor from the staff of the Institution in which they are studying at any time. Selection of the tutor will be based primarily on the specific area of technical interest of the student. The tutor will provide general academic guidance, supervision and support for the student's dissertation, plus pastoral support and advice. The academic staff of each Institution are very experienced in this respect; despite their busy teaching and research schedules, availability of staff to students is an important priority within the Consortium.

## Admission, application, selection, examination criteria

- 2.10 Describe the common admission criteria, application procedure, selection process and examination criteria for students within the Masters consortium. Indicate all admission conditions for students, including any additional ECTS requirements or qualifications needed following the first degree.

Applications will be made to the Consortium Coordinator and will comprise the following: (i) application form, (ii) curriculum vitae, (iii) copies of relevant certificates, (iv) preferred study programme, including choice of home and host Institution, and (v) three references. These documents will be submitted as hard copies, by post. Applicants will also be asked to submit transcripts of their degrees, stating subjects taken and marks obtained (if the documents are not written in English, a translation of their contents will be requested). The key criteria for admission are that the student must offer a qualification that allows him/her to enter the existing Masters course of the home institution, must demonstrate academic excellence, as proved by transcripts and references, must demonstrate linguistic competence, and must be able to show that he/she is able and willing to benefit from the programme of study. The potential student must also be able to demonstrate, to the satisfaction of the home Institution, the ability to pay the appropriate fees and to be able to afford the typical living costs

To benefit from their studies, it is essential that all students possess an adequate command of the languages in which they intend to study. Applicants will therefore be asked to submit any documents that attest to this. In the case of English for example, evidence of a score of at least 230 (computer-based exam) or 570 (paper-based exam) in the TOEFL test, a score of 6 or more obtained with IELTS, a degree obtained in an English speaking country, etc, will be required, with similar documentation for other languages within the Consortium.

Within two weeks of the deadline for submission of applications, the Management Committee of the Consortium, comprising at least one member from each Institution, will meet to select candidates. If required, the applicant or referees may be contacted to obtain further information. As a general rule, applicants will not be interviewed. The Executive Committee will also meet regularly to manage and monitor the activities of the Masters Course.

- 2.11 Indicate if students have to pay tuition fees. If so, give the amount of the fee for third-country and European students. Indicate when and where the students have to pay these fees and how the fees are distributed between the members of the consortium.

Students will pay a fee to the Consortium. There will be one fee for European students and another for Third country students. The fees will be shared between consortium members in proportion to the amount of time spent at each Institution. The fees will be 8000 euros/year for European students and 10500 euros/year for Third Country students.

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<sup>4</sup> If you apply for an Erasmus Mundus Masters Course including a preparatory year, you may not be in a position to provide this information fully.

## **Mobility arrangements**

- 2.12 Describe the mechanisms of student and scholar mobility between the institutions of the Masters consortium. Indicate all mobility combinations, the duration of mobility periods and the number of ECTS credits acquired during mobility.

The student's study programme will be defined at the time of the application, and to a large extent, this will define how the student moves between Consortium partners. The strategy will be based on having the student enrol with a cohort of students with whom she/he will be involved for a considerable period, thus allowing the EM student to integrate fully and acclimatise properly to the country.

### ***For detail, check course structure***

Members of the Consortium have many years of experience of exchanging students, so many of the logistic arrangements, such as finding accommodation, integrating students into the life of the host Institution, procedures for providing marks and transcripts etc, are already very well established

### **Third-country students and scholars<sup>5</sup>**

- 2.13 Describe the mechanisms within the Masters consortium to reach out to potentially interested third-country students and scholars.

All members of the Consortium have a high-profile international reputation, already have well-established channels of communication with third countries to promote existing Masters and PhD programmes, and are well-used to taking on such students. All members also have ongoing sabbatical programmes for exchange of staff with many countries, including Australia, China, Japan, Singapore, Africa, USA, Latin America, Canada, South East Asia, etc. We will focus on these existing and well-established links as a basis for promoting the EM course and for recruitment of both students and scholars. We believe that there is considerable scope for building on our links, particularly with China, South East Asia and Latin America.

- 2.14 With reference to question 2.10, describe if special conditions apply to third-country students. Also, describe the application and selection process for third-country scholars.

