Republic of Turkey

Izmir University of Economics

Deniz Orman

who has satisfactorily pursued the studies and passed the Examinations required therefor has been awarded the Degree of

Bachelor of Science

in

Industrial Systems Engineering

at the

Faculty of Engineering and Computer Sciences

with all the Rights and Privileges thereunto appertaining.

January 23,2014, Izmir

Prof. Dr. Tuncdan Baltacioglu
Rektör
Rector

İZMİR UNIVERSITY OF ECONOMICS
DIPLOMA SUPPLEMENT

Diploma No : U-0603-254-5570
Diploma Date : 23.01.2014

Sakarya Cad. No:156 Balçova-İZMİR/TÜRKİYE
Tel: +90 (232) 279 25 25 Fax: +90 (232) 279 26 26 www.iue.edu.tr

This diploma supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international "transparency" and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.). It is designed to provide a description of the nature, level, context, content and the status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgments, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1. Family name(s) : **ORMAN**
1.2. Given name(s) : **DENİZ**
1.3. Place and date of birth : **KONAK, 04.03.1990**
1.4. Student identification number : **20080603050**

2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1. Name of the qualification:
Endüstri Sistemleri Mühendisliği, Lisans (Industrial Systems Engineering, Bachelor of Science)
Title conferred: Endüstri Sistemleri Mühendisi (Industrial Systems Engineer)
2.2. Main field(s) of study for the qualification:
Industrial Systems Engineering
2.3. Name and status of awarding institution:
İzmir University of Economics: Foundation-supported, Public Legal Entity, State-recognized
İzmir Ekonomi Üniversitesi: Kanunla kurulmuş, Devlet tarafından tanınan Vakıf Üniversitesi
2.4. Name and status of institution administering studies:
same as 2.3
2.5. Language(s) of instruction/examination: **English**

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1. Level of qualification: **First Cycle (Bachelor's Degree)**

3.2. Official length of programme:

4 years (excluding one year of English preparatory school), 2 semesters per year, 16 weeks per semester, total 8 weeks Summer Training.

3.3. Access requirement(s):
High school diploma,
Placement through a centralized national university placement examination,
Certificate of IUE English Proficiency or Paper Based TOEFL (PBT) score of 523, or Computer Based TOEFL (CBT) score of 193, or Internet Based TOEFL (IBT) score of 70 or equivalent.

4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1. Mode of study: **Full Time**

4.2. Programme requirements:

Students must have a Cumulative Grade Points Average (Cum.GPA) of not less than 2.00/4.00 and have completed all the courses with at least a letter grade of DD/S in the program in order to graduate.

Objectives :

- To train industrial systems engineers, who are competent in computer technologies and systems, with improving the efficiency of industrial systems, and producing high value added products.

- To educate students with a solid theoretical framework in industrial systems and processes, with a on critical computational analysis and solution assessments.

- Emphasizing theoretical and laboratory skills, hardware and software skills, using simulation and de to design efficient and reliable industrial systems.

