

National Defence School,
University of Defence (UNID),
Neznanog Junaka 38, 11000 Belgrade



Classroom no. 4, National Defence
School, University of Defence
Wednesday, 7th March 2018

Knowledge FOR Resilient soCiEty

53942-EPP-1-RS-EPPKA2-CBHE-JP



Inter-project coaching meeting

Doc dr Mirjana Laban, University of Novi Sad

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website: www.kforce.uns.ac.rs



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The Project CV

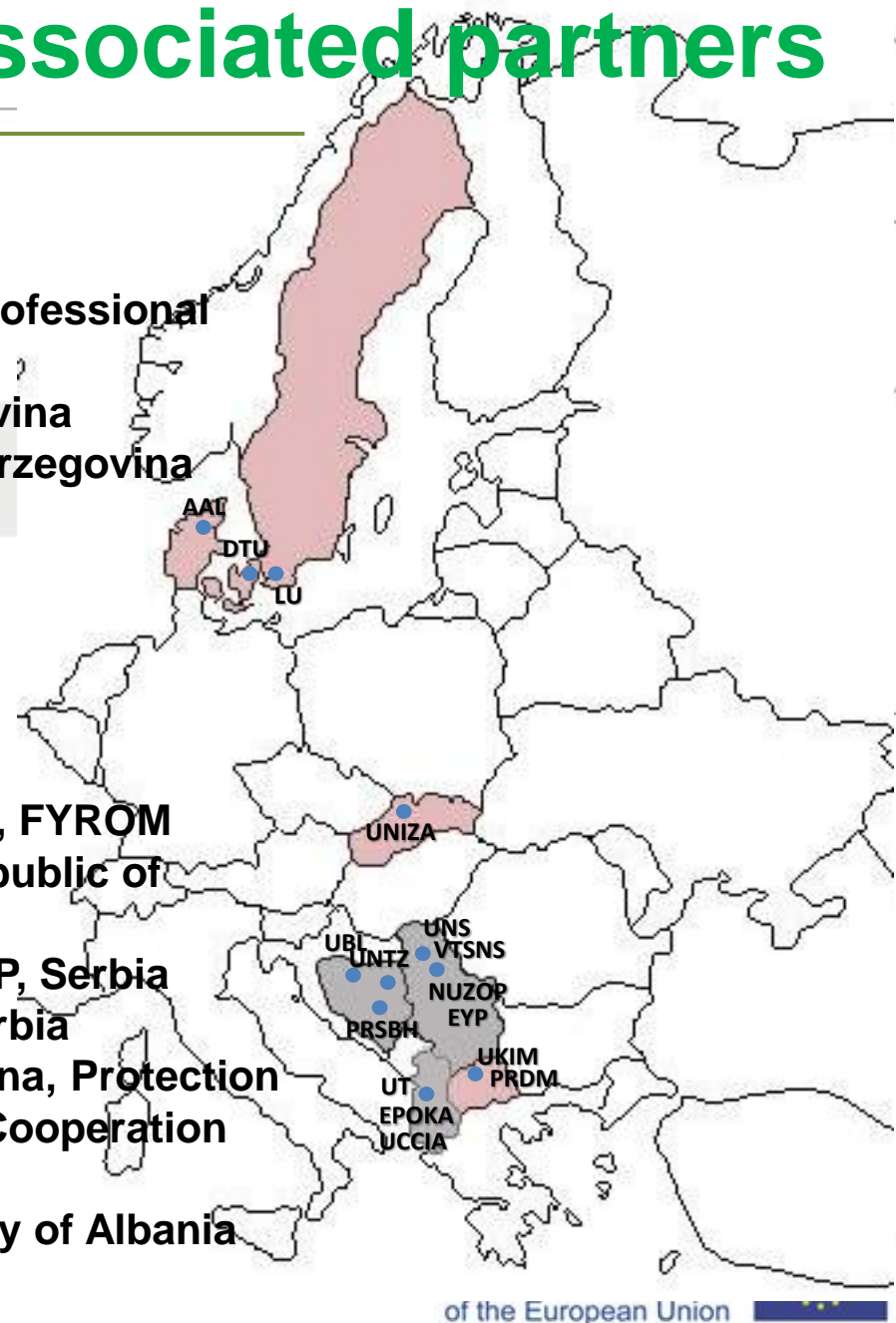


Project Title	Knowledge FOr Resilient soCiEty	
Project acronym	K-FORCE	
Project Number	573942-EPP-1-2016-1-RS-EPPKA2-CBHE-JP	
Project Website	http://kforce.uns.ac.rs/	
Project duration	3 years	
Start	15 th October 2016	
Programme	ERASMUS+	
Key Action	Cooperation for innovation and the exchange of good practices	
Action	Capacity building in the field of higher education	
Total cost of the project	1.237.129,00 EUR	
	Grant for Project Activities:	985.474,00 EUR
	Additional Grant for Special Mobility Strand:	251.655,00 EUR
Coordinator	University of Novi Sad	



Consortium 14 + 2 associated partners

- University of Novi Sad, Serbia
- The Higher Education Technical School of Professional Studies, Serbia
- The University of Tuzla, Bosnia and Herzegovina
- The University of Banja Luka, Bosnia and Herzegovina
- The University of Tirana, Albania
- Epoka University, Albania
- Technical University of Denmark, Denmark
- Aalborg University, Denmark
- The Lund University, Sweden
- The University of Žilina, Slovakia
- Ss. Cyril and Methodius University in Skopje, FYROM
- Protection and Rescue Directorate of the Republic of Macedonia, FYROM
- National Fire Protection Association – NUZOP, Serbia
- European Youth Parliament Serbia – EYP, Serbia
- Ministry of Security of Bosnia and Herzegovina, Protection and Rescue Sector, Sector for International Cooperation and European Integrations
- Union of chambers of commerce and industry of Albania

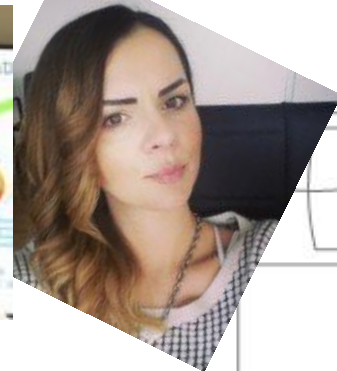


KNOWLEDGE FOR RESILIENT SOCIETY TEAM



PROJECT MANAGEMENT TEAM

k-force.pmt@uns.ac.rs



TEAM MEMBERS



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Workplan