It is not envisaged that special conditions, over and above the criteria set out in Section 2.10, will apply to third country students

- 2.15 Describe how third-country students and scholars will be distributed within the Masters consortium.

The main criterion will be the wish of the student, who will nominate a preferred home and host Institution when setting out her/his programme of study at the time of application. However, it will be for the Consortium Management Committee to strike a balance between student choice and a reasonable/equitable distribution of students within the Consortium. We will direct our advertising in such a way that we attract French-, Spanish-, Hungarian- and English-speaking students, and we believe that, over time, a reasonable balance between consortium partners can be achieved.

- 2.16 Describe the services provided by the Masters consortium to welcome and host third-country students and scholars (international office, housing facilities, coaching and counselling, welfare services, language courses, activities aiming at social integration, services for students with a family or special needs, other support measures, etc.).

All members of the Consortium have a long history of receiving students from third countries and have well established procedures for facilitating the process of each student settling into a new environment. Imperial College London has the longest experience in this respect, having delivered Masters level courses for over 50 years, and with about 35-40% of the students coming from outside the EU, has developed a highly effective induction procedure. The facilities contributing to this procedure include a dedicated International Office, priority allocation of student accommodation, medical and welfare services, English language classes (for students and their spouses), student clubs and societies, and a one-to-one personal tutoring system. At the very start of the academic year, students are have introductory sessions concerning the course on which they have enrolled and on all aspects of daily university life, including use of the libraries and other teaching support facilities. Another aspect of the welcome service is the large body of PhD

<sup>5</sup> If you apply for an Erasmus Mundus Masters Course including a preparatory year, you may not be in a position to provide this information fully.

students, many of whom are graduates from the Masters courses run by the institutions, who also provide a network of support for newly arrived students. Other Institutions within the Consortium have similar arrangements, and we have worked together in many EU programmes for sufficient years now to learn from each other's best practice in this respect.

In addition to the introductory sessions offered by each Institution, there will be a combined session of one week, held before the formal enrolment in the home Institution, which will bring all Erasmus Mundus students and key staff of the Consortium together for an orientation and welcome activities.

- 2.17 Describe the financial management and payment mechanisms of scholarships for third-country students and scholars within the Masters consortium.

***This will need clarification and checking***

Consortium funds will be held by the Coordinator, who will also collect fees from students. Allocation of funds to individual Institutions will be made once the admission of students has been agreed. This will comprise the bursary element for students and funds for Institution costs, and it will be the responsibility of individual Institutions to allocate funds to students. Funds contributing towards Institutional costs will be allocated in proportion to the amount of time students spend at different Institutions. For this reason it will be important for the Consortium to try to maintain a balance of students between members.

**Language policy**

- 2.18 Describe the language policy applied within the Masters consortium, including language(s) of instruction, language(s) of examinations, and language learning support offered.

Teaching, examinations and learning support will take place in the language of the Institution in which the student is based at any time. The exception to this will be BUTE, where students will be able to choose whether to study in Hungarian, French or English.

**Quality assurance and evaluation**

- 2.19 Describe how the quality of the Masters Course as well as ECTS mechanisms (including the "grading scale") or other mechanisms based on ECTS are assured. Explain if quality assurance is carried out internally by the Masters consortium or by an external body. Any processes and procedures developed in response to specific needs of the study programme should be detailed.

Each existing Masters course within the Consortium, on which the proposed EM course is based, is already subject to a rigorous set of procedures to ensure and maintain quality. Within Institutions, these include the role of External Examiners, peer review of teaching and use of questionnaires of student opinion. Each course is also subject to a regular internal review of quality by the Institutional authorities. In addition, there are a number of external procedures, such as regular review by Professional and Government bodies which undertake an accreditation role, and significant involvement of Industry, which gives views on their requirements and the suitability of graduates for professional practice. In the case of Imperial College for example, an Institutional Review is currently under way, undertaken by the national agency (the Quality Assurance Agency), with the Department of Civil and Environmental Engineering taking the lead for the College on postgraduate (Masters) teaching.

