



# HELENA

Higher Education Leading to Engineering and scientific careers



## *Higher Education Leading to ENgineering And scientific careers*





## ***Higher Education Leading to ENgineering And scientific careers***

### **EU funded Collaborative project**

**5.2.1.2: Gender dimension of research**

**2008-2.1.2.1: Influence of the perception of science on study choice**

**Contract starting date : April 1st 2009**

**Duration: 30 months**

**[www.fp7-helena.org](http://www.fp7-helena.org)**





## List of participants

1	<b>SU</b>	Siauliai University (Coordinator )	<b>Lithuania</b>	
2	<b>LABEIN-TECNALIA</b>	Fundación LABEIN	<b>Spain</b>	
3	<b>ENSC</b>	Ecole Normale Supérieure de Cachan	<b>France</b>	
4	<b>UNIKLU</b>	University of Klagenfurt	<b>Austria</b>	
5	<b>LoU</b>	Loughborough University	<b>UK</b>	
6	<b>PUPIN</b>	Mihailo Pupin Institute	<b>Serbia</b>	
7	<b>ECEPIE</b>	Egalité des Chances dans les Etudes et la Profession d'Ingénieur en Europe	<b>France</b>	





## ***Women participation in engineering occupations:***

- a key-issue for European economical and technical development
- a central achievement towards gender equality and social justice.

## ***The technological fields mark gender difference:***

- global lack of attractiveness towards women
- in their specific distribution towards the disciplines.

*Women PhD represented, in 2003 (SHE Figures 2006) 17,1% of the engineering & Engineering trades graduates, 32% of the Manufacturing and Processing graduates, 31,3% of the Architecture & Building graduates, 18,6 % in computing.*





## ***Three reasons are usually mentioned:***

- Machine and technology are seen as the “*symbiotic extension*” (Mellstrom, 2004) of man, and give us a key understanding of masculinities lived and represented by men.
- Unfriendly/hostile atmosphere for women
- The lack of interdisciplinary subjects in E&T curricula is therefore acting as a foil to potential E&T students, males and females.





***Therefore, the aim of this project HELENA is:***

- to question or confirm these statements**
- to provide indications about how to launch corrective measures and monitor the obtained results.**



## ***Data and curricula analysis from traditional and pilot SET degree courses***

- to provide a state of the art
- to analyse country-specific case studies by comparing traditional courses and interdisciplinary curricula.

Two fields: civil engineering and computer science

Computer Science:

-ENSIAME Valenciennes	12% of non ST courses
-UPMC Paris 6	12%
-ENSEIRB Bordeaux	30%
-INSA Toulouse	30%

- to evaluate traditional and pilot degree courses in SET in Europe





## ***Project objectives are:***

- To identify and analyse relevant interdisciplinary SET degree courses in different European countries.
- To analyse the student's perception of this interdisciplinary and traditional SET degree courses.
- To evaluate the effectiveness of existing pilot projects.
- To share good practice identified through this experience.
- To disseminate results through a 'how to' guidebook and monitoring indicators.





## ***Work package 4: Data and curricula analysis from traditional and pilot SET degree courses***

- to provide a state of the art
- to analyse country-specific case studies
- to evaluate traditional and pilot degree courses in SET in Europe



## ***Work package 5: Analysis of students' perception of societal impacts of SET and their study choices***

- to collect data about the background of the current E&T education and the cultural context of E&T in Europe
- to analyse female and male student's perception of E&T in general and of interdisciplinary E&T fields in particular
- to analyse female and male traditional E&T student's study choices from a retrospective point of view
- to analyse female and male interdisciplinary (pilot project-) E&T student's study choices from a retrospective point of view
- to evaluate the success of pilot projects which integrate societal impacts of E&T in the curricula





## ***Work package 6: Evaluation and definition of indicators***

- to provide a state of the art of existing indicators
- to collect and analyse statistical data from existing statistical sources on High Education Programmes (at national and European level)
- to design a methodology to measure the societal impact on the perception of science on study choice
- to measure the impact obtained by pilot projects



## ***Work package 7: Dissemination***

- to build and update a WEB site for the project
- to organise an academic and non-academic dissemination and a permanent dialogue with stakeholders
- to design a leaflet, brochures and write the final synthetic report
- to organise the final conference in Paris





# HELENA

Higher Education Leading to Engineering and scientific careers



## ***HELENA International Conference*** ***Paris June 23-23th, 2011***

**Gender and Interdisciplinary Education for Engineers –  
GIEE 2011**

***Does Interdisciplinary Education improve the gender  
balance***

***and attract more young people in Engineering and  
Technology higher education?***

**Call for papers : dissemination starting June 2010**





## ***Expected results***

- to participate to the academic debate about gender dimension in E&T
- to arise awareness about higher education on science and engineering in order to improve the number of women involved in Technology
- to provide ideas, examples, implementation plans about how to improve Engineering education
- to address a large public interested by Engineering education as a key to our future



# HELENA

Higher Education Leading to Engineering and scientific careers



*Thanks for your attention!*



[www.fp7-helena.org](http://www.fp7-helena.org)