K-FORCE project is planned in three phases: preparation, development and implementation, and valorization phase, to be realized through 9 Work Packages (WPs):

- **WP1** Define directions for development of Master programs
- **WP2** Define directions for development of PhD programme
- **WP3** Improve teaching methodologies and embed the ICT in learning material
- **WP4** Implementation of Master Programmes
- **WP5** Implementation of PhD Programme
- **WP6** Implementation of LLL courses
- **WP7** Quality Assurance and Monitoring
- **WP8** Dissemination and Exploitation
- **WP9** Project Management





In 3 years we plan to modernize/develop/implement 7 curricula at 6 WBC HEIs:

- *DRM&FSE academic master programmes/modules (UNS, UT, UBL, EPOKA),*
- *DRM&FSE PhD programme (UNS),*
- *Protection Engineering vocational master programme (VTSNS)*
- *Economic and Financial Resilience vocational module (UT).*

Study programmes will be interdisciplinary and created and implemented in a way that enables continuation of the studies for a number of different profiles of engineers.

The LLL courses implementation enables continuing education of DRM&FSE oriented professionals.

Study programmes, LLL courses and learning material will be available in EN/SR/BH/AL

*Education material will be available in blended way (**ICT learning platform, e-Library, DRM&FSE Glossary**) as open source educational recourses.*



Meeting at EPOKA University, Albania

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Special Mobility Strand - training



We have foreseen following SMS activities:

1. Students mobility between WB HEIs
2. Staff mobility from WB HEIs to Programme countries HEIs for the purpose of training
3. Staff mobility from project partner HEIs to WB HEIs for the purpose of teaching

Objectives of SMS activities are:

- Contribution to the improvement of Master programmes, Modules and PhD programme implemented in WB HEIs
- Creation of international learning experience for students at project partner HEIs,
- Development of cultural awareness among students
- Exchange of innovative teaching practices
- Learning about teaching methods and practices from Programme countries HEIs
- Development of complementary skills and competencies in the field of DRM&FSE
- Promoting international understanding and cooperation