- 2.20 Describe the evaluation and quality assessment mechanisms within the Masters consortium. Indicate if third-country students and scholars will be invited to assess the Masters Course at the end of their stay.

The key mechanisms are indicated in 2.19. In addition to these, the Consortium will set up an end of course session for all EM students to coordinate opinion and feedback. Third country students will therefore have two opportunities to assess the Masters course, one within the Institutions in which she/he has studied and one in collaboration with partner students.

**Co-operation aspects**

2.21 Describe the co-operation mechanisms within the Masters consortium.

Members of the Consortium have about 15 years experience of working together on collaborative programmes within ERASMUS, SOCRATES and TEMPUS. In addition to this, each member of the Consortium is a member of the Management Committee of EUCEET, the EU Thematic Network for Civil Engineering Education, and as such, we have worked together on many aspects of education and training in our discipline, all of which have been published in hardback book and CD-Rom format, and are widely available. On the basis of this experience, we believe that the Management Committee can demonstrate an impressive track record which will enable it to handle all the decision making, including selection of students, allocation of bursaries, monitoring of student progress, comparison and maintenance of standards and so on.

2.22 Describe briefly the administrative staffing and the funding of the Masters consortium.

This will be the responsibility of a staff member at Imperial College London who has considerable experience of EU programmes and whose Institution has a distinguished record in its interaction with the EU on both educational and research matters. Imperial College also has a well established administrative infrastructure for interacting with the Commission, at both College and Departmental level.

**Preparatory year**

2.23 In case your Masters consortium applies for a Course including a preparatory year, describe the reasons why. Describe the activities you will carry out during the preparatory year, in particular indicate if the Masters Course will run during the preparatory year.

N/A

**Other aspects**

2.24 Explain to which extent the Masters Course is linked to research activities.

One of the principal aims of this course will be to introduce students to the latest technological developments in the subject, so that they can either take the latest ideas with them when they leave and go to work in industry, or be well prepared when they embark on a PhD programme. All academic staff involved in teaching this course are active in research, and will be able to bring research findings to the forefront in seminars and tutorials associated with the formal lecture programme. In particular, project and dissertation work will be work is closely tied to research, and EM students will undertake their projects within well-established research groups. Thus, the proposed EM programme will be very much embedded in a research environment and students will be able to gain considerable benefit from this.

2.25 Explain in how far the Masters Course has a distinctive European added value.

Students will have an integrated and coherent programme of study which will require them to specialise in either structural or geotechnical engineering while taking the other as a supplementary subject. They will receive training in this discipline as taught in two different European cultures, systems and languages. We know that across Europe, different histories and cultures mean systems of engineering formation which often have a different emphasis. One obvious example of this is the British emphasis on empirical solutions and practical design in engineering, compared to the rather more theoretical and mathematical approaches taken by some mainland continental countries such as France. Another is the importance placed on theoretical mechanics, for example in Hungary, compared to the increasing importance of developments in computational methods, as shown for example, in Spain. It is an important feature of the programme that students will be able to gain an exposure to a variety of traditions of European engineering formation and begin to be able to compare and contrast their strengths and limitations. This will take place alongside the cultural and social aspects of operating in more than one country, and will provide the students with a much broader understanding of what it is to be European. Although the primary experience of student will be of the two institutions in which they study, the proposed introduction and wind-up sessions with their colleagues will give them some exposure to engineering education across the Consortium.

- 2.26 Describe any aspect of the Masters Course which offers potential examples of good practice and which could be disseminated more widely.

**Talk to Colleagues, but ....**

The Programme will have opening and closing sessions for each academic year, attended by all students and relevant staff, which will take place in a different Institution each year. The session at the beginning of the academic year will concentrate on induction and orientation, and when the Programme is operating, we will be able to bring together students starting their first and second year. The closing session allow feedback sessions, but will also involve seminars and presentations of students' work. The expectation is that such presentations will be a preliminary to preparation of material for presentation in to technical conferences and journals.

- 2.27 Describe any other aspect of the Masters Course which is not covered by the previous questions and which can be of relevance for the assessment of your application.

