



IE-2-(AP3_MK)

**University of Szeged
Faculty of Engineering
and
C.D.A. College**



FINAL REPORT

on Engineering Management (BSc) and Bachelor of Arts in Business Administration (BA) education in cooperation University of Szeged and C.D.A. College in Cyprus (Nicosia/Lefkosia/ or Larnaca or Limasol/Lemassos or Paphos/Pafos campuses).

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Introduction

Our education network development has a project number in headings. Subproject is AP3 Internalisation of education, AP3_MK Building international cooperation on Engineering Management BSc, deeping cooperation in business subtopics at University of Szeged Faculty of Engineering, and C.D.A. College, to develop partly overlapped programme. Goal is a possible start of joint education by both universities.

Universities have permissions to educate over mentioned study programmes in their home country in native language and English (by C.D.A.) in Cyprus as well. In Szeged we plan to do it in the short future. Having graduated students get **Engineering Manager** in Hungary or **Economist** in Cyprus bachelor degree (BSc/BA) with specialisation in their diploma.

Main goal in our cooperation is develop a semester either Hungary or Cyprus in order that students will be able to study (one semester) at partner university. It would be 5th semester, which looks the bests. Students start their university education programme on engineering management studies in Hungary and on business & economics in Cyprus. During 5th semester two programmes join. After it, students continue their original study programmes in their home countries and will be graduated like Engineering Managers in Hungary or Economists in Cyprus.

They will have collaborative networking skills, communication skills, foreign language skills, sense of responsibility, quality awareness, assessment and self-assessment, analytical and synthesizing ability.

Curriculum: 7 semesters in Hungary 8 semesters in Cyprus

Number of credits earned: 210/240

Until graduation students write thesis (diploma work) for credits and they have vocational training, internship in summer.

Knowledge and competences, skills, attitudes, autonomy and responsibility detailed in course descriptions, not in this essay.

Just the most important ones. The goal of Engineering Managers / Economists in their education is to issue such degree holders whom able to use the newest

scientific results, well informed on natural and economic sciences and technology. They can use their knowledge in different areas in practice of business sector. Graduated students according to their competences are ready to continue their further education in master programmes (MSc/MA), furthermore in doctoral (PhD) programmes.

a) Knowledge and competences learnt in bachelor programme:

- know technical technology, manufacturing, logistics, quality assurance and information technology
- management, organization and control of for business plans,
- make decision-making tasks,
- implementing innovation strategies for managing workplace groups,
- information management,
- human resources management tasks,
- overview of the accounting system,
- to provide operational management tasks for the production management, producer and service provider,
- activity,
- define quality and efficiency indicators,
- analyse competitors, products, market entry opportunities..

b) Skills after graduation:

- planning and development researcher positions,
- develop and manage research and development programs and projects,
- develop production processes,
- carry out management tasks in food industry and related fields,
- transfer knowledge in the field of education and counselling.

c) Attitudes:

- ability and skill to identify and solve problems with the toolbox of science,
- critical evaluation of development work related to the field,
- developer and designer approach,
- coordination capability,
- motivation to expand knowledge and apply new knowledge,
- to improve safety and quality,
- ability to prepare and implement a work plan and program.

d) Autonomy and responsibility

- suitability for self-employment,
- creativity,
- professional opinion creation and effective communication,

- ability to use and analyse information,
- environmentally conscious behaviour,
- compliance with environmental regulations,
- professional responsibility,
- aptitude for cooperation, after conducting good practice to perform managerial tasks.

Among the scientific work in the Faculty, the work of Engineering Managers BSc in English is also linked to the work of several institutes in the following areas:

- objective qualification methods for raw materials, semi-finished and finished products in the food industry, composition analysis of raw materials, quality assurance, and improvement,
- production and product development research, assortment expansion, product quality, packaging, shelf life improvement,
- production,
- logistics joining production,
- industry environmental management research, processing losses, pollution, reducing environmental impact, waste management,
- to reduce costs,
- development products and technology,
- work safety,
- business and management.

The duration of the traineeship placement is at least 6 weeks, defined by the higher education institution's curriculum.

Foreign language requirements in Hungary: To obtain a master's degree in any living foreign language, in which the profession has a scientific literature, a state-recognized, intermediate-level (B2) complex type exam or equivalent maturity certificate or diploma. In Cyprus, the C.D.A. College stands requirements.

Agreed frames about collaboration

Negotiations and preparations were completed in May 2019, in joint education form, subjects in the network available as an acceptable and feasible alternative for both universities (C.D.A. College, University of Szeged Faculty of Engineering).

We have the necessary data, so after final consultation, we hope to be the basis for our joint education.