Special Mobility Strand - teaching



	DATE	HEI	Teacher	TOPIC
1	Thursday 30.11.2017	University of Banja Luka	Gordana Jakovljević	Application of Service Oriented Geographic Information System in Risk Analysis
2	Tuesday, 05.12.2017	University of Zilina	Katarina Holla	Risk Assessment and Treatment in Accidents prevention
	Thursday, 07.12.2017		Katarina Buganova	Enterprise Risk Management for Business Resilience
3	Tuesday, 12.12.2017	University of Tirana	Elona Pojani	Financial Resilience to Hazards and Climate Finance: A comprehensive approach of tools and methods for disaster risk finance
	Thursday, 14.12.2017	EPOKA University	Julinda Keci	RISK MANAGEMENT SYSTEM: Tools and Techniques of Risk management
4	Thursday, 21.12.2017	University of Tuzla	Edisa Nukić	Risk Communication and Risk Perception
5	Thursday, 14.01.2017	DTU	Frank Markert	Methods supporting fire risk assessment and management
6.	22.03-28.03. 2018	Lund University	Enrico Ronchi	Evacuation calculation and modeling
7.	23.04 – 27.04 2018	Aalborg University	Michael Faber	Risk Analysis in Decision Making Process
8.	May 2018	UKiM- IZIS	Vlatko Sesov	To be defined



ENROLLED STUDENTS TO INNOVATED MASTER ACADEMIC STUDIES DISASTER RISK MANAGEMENT AND FIRE SAFETY

OPEN LECTURES IN WINTER SEMESTER
2017/2018



Webinar subtitled in
EN/AL/BiH/SRB



UNIVERZITET
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TEHNIČKIH NAUKA



Organizuju predavanje iz oblasti
Upravljanje rizikom od
katastrofalnih događaja i požara

**RISK ASSESSMENT AND TREATMENT IN
ACCIDENTS PREVENTION**

Predavač: **Ing. Katarína Hollá PhD,**
Faculty of Security Engineering, University of Žilina

Datum / vreme: 05.12.2017. 18:00h

Mesto održavanja: Svečana sala Fakulteta tehničkih nauka,
Trg Dositeja Obradovića 6, prizemlje

Knowledge FOR Resilient soCiEty



Katarína Hollá, PhD.

RISK ASSESSMENT AND TREATMENT IN ACCIDENTS PREVENTION

Abstract: This education material is determined for those students and employees who deal with security and safety engineering and crisis management, but especially with the prevention of industrial accidents. It can furthermore be utilized in companies which aim at risk assessment for fulfilling regulation requirements, risks in managing the continuity of operational processes or detecting security at the workplace from the point of view of safety and protection of health at work.

Key words: risk assessment, risk treatment, industrial accident, prevention, hazardous substance, Seveso



Ing. Katarína Hollá PhD,
Faculty of Security Engineering, University of Žilina

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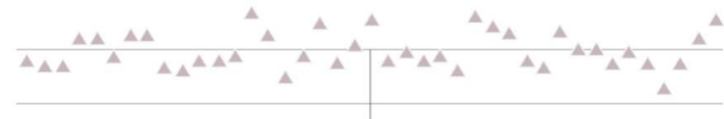
Julinda KEÇI, PhD, Lecturer,
Department of Civil Engineering,
EPOKA University



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Organizuju predavanja iz oblasti
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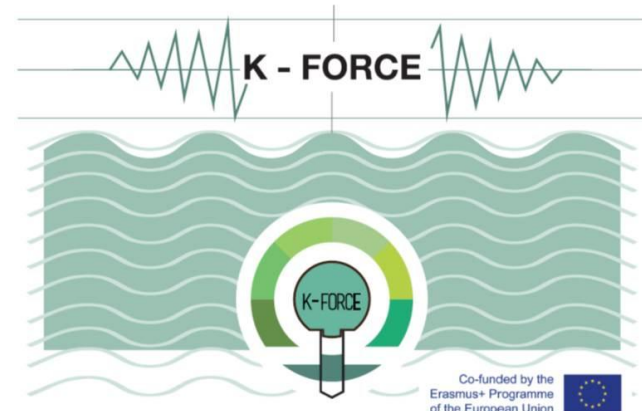
RISK MANAGEMENT SYSTEM: Tools and Techniques of Risk Management