***Anything else?***

## SECTION 3 - GRANT REQUESTED

- Please read the relevant section of the *Erasmus Mundus Call for Proposals EAC/04/05* and the *Administrative and Financial Handbook for Erasmus Mundus Projects*.
- The requested grant of 15,000 € refers to the first year of the five-year period for which an Erasmus Mundus Masters Course will be selected. This amount applies to Erasmus Mundus Masters Courses with or without a preparatory year.

<b>Total grant</b> requested by the Consortium for the academic year 2006/2007	<b>15,000 €</b>
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## SECTION 4 - DECLARATION

**To be completed by the legal representative of the co-ordinating institution indicated under Section 1, point 6.1 above.**

I, the undersigned, certify that the information contained in this application is correct to the best of my knowledge.

If my institution is private in nature, I declare on my honour that it has the financial and operational capacity to carry out the proposed Masters Course.

I declare on my honour that neither I nor my institution is in any of the situations listed under point 12 of the *Erasmus Mundus Call for Proposals EAC/04/05*.

I am aware that the Erasmus Mundus Masters consortium which submits this application commits itself to participate in Action 1 and Action 2 (scholarships) of the Erasmus Mundus programme for a period of five years, if my application is successful.

I am aware that penalties may be applied in the case of a false declaration.

In the event that my application is successful, I authorise the Commission to publish on its internet site or in any other appropriate medium:

- The name and address of the beneficiary of the Erasmus Mundus grant;
- The subject of the grant;
- The amount awarded to the approved Masters Course.

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Place: \_\_\_\_\_ Date:    /    /    (day/month/year)

Signature: \_\_\_\_\_ Stamp of the co-ordinating institution: \_\_\_\_\_

Name and position in capitals: \_\_\_\_\_

### Checklist

The application is completed in full. All questions have been answered.	<input type="checkbox"/>
Each page has been numbered.	<input type="checkbox"/>
The application has been typewritten or word-processed.	<input type="checkbox"/>
The original application has been signed by the legal representative of the co-ordinating institution and stamped.	<input type="checkbox"/>
Copies of letters from the appropriate authorities of each institution participating in the Masters Course, confirming their agreement with the application as submitted are attached.	<input type="checkbox"/>
Proof of the official recognition of the degree(s) is attached.	<input type="checkbox"/>
The financial identification form has been filled in and duly signed in original (see Annex 2).	<input type="checkbox"/>
The original application and 2 copies thereof are being sent to the address indicated on page 2 of the application form by rapid post and e-mail, in the same envelope and before the closing date.	<input type="checkbox"/>
Paper and electronic copies of this application are being sent to the National Structures in the countries of each of the participating institutions before the closing date.	<input type="checkbox"/>

# ANNEXES

<b>List of codes to be used in the application</b>
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You will find here the codes you will have to use when filling in the application, i.e.:

- Country codes
- Region codes (NUTS)

<b>Country codes</b>			
BE	Belgium	HU	Hungary
CZ	Czech Republic	MT	Malta
DK	Denmark	NL	The Netherlands
DE	Germany	AT	Austria
EE	Estonia	PL	Poland
ES	Spain	PT	Portugal
FR	France	SI	Slovenia
GR	Greece	SK	Slovak Republic
IE	Ireland	FI	Finland
IT	Italy	SE	Sweden
CY	Cyprus	UK	United Kingdom
LV	Latvia	IS	Iceland
LT	Lithuania	LI	Liechtenstein
LU	Luxembourg	NO	Norway

## REGION CODES (NUTS)

### BE BELGIUM

BE1	BRUXELLES CAP. BRUSSEL HOF
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BE21	ANTWERPEN
BE22	LIMBURG
BE23	OOST-VLAANDEREN
BE24	VLAAMS BRABANT
BE25	WEST VLAANDEREN

BE31	BRABANT WALLON
BE32	HAINAUT
BE33	LIEGE
BE34	LUXEMBOURG
BE35	NAMUR

### DK DANMARK

DK001	Københavns og Frederiksberg Kommuner
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DK002	KØBENHAVNS AMT
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DK003	FREDERIKSBORG AMT
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DK004	ROSKILDE AMT
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DK005	VESTSJÆLLANDS AMT
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DK006	STORSTRØMS AMT
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DK007	BORNHOLMS AMT
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DK008	FYNS AMT
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DK009	SØNDERJYLLANDS AMT
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DK00A	RIBE AMT
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DK00B	VEJLE AMT
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DK00C	RINGKØBING AMT
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DK00D	ÅRHUS AMT
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DK00E	VIBORG AMT
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DK00F	NORDJYLLANDS AMT
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### DE DEUTSCHLAND

