



**ACCESSIBILITY AND HARMONIZATION OF HIGHER
EDUCATION IN CENTRAL ASIA THROUGH CURRICULUM
MODERNIZATION AND DEVELOPMENT**

Project № 561553-EPP-1-2015-1-BG-EPPKA2-CBHE-JP

**ERASMUS+ Programme
KA2 - Capacity-building in the Field of Higher Education**

Coordinated by Burgas Free University

**WP1 Research
Dev. 1.1
App. 8.2 Institutional Report USGM - Italy**



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INSTITUTIONAL SUMMARY REPORT – P2 USGM, Italy**A. General Information****COUNTRY:** Italy**INSTITUTION** (Full name and abbreviation): Università degli Studi Guglielmo Marconi - USGM**ADDRESS:** Via Plinio, 44 – Rome**FACULTIES** (or other university units):

Faculty of Applied Sciences and Technologies

B. Information related to Engineering and Engineering Trade Subject Area**I. Academic Programs in Engineering and Engineering Trade Subject Area**

Please, specify only Bachelor's and/or Master's Degree Programs which the university is expected to provide education in over the period of the Project (the next three academic years: 2015-18)¹, with indication of the Area (see table) where the academic program should be considered.

Engineering	Area 1 (covers all types of classical Engineering degrees including electrical, mechanical, electronic, agricultural, aerospace, civil, mine, telecommunication, computer, etc.)
Engineering Trade	Area 2 (covers all types of general industrial Engineering degrees including design, logistics, management, business, etc.)

Table 1. Description of Academic Programs in the field of Engineering and Engineering Trade

Area	Name of the Academic Program	Educational degree provided (<i>Bachelor, Master</i>)	Form of study (<i>part-time, full-time, distant education</i>)	Approximate total number of students	Total number of academic staff

(Please, add as many rows as necessary.)

Area	Name of the Academic Program	Educational degree provided (<i>Bachelor, Master</i>)	Form of study (<i>part-time, full-time, distant education</i>)	Approximate total number of students (<i>at 2014-2015</i>)	Total number of academic staff

¹If the university does not offer academic programs in Engineering and Engineering Trade subject area, please, in Table 1 fill in academic programs whose program's curriculum includes courses/subjects related to Engineering Sciences.

Area 1	Civil Engineering	1st Level Bachelor	e-learning	800	25
Area 1	Computer Engineering	1st Level Bachelor	e-learning	606	22
Area 2	Industrial Engineering	1st Level Bachelor	e-learning	971	23
Area 1	Civil Engineering	2nd Level Bachelor	e-learning	299	14
Area 1	Computer Engineering	2nd Level Bachelor	e-learning	205	14
Area 1	Energetic and Nuclear Engineering	2nd Level Bachelor	e-learning	78	14
Area 2	Industrial Engineering	2nd Level Bachelor	e-learning	166	13

II. Current State of Education

Please, provide the following information for your university.

II.1. Quality of the Program's Curriculum and the Teaching Programs. Provide the information for each general type of Bachelor Degree and Master Degree.

a) The indicators in this section refer to the Program's Curriculum. They aim to assess the consistency of the academic program with the requirements of the European higher education (please write down just the total length and the number of ECTS of each type).

Share of core (required), Compulsory Specialized subjects, specialized subjects, common and optional subjects, and elective courses included in the Program's curriculum. In the following table:

- **Type:** may refer to (bachelor/master/professional bachelor/academic bachelor, and similar categories in case you have such types of degrees at your university)
- **Area:** may refer to Area 1 or Area 2 as defined in B.1

Table 2. Number of ECTS within each Type/area Degree

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
1 st Level Bachelor's Degree of Civil Engineering/Area 1	BASIC COMPULSORY	48
	CORE or COMPULSORY SPECIALIZED	78
	SPECIALIZED or RELATED	18
	OPTIONAL OR ELECTIVE	18
	Internship or training activities	12
	Final project or final dissertation	6
	TOTAL PER TYPE OF DEGREE	180