Predavač: **Julinda KEÇI, PhD, Lecturer,**
Department of Civil Engineering, EPOKA University

Datum i vreme: 12.12.2017. 18:00h

Mesto održavanja: Svečana sala Fakulteta tehničkih nauka,
Trg Dositeja Obradovića 6, prizemlje

Knowledge FOr Resilient soCiEty



Special Mobility Strand - training



HOST INSTITUTION	MOBILITY PERIOD	TOPIC	CONTACT PERSON	candidates
DTU, Kopenhagen, Denmark <i>Civil Engineering Department</i>	Arrival date: 11 March Training: 12 March – 23 March Departure date: 23 March	FIRE SAFETY DESIGN	<i>Luisa Giuliani</i> lugi@byg.dtu.dk <i>Frank Markert</i> fram@byg.dtu.dk	UNS 1 EPOKA 1 VTSSS NS 1 UTZ 1 UBL 1
UkiM, Skopje, FYR Macedonia	Arrival date: 10 April Training: 11 April – 21 April Departure date: 22 April (Working Saturdays)	Selected lectures and workshop: SEISMIC RISK, EARTHQUAKE, FIRE SAFETY OF STRUCTURES, PROJECT RISK MANAGEMENT	Meri Cvetkovska cvetkovska@gf.ukim.edu.mk	UNS 1 EPOKA 1 UTZ 1 UT 1 UBL 1 VTSSS NS 1
UNIZA, Žilina, Slovakia	Arrival date: 22 April Training: 23 April – 4 May Departure date: 4 May	Fire safety engineering – Fire modelling Economics – Risks and resilience	Lenka Sivakova lenka.sivakova@fbi.uniza.sk cc. Katarina Holla katarina.holla@fbi.uniza.sk	UNS 1 EPOKA 1 UTZ 1 UT 1 UBL 1 VTSSS NS 1
AAL University, Aalborg, Denmark	Arrival date: 6 May Training: 7 May -18 May Departure date: 18 May	1 st week- preparation for JCSS course 2 nd week - JCSS Advanced Course on Systems Risk Modelling and Analysis in Engineering Decision Making	Michael Faber Nielsen mfn@civil.aau.dk IMPORTANT: CONTACT PROF. MICHAEL FABER BEFORE SIGNING UP FOR A COURSE ACCORDING TO FLYER INSTRUCTIONS – K-FORCE TRAINEES ARE EXEMPT FROM PAYING REGISTRATION FEES	UNS 1 EPOKA 1 UTZ 1 UT 1 UBL 1
LUND University	Arrival date: 3 June Training: 4 June – 15 June Departure date: 15 June	Fire safety (evacuation) Disaster Risk Management	Enrico Ronchi enrico.ronchi@brand.lth.se Henrik Hassel henrik.hassel@risk.lth.se	UNS 2 UT 1 EPOKA 1

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Date: 29-01-18

Place: Zilnia

Knowledge FOR Resilient soCiEty

SMS Training Visit to DTU

Technical University of Denmark (DTU)

Department of Civil Engineering (DTU-BYG)



DTU Civil Engineering
Department of Civil Engineering



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TIME FRAME AND MAIN ACTIVITIES

1st week: Monday 12 March – Friday 16 March (WEEK 11)

- Fire Lab: preparation of experiments for teaching activities
- MSc Education: Fire Dynamics on Friday 16 March (8-12)
- Pedagogical seminar and other seminar related to teaching

2nd week: Monday 19 March – Friday 23 March (WEEK 12)

- MiB Education: 11B05 Fire Risk Management on Mon 19 and Tue 20 March
- MiB Education: 11B27 Complex buildings on Thu 22 and Fri 23 March
- MSc Education: Fire Dynamics on Friday 23 March

OBS: This is a tentative plan and can be subjected to changes

PRACTICAL ASPECTS

Theoretical background:

- The project work and the teaching activities are focused on fire safety design. It is therefore desirable that you have a general background in this area.
- In particular, it is good if you have some lab experience and interest either in fire risk or in fire safety design of complex buildings.
- Please note that you will have plenty of time to study and prepare on your own or in small group before attending lectures and doing experiments.