BADEN WÜRTTEMBERG	
DE11	STUTT GART
DE12	KARLSRUHE
DE13	FREIBURG
DE14	TÜBINGEN

BAYERN	
DE21	OBERBAYERN
DE22	NIEDERBAYERN
DE23	OBERPFALZ
DE24	OBERFRANKEN
DE25	MITTELFRANKEN
DE26	UNTERFRANKEN
DE27	SCHWABEN

DE3	BERLIN
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DE4	BRANDENBURG
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DE5	BREMEN
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DE6	HAMBURG
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NIEDERSACHSEN	
DE91	BRAUNSCHWEIG
DE92	HANNOVER
DE93	LÜNEBURG
DE94	WESER-EMS

NORDRHEIN-WESTFALEN	
DEA1	DÜSSELDORF
DEA2	KÖLN
DEA3	MÜNSTER
DEA4	DETMOLD
DEA5	ARNSBERG

RHEINLAND-PFALZ	
DEB1	KOBLENZ
DEB2	TRIER
DEB3	RHEINHESSEN - PFALZ

DEC	SAARLAND
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SACHSEN	
DED1	CHEMNITZ
DED2	DRESDEN
DED3	LEIPZIG

HESSEN	
DE71	DARMSTADT
DE72	GIESSEN
DE73	KASSEL

DE8	MECKLENBURG-VORPOMMERN
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GR	ELLADA
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VOREIA ELLADA	
GR11	ANATOLIKI MAKEDONIA, THRAKI
GR12	KENTRIKI MAKEDONIA
GR13	DYTIKI MAKEDONIA
GR14	THESSALIA

KENTRIKI ELLADA	
GR21	IPEIROS
GR22	IONIA NISIA
GR23	DYTIKI ELLADA

ES	ESPAÑA
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NOROESTE	
ES11	GALICIA
ES12	ASTURIAS
ES13	CANTABRIA

NORESTE	
ES21	PAÍS VASCO
ES22	NAVARRA
ES23	LA RIOJA
ES24	ARAGÓN

ES3	COMUNIDAD DE MADRID
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ES7	CANARIAS
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SACHSEN-ANHALT	
DEE1	DESSAU
DEE2	HALLE
DEE3	MAGDEBURG

DEF	SCHLESWIG-HOLSTEIN
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DEG	THÜRINGEN
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GR3	ATTIKI
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NISIA AIGAIU, KRITI	
GR41	VOREIO AIGAIO
GR42	NOTIO AIGAIO
GR43	KRITI

GR24	STEREA ELLADA
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GR25	PELOPONNISSOS
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FR	FRANCE
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FR1	ILE DE FRANCE
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BASSIN PARISIEN	
FR21	CHAMPAGNE – ARDENNE
FR22	PICARDIE
FR23	HAUTE NORMANDIE
FR24	CENTRE
FR25	BASSE NORMANDIE
FR26	BOURGOGNE

FR3	NORD - PAS DE CALAIS
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EST	
FR41	LORRAINE
FR42	ALSACE
FR43	FRANCHE-COMTE

SUD-OUEST	
FR61	AQUITAINE
FR62	MIDI-PYRENEES
FR63	LIMOUSIN

CENTRE-EST	
FR71	RHÔNE-ALPES
FR72	AUVERGNE

MEDITERRANEE	
FR81	LANGUEDOC-ROUSSILLON
FR82	PROVENCE-ALPES-CÔTES D'AZUR
FR83	CORSE

OUEST	
FR51	PAYS DE LOIRE
FR52	BRETAGNE
FR53	POITOU-CHARENTE

DEPARTEMENTS D'OUTRE-MER	
FR91	GAUDELLOUPE
FR92	MARTINIQUE
FR93	GUYANE
FR94	REUNION

<b>IE</b>	<b>IRELAND</b>
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IE011	BORDER
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IE023	MID-WEST
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IE021	DUBLIN
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IE024	SOUTH-EAST (IRL)
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IE022	MID-EAST
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IE025	SOUTH-WEST (IRL)
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IE012	MIDLAND
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IE013	WEST
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<b>IT</b>	<b>ITALIA</b>
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NORD OVEST	
IT11	PIEMONTE
IT12	VALLE D'AOSTA
IT13	LIGURIA