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
1 st Level Bachelor's Degree of Computer Engineering /Area 1	BASIC COMPULSORY	36
	CORE or COMPULSORY SPECIALIZED	78
	SPECIALIZED or RELATED	24
	OPTIONAL OR ELECTIVE	12

	Internship or training activities	24
	Final project or final dissertation	6
	TOTAL PER TYPE OF DEGREE	180

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
1 st Level Bachelor's Degree of Industrial Engineering /Area 2	BASIC COMPULSORY	48
	CORE or COMPULSORY SPECIALIZED	66
	SPECIALIZED or RELATED	24
	OPTIONAL OR ELECTIVE	12
	Internship or training activities	24
	Final project or final dissertation	6
	TOTAL PER TYPE OF DEGREE	180

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
2 nd Level Bachelor's Degree of Civil Engineering /Area 1	BASIC COMPULSORY	0
	CORE or COMPULSORY SPECIALIZED	78
	SPECIALIZED or RELATED	12
	OPTIONAL OR ELECTIVE	12
	Internship or training activities	6
	Final project or final dissertation	12
	TOTAL PER TYPE OF DEGREE	120

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
2 nd Level Bachelor's Degree of Computer Engineering /Area 1	BASIC COMPULSORY	0
	CORE or COMPULSORY SPECIALIZED	66
	SPECIALIZED or RELATED	18
	OPTIONAL OR ELECTIVE	12
	Internship or training activities	6
	Final project or final dissertation	18
	TOTAL PER TYPE OF DEGREE	120

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
2 nd Level Bachelor's Degree of Energetic and Nuclear Engineering /Area 1	BASIC COMPULSORY	0
	CORE or COMPULSORY SPECIALIZED	60
	SPECIALIZED or RELATED	30
	OPTIONAL OR ELECTIVE	12
	Internship or training activities	6
	Final project or final dissertation	12
	TOTAL PER TYPE OF DEGREE	120

TYPE/AREA	SUBJECT TYPE	NUMBER OF ECTS
2 nd Level Bachelor's Degree of Industrial	BASIC COMPULSORY	0

Engineering /Area 2		
	CORE or COMPULSORY SPECIALIZED	54
	SPECIALIZED or RELATED	36
	OPTIONAL OR ELECTIVE	12
	Internship or training activities	6
	Final project or final dissertation	12
	TOTAL PER TYPE OF DEGREE	120

(repeat the table for each type of degree or master)

b. Do you collect information on Program's curriculum, teaching programs, learning materials related to similar academic programs at European higher academic institutions (HEIs)?

No.

Please, provide information about the ways to collect such data and give specific examples.

c. Share of the teaching staff with a doctoral degree/PhD (% of the full-time academic staff providing education at university or Faculty level) (average)

75%

d. Policy toward usage of modern approaches and methods of teaching

Please, give evidence on the usage of modern approaches and methods of teaching. Describe the policy for upgrading academic staff qualification. Mention specific actions taken such as seminars, workshops, training courses, etc. which aim to raise teachers' awareness of contemporary methods in higher education.

Academic staff is upgraded through in service training regarding the development of new teaching method, the use and the integration of new solutions for e-learning and the training of the new instructors. Indeed, every schools organize a training session two times per year.

Concerning out-service training, each instructor has to inform previously university about his/her participation in workshops, seminars, conferences.

e. Existence of a Quality Assurance System at National level or International QAS followed. Please explain QAS, if any, to recognize degrees nationwide and follow up system, if any, to reaccredit degrees after being implemented for a given number of years.

In Italian academic system, each course has to be accredited every year by Ministry of Education by sending them the list of instructors and all data related to students statistics, updating courses, etc.

Moreover, since this year (2015), the Italian Agency ANVUR will organize audit of both courses and institutions in order to evaluate, implement and improve quality policy in the academic system.

USGM is also accredited for ISO (international quality system), ACICS (Accrediting Council for Independent Colleges and Schools) and FaDrive for the quality of e-learning system.

f. Share of new courses (subjects) which have been introduced in the Program's curricula for the last 3 years (% of the total number of courses/subjects in the Program's curriculum)

0%, but every curricula is analyzed every year by a special board who evaluates Program quality, student results, information received by stakeholders and from placement data. This board produces a specific report used to update, if needed, the content of each course.

g. Usage of contemporary references or bibliography recommended to students

Please, specify the approximate average number per University/Faculty/Department according with the data used at your university, specify which one.