PRACTICAL ASPECTS

Daily activity:

- Daily activities include: attendance to seminars and lectures, preparation for lab project, participation in lab experiments, possible participation in teaching (to be agreed upon), as well as group-work and self study.
- Daily activities will be organized within the time frame 8.00 to 16.00. On the days when there is no participation in courses, the activities will be limited to the time frame 9-15.
- A social event will be organized (costs covered by yourself)

PRACTICAL ASPECTS

Travel and accommodation

- Activities will start later on the first day and finish earlier on the last day, so that it is possible to arrive/leave on the same day
- DTU Campus is in the commune of Lyngby, about 15 km from Copenhagen city center. It is well connected with bus 150S from Nørreport metro station in Copenhagen and with bus 190 from Lyngby train station (S-stog).
- Unfortunately, DTU has no guest-houses or accommodations to offer. Finding an accommodation in Copenhagen is neither cheap or easy, so please start looking for one as soon as possible.

Knowledge FOR Resilient soCiEty

STUDY VISIT + TRAINING, UNIVERSITY OF ZILINE
January 29th to February 02nd, 2018

OFFERED LECTURERS

Ss. Cyril and Methodius University



Prof. Violeta Mirčevska

Methods and tools for Seismic Risk assessment and development of information system for emergency response and mitigation plans

- Seismic hazard
- Local site conditions (in each study area)
- Detailed building inventory (in each study area)
- Building classification scheme
- Vulnerability models

Prof. Vlatko Šešov

Earthquake Geotechnical Risks Manifestation, Consequences and Mitigation

First part of lecture will present the main aspects of dynamic response of soils, which is the relation between the surface vibrations and the vibrations within the soil medium and the rock half-space. (influence upon the amplitudes and the frequency on travelling seismic waves). Soil is constitutive part of structural foundation and therefore its motion is a direct excitation to them (evaluation of seismic design parameters).

Presentation intends to give practical knowledge for seismic performance of ground and foundation soil as well as information on some of the most destructive geotechnical hazards and the ways how to mitigate the earthquake geotechnical risks.

Prof. Mihail Garevski

Basic knowledge to be prepared for earthquakes

- Main characteristic and side effects of earthquakes
- How to choose seismic sieve house/building
- What to do before, during and after the earthquake

Prof. Meri Cvetkovska

Fire safety engineering-from theory to practice

- Fire as accidental load on structures
- Risks from fire as accidental load on structures
- Behavior of concrete structures in fire
- Behavior of still structures in fire
- Behavior of wooden structures in fire

Assist. Prof. Marijana Lazarevska

PROJECT RISK MANAGEMENT

Definition of risk. Risks in investment projects. Classification and sources of risks. Characteristics and specificities of investment projects as possible sources of risk. Possible consequences of risks. Examples of risks. Risk management and uncertainty management. Standards for risk management and their application in construction. Stages of risk management. Planning risk management. Identification of risks. Qualitative risk analysis. Quantitative risk analysis. Methods for assessing the probability of occurrence of risk. Planning a risk response. Monitoring and risk control. Measures to reduce risks.

SECOND WEEK WORKSHOP

SAFIR AND OTHER PROGRAMMES FOR FIRE MODELING

Topics:
- Fire safety engineering
modelling

Activities:

- Level assessment to adjust content
- Introductory lecture(s) by UNIZA
- Lectures for UNIZA students
- Guided project work
- Student scientific competition panel member
- Final evaluation



JCSS Advanced Course on Systems Risk Modelling and Analysis in Engineering Decision Making

**Decision Analysis, Probabilistic
Systems Modeling, Probability
Analysis, Risk Assessment - and
Applications**

Teachers

Prof. M. H. Faber, AAU, DK

Prof. J. D. Sørensen, AAU, DK

PhD. M. Schubert, Matrisk GmbH, CH

Prof. J. Nielsen, AAU, DK

Prof. J. Qin, AAU, DK

Prof. S. Miraglia, AAU, DK

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Motivation

Methods of reliability, risk and safety assessment are increasingly gaining importance as decision support tools across the engineering sciences.