IT6	LAZIO
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IT2	LOMBARDIA
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ABRUZZO-MOLISE	
IT71	ABRUZZO
IT72	MOLISE

NORD EST	
IT31	TRENTINO-ALTO ADIGE
IT32	VENETO
IT33	FRIULI-VENEZIA GIULIA

IT8	CAMPANIA
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IT4	EMILIA-ROMAGNA
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SUD	
IT91	PUGLIA
IT92	BASILICATA
IT93	CALABRIA

CENTRO	
IT51	TOSCANA
IT52	UMBRIA
IT53	MARCHE

ITA	SICILIA
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ITB	SARDEGNA
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<b>LU</b>	<b>LUXEMBOURG (Grand Duché)</b>
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<b>NL</b>	<b>NEDERLAND</b>
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NOORD-NEDERLAND	
NL11	GRONINGEN
NL12	FRIESLAND
NL13	DRENTHE

WEST-NEDERLAND	
NL31	UTRECHT
NL32	NOORD-HOLLAND
NL33	ZUID-HOLLAND
NL34	ZEELAND

OOST-NEDERLAND	
NL21	OVERIJSEL
NL22	GELDERLAND
NL23	FLEVOLAND

ZUID-NEDERLAND	
NL41	NOORD-BRABANT
NL42	LIMBURG (NL)

<b>AT</b>	<b>ÖSTERREICH</b>
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OSTÖSTERREICH	
AT11	BURGENLAND
AT12	NIEDERÖSTERREICH
AT13	WIEN

WESTÖSTERREICH	
AT31	OBERÖSTERREICH
AT32	SALZBURG
AT33	TIROL
AT34	VORARLBERG

SÜDÖSTERREICH	
AT21	KÄRNTEN
AT22	STEIERMARK

<b>PT</b>	<b>PORTUGAL</b>
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CONTINENTE	
PT11	NORTE
PT12	CENTRO
PT13	LISBOA E VALE DO TEJO
PT14	ALENTEJO
PT15	ALGARVE

PT2	AÇORES
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PT3	MADEIRA
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<b>FI</b>	<b>SUOMI / FINLAND</b>
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MANNER-SUOMI	
FI12	ETELÄ-SUOMI
FI13	ITÄ-SUOMI
FI14	VÄLI-SUOMI

FI15	POHJOIS-SUOMI
FI16	UUSIMAA (SUURALUE)

FI2	ÅLAND
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<b>SE</b>	<b>SVERIGE</b>
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SE01	STOCKHOLM
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SE06	NORRA MELLANSVERIGE
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SE02	ÖSTRA MELLANSVERIGE
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SE07	MELLERSTA NORRLAND
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SE04	SYDSVERIGE
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SE08	ÖVRE NORRLAND
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SE0A	VÄSTSVRIGE
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SE09	SMÅLAND MED ÖARNA
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<b>UK</b>	<b>UNITED KINGDOM</b>
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NORTH EAST	
UKC1	TEES VALLEY AND DURHAM
UKC2	NORTHUMBERLAND, TYNE AND WEAR

SOUTH WEST(UK)	
UKK1	GLOUCESTERSHIRE, WILTSHIRE AND NORTH SOMERSET
UKK2	DORSET, SOMERSET
UKK3	CORNWALL AND ISLES OF SCILLY
UKK4	DEVON

YORKSHIRE AND THE HUMBER	
UKE1	EAST RIDING AND NORTH LINCOLNSHIRE
UKE2	NORTH YORKSHIRE
UKE3	SOUTH YORKSHIRE
UKE4	WEST YORKSHIRE