Table 3. Bibliography/references

Share of core readings (references) issued over the last five (0-5) years (% of the total number of core readings)	Share of core readings (references) issued over the last ten (0 - 10) years (% of the total number of core readings)	Share of the digital references in e-format (% of the total number of references)
50%	50%	40% (downloaded lessons in pdf format)

II.2. ICT facilities and ICT based education

II.2.a This section aims to shed light on the usage of ICT-based facilities and teaching methods as well as the digital competencies of the teaching staff.

Table 4. ICT facilities

Indicator	Value
Teaching e-platform accessible online to support general teaching activities	Yes
On-line platform for non-presential education courses	Yes
ICT lab facilities for students and percentage of students that access to them	Yes – 100%
Number of software products used for educational purposes	10 (e.g. Autocad, Inventor, Catia, Ansys, Fluent, Matlab, HVAC)
Access to Wi-Fi at the university campus	Yes
Average share of academic hours per course/subject requiring usage of ICT-based teaching methods (i.e. computers and software, multimedia devices)	70% online (and 30% face-to-face sessions)
Average share of academic hours per course/subject held in a computer lab	About 30% but it depends on the type of the course.

Average share of the teaching staff who regularly use ICT-based methods of teaching		70% Each teacher/professor develops the multimedia tools to be used for their lessons and courses.
Type of e-learning devices used by teaching staff (i.e. personal computer, smartphones, tablets, etc.)		All our multimedia products/tools are designed and developed according to an advanced technology suitable to all mobile devices.
Devices used by students in classrooms (type of personal devices: i.e. laptop, smartphones, tablets, etc.)		Our students use the virtual classes designed and developed also to be used by mobile devices.
E-learning materials (e-based content) based on e-platform (i.e. Moodle, Sakai, Caroline, etc.)		Please, specify type only if you use an e-platform (ie chat, blog...) We use a custom e-platform including video-lessons, online exercises-sessions, virtual room, etc.
Web based learning-MOOCs		Yes http://mooc.unimar.coni.it
		The method used is the traditional exam since, in the Italian Educational system, the final exam must be in presence. Other solutions, such as online tests or quizzes, are offered, for self-assessment activities.
	CONCERNS	KEY ACTIONS
Technology use by faculties, schools and University Services units CSUs of plans for technology use	Ability of new instructors to fully exploit e-learning system	In-service training
Student experience and support in ICT use	Ability of students to use learning management system	Tutorial online
Administrative Staff training	Ability of	Out-service training

and support in ICT use to improve the digital competence	administrative staff to use ICT skills		
Faculty Staff training and support in ICT use to improve the digital competence	Ability of new instructors to fully exploit e-learning system	In-service training	
Library services. Research tools	Availability of texts and books for students and academic staff	Local library and online a books, e-texts catalogue	
Technological support for assessment activities	Given support to students for fighting school dropout	Custom platform to develop assessment activities for during their study and before exam	
MOOCs or online courses	Possibility to offer open academic courses	Availability of different MOOCs	
On-line services addressed to the students (class timetable, exam timetable, courses history, grades, digital library and etc.)	Giving students all information about academic path and timetable. This is a good solution against school dropout especially during first years.	<ol style="list-style-type: none"> 1. Preliminary course into management system for and their resources. 2. Exams and virtual classes and visible online. 3. Full syllabus available for course. 	
Students evaluation methods			
Other non-traditional evaluation methods for transversal competences			Self-assessment with online test, quizzes, multiple answer questionnaire, exercise sessions, virtual room, etc.