In order to utilize these methods and to exploit their potential in research, public governance and industrial applications a deep understanding of the fundamental principles is necessary.

Evaluation and certificates

The evaluation of the course is based on:

1. The solutions to the exercises produced by the participants during the course
2. A mini-project submitted by the students within two weeks after the completion of the course.

The reports documenting the mini-projects are assumed to be in the order of 10-15 pages.

Three (3) ECTS point will be given to participants participating and satisfactorily solving the exercises during the course.

Additional two (2) ECTS points (total of five ECTS points) will be given to participants who choose also to submit a mini-project – provided this is positively evaluated.

Successful evaluations will be recognized by a JCSS Diploma.

Course contents

The present course provides the background, methods and tools for decision analysis on the optimal management of engineered systems.

Topics/lectures of the course include:

- Statistics and Bayesian probability theory
- Probabilistic modeling in engineering
- FORM, SORM and MC techniques
- Components and systems reliability
- Bayesian Probabilistic Nets
- Engineering decision analysis
- Probabilistic structural analysis
- Optimization and acceptance criteria
- Cases studies

Application domains include, but are not limited to transport infrastructures, energy production and distribution systems, buildings and structures, offshore and marine systems.

The course consists of lectures, exercises, mini-projects and self-study. Lecture notes will be provided in advance of the course.

Preliminary course program

Time	May 14	May 15	May 16	May 17	May 18
08:30-10:00	Introduction Basics of statistics and probability	Decision analysis	Bayesian Probabilistic Nets II	Roadway and tunnel risk modelling	Integrity management o large concrete bridges
10:00-10:30	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
10:30-12:00	Probabilistic systems engineering I	Methods of structural reliability I	Probabilistic design and assessment of structures	Integrity management of offshore structures	Robustness and resilience of electrical distribution systems
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Probabilistic systems engineering II	Methods of structural reliability II	Risk informed inspection and maintenance planning	Integrity management of offshore well head facilities	Introduction to mini-project Open questions and discussions
14:30-15:00	Coffee break	Coffee break	Coffee break	Coffee break	Coffee break
15:00-16:30	Optimization and risk acceptance	Bayesian Probabilistic Nets I	Value of Information in Structural Health Monitoring	Integrity management of wind turbine facilities	Mini-project work
16:30-18:00	Exercises I	Exercises II	Exercises III	Exercises IV	Closure

Special Mobility Strand Lund University

Enrico Ronchi

Lund University

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SMS planning

2 Incoming groups in 2017/2018:

Group 1: Fire safety (evacuation)
(1 UNS+ 1 Epoka)

Training with Enrico Ronchi
(individual training on basics of evacuation +
test with computer software Pathfinder)



SMS planning

Incoming: 2 groups in 2017/2018:

**Group 2: Disaster Risk Management
(1 Uni Tirana + 1 UNS)**

**Training with Henrik Hassel + possibility to
follow DRM courses in English → List:**

Climate Smart Risk Reduction (January-March)
Risk Based Land Use Planning (January-March)
Preparedness and Planning (March-May/June)
Risk Assessment (March-May/June)



CHALLENGES



B. Implementation: basic principles

- Pre-financing of the grant must be foreseen for students in order to facilitate the installation process.
- Receiving organisation and sending organisation have to ensure a constant follow-up and regular monitoring on the individual mobility.
- All mobility details must be encoded in the EACEA Mobility tool



CHALLENGES



B. Follow-up: basic principles

Beneficiary organisations involved in the SMS commit to:

- Recognise the ECTS or equivalent credits obtained by the students during the activities carried out and agreed in the Learning Agreement
- Avoid any extension of the study period upon return to take additional exams
- Recognise, disseminate and embed the learning outcomes of the staff mobility (for training purposes)
- Solicit the individuals to fill in the Participant Report before the end of mobility (for students) and right after the end of the mobility (for staff).



CHALLENGES



European
Commission

C. Financial Management: basic principles

- The budgets of your CBHE and SMS must be kept separated
- It is a contribution to cover two types of costs (*based on the principle of unit costs*): **Subsistence costs and travel**
- Individuals cannot benefit at the same time from SMS support and E+International Credit Mobility
- Students selected must be exempted from paying fees for tuition, registration, examinations and access to laboratory and library facilities at the receiving institution.