Some principles are fixed:

- a) University of Szeged need start licencing Engineering Management BSc in English (full programme)
- b) In Cyprus - typically - with a higher credit number the subjects are run, so they can be matched with the subject of several names from the Szeged network – occasionally;
- c) the scheduling of each university's subject network will be changed because it seems appropriate to designate 5nd semester for mutual mobility;
- d) the most important subjects for the given institution - and if equivalence - could be taught by both institutions themselves;
- e) summary study does not address the financing issues, and later dean consultation will be needed on this issue. For the time being, it is not known how symmetrical the training and the licensing process (students should always receive a formal certificate / deposit from their other university) attesting to their participation in joint training;
- f) students get degree from their home institution like Engineering Manager (BSc) in Szeged or Economist in Cyprus (BA).

It is important; this joint programme is offered for limited number of students in both countries, who must choose joint study programme in the 1st semester and complete courses without ones are mentioned in 5th semester.



Curriculums in joint programme

Harmonized curriculum is the result of two partners' curriculum (study programmes). In annex you can find original curriculums of University of Szeged Faculty of Engineering and C.D.A. College Cyprus in different campuses. We had to make some changes in row of courses, someone are a semester before or later.

Curriculum in joint programme

Title of subjects in Hungary/Cyprus	Semester		
	5 th classes/week, types (lecture (lec) / practical course (pc))	Credits	Exam / term mark
<i>Language: English</i>			
Microeconomics / Principles of Microeconomics	2/30 lec 1/15 pc	5	exam
Macroeconomics / Principles of Macroeconomics	2/30 lec 1/15 pc	5	exam
Principles of Accounting + Organization of Enterprises / Introduction to Accounting	4/60 lec 1/15 pc	6	exam
Human Resource Management / Human Resource Management	2/30 lec	3	exam
Principles of Finance / Introduction to Finance	2/30 pc	3	exam

Marketing + Projectmanagement + Quality Management / Marketing Management	3/45 <i>lec</i> 3/45 <i>pc</i>	8	<i>exam</i>
Total:	13/195 <i>lec</i>, 8/120 <i>pc</i>		6 exams, 0 qualifications (3 grade), 0 term mark
Credits		30	

Annexes

Annex 1. Curriculum of Engineering Management BSc at University of Szeged Faculty of Engineering

Nr	Semester	1		2		3		4		5		6		7		All together		
		h	c	h	c	h	c	h	c	h	c	h	c	h	c	h	c	
BASIC COURSES (64)																		
1	Mathematics I-II.	2+2	5(K)	2+2	5 (K)												120	10
2.	Representative Geometry	2+2	5(G)														60	5
3.	Physics	2+2	5(K)														60	5
4.	Mechanics I.,II.			2+2	5(K)	2+2	5(K)										120	10
5.	Mathematical Statistics							0+2	3(G)								30	3
6.	Chemistry			2+0	3(K)												30	3
7.	Microeconomics	2+2	5(K)							2+2							60	5
8.	Macroeconomics			2+2	5(K)												60	5
9.	Fundamentals of Ecology	2+0	3(K)														30	3
10.	Principles of Finance					2+0	3(K)										30	3
11.	Project Management							2+0	2(K)								30	2
12.	Quality Management					2+0	3(K)										30	3
13.	Human Resource Management					2+0	3(K)										30	3
14.	Principles of Accounting									2+1	4(K)						45	4
VOCATIONAL COURSES (106)																		
15.	Principles of Informatics	0+2	2(G)														30	2
16.	Technical Drawing I-II	1+2	3(G)	1+2	3(G)												90	6
17.	Materials and Production Technology. I-II-III.			2+1	4(K)	2+1	4(K)	2+1	4(K)								135	12
18.	System of Machines I.-II					2+2	4(K)	2+2	4(K)								120	8
19.	Heat Technology.					2+1	3(K)	2+0	2(K)								75	5

20.	Electronics					2+2	5(K)										60	5
21.	Energetics							2+0	3(B)								30	3
22.	Construction Design							2+0	3(B)								30	3
23.	Labour and Job Safety									0+2	2(G)						30	2
24.	Economic Law							2+0	3(K)								30	3
25.	Principles of EU			2+0	3(B)												30	3
26.	Informatics in Practice									1+2	3(G)						45	3
27.	Environmental Technology I-II.									2+0	2(B)	0+3	3(G)				75	5
28.	Marketing									2+0	3(K)						30	3
29.	Communication	0+2	2(G)														30	2
30.	Ethics	2+0	2(B)														30	2
31.	Engineering Design and Planning													3+0	4(K)		45	4
32.	CNC-CAD-CAM											2+1	4(K)				45	4
33.	Elective courses							4+0	4(B)	4+0	4(B)	4+0	4(B)	4+0	4(B)		240	16
34.	Thesis (Diploma Work)											0+5	5(B)	0+10	10(B)		375	15
	All together	27	32	22	28	24	30	23	28	16	18	15	16	17	18		2160	170