III Digital Framework

1 Is your university following a strategic plan for Digital implementation? YES/NO. Describe it in max 700 words.

Università degli Studi Guglielmo Marconi is an open university with 70% of e-learning lessons

2. Describe how your university develops its Digital Strategy in terms of Concerns and Key Actions during the last 2 years (i.e. training courses, sessions, workshops, financial assistance offered to academics for qualification upgrading, etc.):

Table 5. Digital Framework

3. Describe the digital methodology used in your **Learning Environment, giving examples in different types of subjects related with the type of subjects described in B.1.**

You should include a small explanation with the following information:

- **Type of ICT methodology used:** Blended learning (70% online and 30% face-to-face). Concerning online modality, the methodology includes mainly video-lessons for each course delivered; virtual classes (usually every 2 months but it depends on the course type); multimedia tools/products such as virtual games, role games, simulations, animations and multimedia laboratories.
- **Type of learning:** Independent learning for e-learning lessons and exercises, and collaborative learning, especially, during the virtual classes and lab-activities (both online and onsite) where students are requested to collaborate.
- **Feedback:** feedback collection by online quizzes and questionnaires, emails and face-to-face exams.
- **Digital facilities:** Organization of meetings, seminars, conferences and workshops at national and international level.

IV. Competitiveness of Education

The goal is to assess the competitiveness of your university and the academic program at a national, regional and EU-wide level as well as its conformity with the labor market requirements.

1. Do you receive a feedback from students – current and former ones – about the quality of education in the academic programs? Please answer at university level, Faculties or by areas described in Table 1, according with the characteristics and data of your institution giving information about the ways for collecting such information (i.e. questionnaires, surveys; regular meetings with graduates; alumni associations, etc.). Present specific documents, if applicable. Summarize the results.

Each student has to fill in online questionnaires submitted at the end of each course (before final exam) or after a traineeship period (mandatory for some engineering courses) and before master thesis dissertation.

Data gathered are related to: teaching quality, timetable, availability of instructors, learning materials/tools in terms of both quality and quantity, personal experiences with university facilities, etc.

Moreover, each instructor is evaluated at the end of each solar year considering students feedbacks, presence at in-service training and at seminars and conferences organized by university. Evaluation form is then discussed with dean.

2. Do you collect information from employers of your students about the quality of education and students' professional qualification and preparation? Please, give information about the ways for collecting such information (i.e. questionnaires, surveys; regular meetings with employers, employers' associations, labor market institutions, etc.). Present specific documents, if applicable. Summarize the results.

No information collection from employers. This doesn't have foreseen in the Italian system. Only in the traineeship the employer can give his/her feedback on student preparation. However it is not mandatory.

3. Student and teaching staff mobility per University/Faculty/Area described in table 1

Total number of students per year over the last 2 years who have <u>studied</u> abroad (excluding the EU countries)	0
Total number of student per year over the last 2 years who have <u>studied</u> in the EU	No. 10 studies + no. 15 traineeship
Total number of teachers per year over the last 2 years who have visited foreign academic institutions (excluding the EU countries) for the purposes of delivering lectures/seminars, conducting scientific research, project participation	0
Total number of teachers per year over the last 2 years who have visited academic institutions in the EU for the purposes of delivering lectures/seminars, conducting scientific research, project participation.	0

4. Employability of graduates. (Please provide information by University/Faculty/Areas as described in Table 1 if such data is known and available.)

The next two indicators estimate the degree of qualification mismatch for your graduates. Please, provide data on:

- Share of graduates (% of the average total number of graduates per year) who over the last 5 years have started a job which require professional qualification and theoretical knowledge in the field of Engineering and Engineering Trade. These are students who work in accordance with their field of study/specialty (this indicator is related to the extent of horizontal qualification mismatch).

2012-2013

Bachelor Degree Programs – First Level

Industrial Engineering 33.33%

Civil Engineering 29.21%

Computer Engineering 30.43%

2013-2014

Bachelor Degree Programs – First Level

Industrial Engineering 25.30%

Civil Engineering 12.37%

Computer Engineering 32.35%

2012-2013

Bachelor Degree Programs – Second Level

Industrial Engineering 27.27%
Civil Engineering 40.63%
Computer Engineering 30%
Energetic and Nuclear Engineering 54.55%

2012-2013

Bachelor Degree Programs – Second Level

Industrial Engineering 28.57%
Civil Engineering 2.13%
Computer Engineering 0%
Energetic and Nuclear Engineering 37.50%

- Share of graduates (% of the average total number of graduates per year) who over the last 5 years have taken working positions which require the same educational degree (i.e. bachelor or master) as that they possess. These are students who work in accordance with the educational degree acquired (this indicator is related to the extent of vertical qualification mismatch).