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CHALLENGES



C. Subsistence costs for students

RECEIVING COUNTRIES	Students from Partner Countries Amount (per month)	Students from Programme Countries Amount (per month)
Denmark, Ireland, France, Italy, Austria, Finland, Sweden, United Kingdom, Liechtenstein, Norway	850€	Not eligible
Belgium, Czech Republic, Germany, Greece, Spain, Croatia, Cyprus, Luxembourg, Netherlands, Portugal, Slovenia, Iceland, Turkey	800€	Not eligible
Bulgaria, Estonia, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovakia, former Yugoslav Republic of Macedonia	750€	Not eligible
Albania, Bosnia and Herzegovina, Montenegro, Serbia and Kosovo Armenia, Azerbaijan, Belarus, Georgia, Moldova, Territory of Ukraine as recognised by international law, Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia	750€	650€
All other Partner Countries	Not eligible	Not eligible



IMPOSSIBLE IN SERBIA



C. Subsistence costs for students

- The amount must be paid in full and directly to the student concerned.
- Consortia are strongly recommended to manage their SMS grants in an account in euros.





C. Subsistence costs for staff

RECEIVING COUNTRIES	Staff from Partner Countries Amount (per day)		Staff from Programme Countries Amount (per day)	
	up to the 14 th day	between the 15 th & 60 th day	up to the 14 th day	between the 15 th & 60 th day
Denmark, Ireland, Netherlands, Sweden, United Kingdom	160€	112€	Not eligible	
Belgium, Bulgaria, Czech Republic, Greece, France, Italy, Cyprus, Luxembourg, Hungary, Austria, Poland, Romania, Finland, Iceland, Liechtenstein, Norway, Turkey	140€	98€	Not eligible	
Germany, Spain, Latvia, Malta, Portugal, Slovakia, former Yugoslav Republic of Macedonia	120€	84€	Not eligible	
Estonia, Croatia, Lithuania, Slovenia	100€	70€	Not eligible	
Albania, Bosnia and Herzegovina, Montenegro, Serbia and Kosovo Armenia, Azerbaijan, Belarus, Georgia, Moldova, Territory of Ukraine as recognised by international law Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia	100€	70€	160€	112€
All other Partner Countries	Not eligible		Not eligible	





C. Modification of the mobility scheme

Regardless of the duration, the **minimum number of:**

- students from Partner Countries and Programme Countries
- staff members from Partner Countries and Programme Countries

As foreseen in the original proposals **must be respected!**

These figures and the budget allocation for each of the 4 categories are indicated in the Estimated Budget of the Action, Annex III of the CBHE Grant Agreement signed with the Agency.





Example 1 Student mobility

Purpose:	studying Master level (<i>EQF/ISCED 6</i>) and traineeship
Mob track:	from University of Cairo to the University of Rome (<i>2130.34 km</i>)
Start date:	21/09/2017
End date:	28/03/2018
Duration:	6 months 8 days
Sub. costs:	$(6 \text{ months} \times 850\text{€}) + (850\text{€} : 30\text{dd}) \times 8\text{dd} = \mathbf{5.326,7\text{€}}$
Travel:	360€
<u>Total grant:</u>	<u>5686,7€</u>





Example 2 Staff mobility

Purpose: teaching

Mob track: from the University of Yerevan to the University of Antwerp (3298.36 km)

Start date: 06/10/2016

End date: 25/10/2016

Duration: 20 days

Sub. costs: $(140\text{€} \times 14\text{dd}) + (98\text{€} \times 6\text{dd}) = 1.960\text{€} + 588\text{€} = \mathbf{2.548\text{€}}$

Travel: **530€**

Total grant: **3.078€**





EACEA Mobility Tool

- SUPPORT to the coordinators in the management of the individual mobility
 - TRANSCRIPTION OF INFORMATION on mobility tracks, activities, credits earned, amounts disbursed and automatic reports.
- **coordinators must update the tool regularly**
- ✓ To ease the management
 - ✓ For statistical analysis and quantitative assessments



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Thank you for your attention!

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