SPECIAL COURSES																			
Logistics Specialisation																			
35	Product Management											2+0	3(K)					30	3
36	Production Management											2+0	3(K)					30	3
37	Production Logistics I.-II											2+1	4(K)	2+0	3(K)			75	7
38	Systems and Modelling											2+2	5(G)					60	5
39	Forwarding													3+0	4(K)			45	4
40	Information of enterprises I.													2+0	3(K)			30	3
41	Quality Management I.-II													2+0	3(K)	2+0	2(K)	60	5
42	Economics of Enterprises													2+0	3(K)			30	3
43	Economics of Enterprises															2+0	2(K)	30	2
44	Organisation of Enterprises															2+0	2(B)	30	2
45	Organisation of Transport															2+0	3(B)	30	3
	Specialisation all together											11	15	11	16	8	9	450	40
Energetics Specialisation																			
35	Measurement Technology											2+2	5(K)					60	5
36	Global Environmental Problems													2+0	3(B)			30	3

37	Systems and Modelling									2+2	5(K)					60	5	
38	Energetics in Agriculture									2+0	3(B)					30	3	
39	Regional Statistics									2+0	3(K)					30	3	
40	Renewable Energy Sources											2+2	6(K)			60	6	
41	Not Renewable Energy Sources											2+2	6(K)			60	6	
42	Modelling of Air Pollution											2+0	3(K)			30	3	
43	Power Plants in our Environment													2+0	3(K)	30	3	
44	Energy Management													2+0	3(K)	30	3	
	Specialisation all together															420	40	
Information Technology Specialisation																		
35	Programming										1+2	4(G)					45	4
36	Software for Users										0+3	3(G)					45	3
37	System Technology and Computers										2+2	5(K)					60	5
38	Communication and Information Systems										2+0	3(B)					30	3
39	Development of Information Technology												1+2	4(K)			45	4
40	Algorithms												2+2	5(K)			60	5
41	Database Management												2+2	5(K)			60	4
42	Communication Networks and Systems												2+1	4(B)			45	3
43	Enterprise Information Systems in Practice														2+2	4(K)	60	4
44	Operation of Computer Systems														0+3	3(G)	45	3
	Specialisation all together																495	40
	Internship (on each specialisation)																160	
	All together:																	
	<i>Logistics Specialisation</i>	27	32	22	28	24	30	23	28	27	33	26	32	25	27	2770	21	
	<i>Energetics Specialisation</i>	27	32	22	28	24	30	23	28	28	34	27	34	21	24	2740	0	
	<i>Information Technology Specialisation</i>	27	32	22	28	46	30	23	28	28	33	29	34	24	25	2815	21	
																	0	
																	21	
																	0	

Legend: **h**: hours, **c**: credits; **K**: exam, **G**: practice, **B**: qualification

Annex 2. Curriculum of Bachelor of Arts in Business and Administration BSc at C.D.A. College in Cyprus

Nr	Semester	1		2		3		4		5		6		7		8		All together	
		h	c	h	c	h	c	h	c	h	c	h	c	h	c	h	c	h	c
Subjects of courses																			
1	Organizational Behaviour	3	6 (E)															45	6
2	Introduction to Management	3	6 (E)															45	6
3	Business Law	3	6 (E)															45	6
4	Public Speaking	3	6 (E)															45	6
5	European History	3	6 (E)															45	6
6	International Business			3	6 (E)													45	6
7	International Finance			3	6 (E)													45	6
8	Advanced English			3	6 (E)													45	6
9	Services Marketing			3	6 (E)													45	6
10	Market Research			3	6 (E)													45	6
11	Small Business Management					3	6 (E)											45	6
12	Business Policy and Strategic Management					3	6 (E)											45	6
13	Human Resource Management					3	6 (E)											45	6
14	E-Business					3	6 (E)											45	6

34	Introduction to Finance													3	6 (E)			45	6	
35	Statistics I.													3	6 (E)			45	6	
36	Financial Accounting														3	6 (E)			45	6
37	Business Information Systems														3	6 (E)			45	6
38	History of Cyprus														3	6 (E)			45	6
39	Marketing Management														3	6 (E)			45	6
40	Statistics II.														3	6 (E)			45	6
	<i>All together</i>	15	30	15	30	15	30	15	30	15	30	15	30	15	30	15	30	1800	240	

Legend: **h**: hours, **c**: credits; **K**: exam, **G**: practice, **B**: qualification

Legend: C – Course, S – Seminar, L – Practical (laboratory), P – Project; Type of examination: examination, colloquium.