In Italy, placement service is not mandatory for academic institutions. Despite this, during last years we started a dedicated placement service for first and second level students. We offer a dedicated placement web pages (<http://placement.unimarconi.it/en/>) where companies publish their request for personnel (from internship to staff).

Moreover we send a questionnaire at 1 month, 6 months and 12 months after graduation to collect information about students experience in job market. If the students were employed, we ask also information about companies.

The response ratio is still low but we are applying some key actions to increase it (e.g. with agreement with private companies).

5. Education and training provided in a real-life working environment

5.1. Per areas described in table 1, please share the courses/subjects type for which part or all classes are conducted in a real-life working environment (i.e. companies, banks, factories, etc.)

Mandatory internship is foreseen for the following subjects/courses:

1. Civil Engineering
2. Computer Engineering
3. Industrial Engineering

5.2. The average number of academic hours per course/subject conducted in a real-life environment

150 hours = (6 ECTS x 25 hours)

5.3. Additional evidence on the practical orientation of the study and the practical training of students (i.e. internships during study, etc.).

Internship is mandatory during some courses. Internship period of about 3 months in private companies. At the end, we ask for detailed reports drawn up by both student and academic tutor. In addition, we require also the compilation of a satisfaction questionnaire by both student and company staff.

6. University – Business links

Please, provide information on participation of specialists, experts, entrepreneurs, etc. in the educational process and/or curricula development, if any. Specify the average share of lectures/seminars delivered by them (% of total academic hours per course/subject.)

In our quality policy, each course is revised every year by a specific committee, including instructors, students and stakeholders. This process is deeply conducted all course duration (3 years for first level, 2 years for second level bachelor).

7. Does your university study the current tendencies and requirements of the labor market?

(Please, provide specific information about the ways to collect labor market data. Describe records, databases, analysis you prepare, if any.)

Firstly, USGM offers their students a placement service. Please, visit this website <http://placement.unimarconi.it/en/> for more information.

Secondly, we collect all important data on students experience in job market through the submission of a questionnaire at 1st - 6th and 12th month after graduation. If the students were employed, we gather also information about their companies.

Thirdly, we foresee an internship during some courses. It last about 3 months in private companies. At the end, both students and academic tutor have to draw up a detailed and both student and company staff have to fill out a satisfaction questionnaire.

Finally, each course is revised every year by a specific committee constituted of instructors, students and stakeholders.

8. Does your university/faculty offer or plan to offer joint degree programs with partner universities?

JOINT DEGREES

1. La Universidad a Distancia de Madrid (UDIMA)

This partnership offers students to achieve a bilingual MBA(English and Spanish).

2. International Humanitarian University (Odessa – Ukraine)

This partnership offers students to obtain a Master Degree in Business Administration in English languages.

3. KYIV National University of Trade and Economics

This partnership provides students with the opportunity to achieve a Master Degree in Business Administration in English languages.

9. Please, discuss the Lifelong Learning (LLL) policy of your institution such as students, alumni, company members, retired citizens, other actions.

Concerning the LLP policy, USGM offers updating courses such as Master and other types of training courses, especially for school teachers.

Moreover, USGM offers free MOOC courses, useful in order to improve knowledge about specific subjects and topics. The duration of each course is 12 weeks and they include different virtual activities such as lessons, laboratories, brainstorming sessions, and so on.

All people, interested in the topics discussed, can enroll to these courses.

10. Future teaching methodologies and their implementation

Thinking about future students, current learning strategies followed by many of them before entering university, and ICT technologies:

Which key competences, skills and practices do you think that will be needed at university level to enhance students learning experience? Explain briefly under faculty staff, student and stakeholders' point of view.

Since USGM is open university, we already use ICT technologies applied to teaching processes and new teaching approaches.

However our aim is to improve and update skills of our staff and to develop more and more advanced technologies through the implementation of testing projects.