WEST MIDLANDS	
UKG1	HEREFORD & WORCESTERSHIRE, WARWICKSHIRE
UKG2	SHROPSHIRE, STAFFORDSHIRE
UKG3	WEST MIDLANDS

EAST MIDLANDS	
UKF1	DERBYSHIRE, NOTTINGHAMSHIRE
UKF2	LEICESTERSHIRE, RUTLAND, NORTHAMPTONSHIRE
UKF3	LINCOLNSHIRE

NORTH WEST (UK)	
UKD1	CUMBRIA
UKD2	CHESHIRE
UKD3	GREATER MANCHESTER
UKD4	LANCASHIRE
UKD5	MERSEYSIDE

EASTERN	
UKH1	EAST ANGLIA
UKH2	BEDFORDSHIRE AND HERTFORDSHIRE
UKH3	ESSEX

LONDON	
UKI1	INNER LONDON
UKI2	OUTER LONDON

WALES	
UKL1	WEST WALES AND THE VALLEYS
UKL2	EAST WALES

SOUTH EAST (UK)	
UKJ1	BERKSHIRE,BUCKINGHAMSHIRE,OXFORDSHIRE
UKJ2	SURREY, EAST AND WEST SUSSEX
UKJ3	HAMPSHIRE, ISLE OF WIGHT
UK55	GREATER LONDON
UKJ4	KENT

SCOTLAND	
UKM1	NORTH EASTERN SCOTLAND
UKM2	EASTERN SCOTLAND
UKM3	SOUTH WESTERN SCOTLAND
UKM4	HIGHLANDS AND ISLANDS

UKN	NORTHERN IRELAND
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IS	ISLAND
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LI	LIECHTENSTEIN
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NO	NORGE
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NO01	OSLO OG AKERSHUS
NO02	HEDMARK OG OPPLAND
NO03	SØR-ØSTLANDET
NO04	AGDER OG ROGALAND

NO05	VESTLANDET
NO06	TRØNDELAG
NO07	NORD-NORGE

CZ	ČESKÁ REPUBLIKA
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CZ01	PRAHA
CZ02	STŘEDNI ČECHY
CZ05	SEVEROVÝCHOD
CZ06	JIHOVÝCHOD

CZ03	JIHOZÁPAD
CZ04	SEVEROZÁPAD
CZ07	STŘEDNI MORAVA
CZ08	OSTRAVSKO

EE	EESTI
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CY	KYPROS
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LV	LATVIJA
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LT	LIETUVA
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HU	MAGYARORSZÁG
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HU01	KÖZÉP-MAGYARORSZÁ
HU02	KÖZÉP-DUNÁNTÚL

HU05	ÉSZAK-MAGYARORSZÁG
HU06	ÉSZAK-ALFÖLD

HU03	NYUGAT- DUNÁNTÚL
HU04	DÉL- DUNÁNTÚL

HU07	DÉL-ALFÖLD
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MT	MALTA
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PL	POLSKA
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PL01	DOLNOŚLASKIE
PL02	KUJAWASKO-POMORSKIE
PL03	LUBELSKIE
PL04	LUBUSKIE
PL05	ŁÓDZKIE
PL06	MAŁOPOLSKIE
PL07	MAZOWIECKIE
PL08	OPÓLSKIE

PL09	PODKARPACIE
PL0A	PODLASKIE
PL0B	POMORSKIE
PL0C	ŚLASKIE
PL0D	ŚWIETOKRZYSKIE
PL0E	WARMIŃSKO-MAZURSKIE
PL0F	WIELKOPOLSKIE
PL0G	ZACHODNIOPOMORSKIE

SI	SLOVENIJA
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<b>SK</b>	<b>SLOVENSKÁ REPUBLIKA</b>
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<b>SK01</b>	BRATISLAVSKÝ KRAJ
<b>SK21</b>	TRNAVSKÝ KRAJ
<b>SK22</b>	TRENČIANSKY KRAJ
<b>SK23</b>	NITRIANSKY KRAJ

<b>SK31</b>	ŽILINSKÝ KRAJ
<b>SK32</b>	BANSKOBYSTRICKÝ KRAJ
<b>SK41</b>	PREŠOVSKÝ KRAJ
<b>SK42</b>	KOŠICKÝ KRAJ

## **Annex 2 : Financial Identification**

See separate annex.