4.3. Programme details and the individual grades/marks obtained* :

Code	Title of Course	Course Category	Grade	Credit	ECTS Credit
001	English Preparatory Program	Required Course	S	0.0	0.0
SE 115	Introduction to Programming I	Required Course	CB	3.0	7.0
IREU 110	Introduction to Political Science	Elective	AA	3.0	5.0
MATH 153	Calculus I	Required Course	DD	4.0	5.0
CHEM 100	General Chemistry	Required Course	CB	3.0	4.0
PHYS 103	General Physics	Required Course	CC	3.0	4.0
HUM 103	Principles of Social Sciences I	Required Course	CC	3.0	3.0
IUE 100	Academic and Social Orientation	Required Course	AA	1.0	1.0
ENG 101	Academic Skills in English I	Required Course	CB	3.0	4.0
GER 101	German Language I	Required Course	AA	3.0	4.0
ISE 104	Introduction to Materials Science	Required Course	CC	3.0	3.0
SE 116	Introduction to Programming II	Required Course	CB	3.0	7.0
MATH 230	Linear Algebra for Engineers	Required Course	CC	3.0	5.0
ECON 100	Principles of Economics	Required Course	BB	3.0	4.0
MATH 154	Calculus II	Required Course	DD	4.0	5.0
HUM 102	History of Civilization II	Elective	BA	3.0	5.0
HUM 104	Principles of Social Sciences II	Required Course	BB	3.0	4.0
ENG 102	Academic Skills in English II	Required Course	CB	3.0	4.0
GER 102	German Language II	Required Course	BB	3.0	4.0
ISE 203	Optimization I-Linear Models	Required Course	CC	3.0	5.0
ISE 220	Engineering Economics	Required Course	BA	3.0	5.0
BA 240	Financial and Cost Accounting	Required Course	DC	3.0	4.0
MATH 223	Introduction to Probability	Required Course	DC	3.0	5.0
BA 250	Management Science	Elective	AA	3.0	6.0
TURK 201	Turkish I	Required Course	CB	2.0	1.0
GER 201	German Language III	Required Course	DC	3.0	3.0
ST 200	Summer Training (4 weeks)	Required Course	S	0.0	4.0
ISE 204	Optimization II-Nonlinear Models	Required Course	CC	3.0	5.0
ISE 322	Work Systems Analysis and Design	Required Course	DD	4.0	5.0
ISE 216	Production Systems Analysis	Required Course	CC	3.0	4.0
MATH 234	Engineering Statistics	Required Course	CB	3.0	5.0
TURK 202	Turkish II	Required Course	BA	2.0	1.0
GER 202	German Language IV	Required Course	CC	3.0	3.0
ISE 315	Production Planning, Design and Control	Required Course	BA	3.0	4.0
ISE 317	Simulation	Required Course	CC	3.0	5.0
ISE 211	Industrial Info.Sys. I-Databases & Analys.	Required Course	BA	3.0	5.0
ENG 311	Effective Speaking Skills	Elective	AA	3.0	3.0
HIST 201	Princ. of Atatürk and Hist. of Revol. I	Required Course	CC	2.0	1.0
GER 301	German Language V	Required Course	CB	3.0	3.0
ST 300	Summer Training (4 weeks)	Required Course	S	0.0	4.0
ISE 362	Lean Production	Elective	CB	3.0	4.0
ISE 320	Modeling and Analysis of Supply Chains	Elective	BB	3.0	4.0
BA 360	Human Resources Management	Elective	CC	3.0	4.0
ISE 212	Industrial Information Systems II-Dsgn. and Appl.	Required Course	BA	3.0	7.0
ISE 324	Fundamentals of Modern Manufacturing Systems	Required Course	DD	3.0	7.0
HIST 202	Princ. of Atatürk and Hist. of Revol. II	Required Course	CB	2.0	1.0
GER 302	German Language VI	Required Course	BB	3.0	3.0
ISE 451	Applied Workshop in Ind. Systems Engineering I	Required Course	AA	1.0	2.0
ISE 413	Software Applications in Industry	Elective	BB	3.0	4.0
ISE 470	Facility Layout and Materials Handling	Elective	CB	3.0	4.0
ISE 318	Quality Assurance and Reliability	Required Course	CB	3.0	6.0
ISE 480	Sequencing and Scheduling	Elective	BA	3.0	4.0
ISE 415	Network Optimization	Elective	BA	3.0	4.0
ISE 497	Senior Project I (ISE)	Required Course	BB	5.0	7.0
ISE 421	Quantitative Production Planning	Elective	BB	3.0	4.0
CLM 400	Oenology	Elective	AA	3.0	5.0
ENG 400	Advanced English	Elective	BB	3.0	3.0
GER 401	German Language VII	Required Course	CC	3.0	3.0
ISE 452	Applied Workshop in Ind. Systems Engineering II	Required Course	AA	1.0	2.0

ISE 414	Applied Production Systems	Elective	AA	3.0	4.0
ISE 498	Senior Project II (ISE)	Required Course	BB	5.0	9.0
ISE 444	Ethics in Engineering and Comp. Sciences	Required Course	AA	3.0	4.0
GER 402	German Language VIII	Required Course	BA	3.0	3.0

Total IUE Credits : 177

Total ECTS Credits : 257

4.4 Grading Scheme and Grades

For each course taken, the students is given one of the following grades by the course teacher. Local letter grades, ECTS grades, grade points and percentage equivalents are given below:

Percentage	90-100	85-89	80-84	75-79	70-74	65-69	60-64	50-59	49 and below
Local Course Grades	AA	BA	BB	CB	CC	DC	DD	FD	FF
Grade Points	4.00	3.50	3.00	2.50	2.00	1.50	1.00	0.50	0.00
ECTS Grades	A	B	B	C	C	D	E	FX	F

Other Grades: I: Incomplete, S: Satisfactory Completion, P:Satisfactory Progress, U: Unsatisfactory, EX: Exempt, NI: Not Included, W: Withdrawn, NA: Not Attended

Exchange Program Courses(EP): These are the courses taken at partner universities abroad in the framework of Erasmus Program and/or cooperation protocols.

Double Major, Minor and Certificate Program Transfer Courses (DMT, MNT, CT): Shows the courses of the students who left DMP (Double Major Program), MP (Minor Program) and CP (Certificate Program)These are not counted in Major Program courses. When students leave Double Major and Minor Programs, they are not obliged to repeat the Double Major and Minor Program courses they have failed.

Grade Point Averages: The student's academic standing is calculated in the form of a GPA and Cum. GPA out of a scale of 4.00 and announced at the end of each semester by the Registrar's Office. A student's GPA is obtained by the multiplying the grade points of the final grade by the credit hours and divided by the total credit points earned in that semester. The Cum. GPA is computed by the ratio of total grade points earned by the total credit points earned up to and including that semester.

4.5 Overall Classification of the qualification :

Cum. GPA : 2.66 out of 4.00
Final Grade of Degree : "Başarılı-Satisfactory"
Relative RANK: 2 of 6

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to further study:

May apply to graduate programs.

5.2 Professional status conferred:

This degree enables the holder to exercise the profession.

6. ADDITIONAL INFORMATION

6.1. Additional information

6.2. Further information sources

Faculty of Engineering and Computer Sciences' website is; http://fecs.ieu.edu.tr/en
University web site: http://www.iue.edu.tr/
Online University Catalogue: http://ects.ieu.edu.tr/index.php?lang=en
Office of International Affairs: http://oia.iue.edu.tr/
The Council of Higher Education web site: http://www.yok.gov.tr/en/
The Turkish ENIC-NARIC web site: http://www.enic-naric.net/index.aspx?c=Turkey

7. CERTIFICATION OF THE SUPPLEMENT

7.1. Date : 23.01.2014

7.2. Name and Signature : Nergiz FİLİZ

7.3. Capacity: Head of Registrars`s Office :

7.4. Official stamp or seal

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

Structure and Degree System

The basic structure of the Turkish National Education System consists of stages of noncompulsory pre-school education; compulsory primary (elementary and middle school) and secondary (high school) education; and higher education. Primary education begins at the age of 5.5 (66 months), lasts eight years and comprises elementary and middle school education, four years each. Secondary education is also four years and divided into two categories as 'General High School Education' and 'Vocational and Technical High School Education'. The entry into these categories is through composite scores obtained from a centralized exam for secondary schools.

Higher education system in Turkey is managed by the Council of Higher Education (CoHE, Yükseköğretim Kurulu-YÖK) which is an autonomous public body responsible for the planning, coordination, governance and supervision of higher education within the provisions set forth in the Constitution of the Turkish Republic and the Higher Education Law. Both state and non-profit foundation universities are founded by law and subjected to the Higher Education Law and to the regulations enacted in accordance with it.

Higher education in Turkey comprises all post secondary higher education programmes, consisting of short, first, second, and third cycle degrees in terms of the terminology of the Bologna Process. The structure of Turkish higher education degrees is based on a two-tier system, except for dentistry, pharmacy, medicine and veterinary medicine programmes which have a one-tier system. The duration of these one-tier programmes is five years (300 ECTS) except for medicine which lasts six years (360 ECTS). The qualifications in these one-tier programmes are equivalent to the first cycle (bachelor's) plus second cycle (master's) degree. Undergraduate level of study consists of short cycle (associate's)-(önlisans derecesi) and first cycle (bachelor's)-(lisans derecesi) degrees which are awarded after successful completion of full-time two-year (120 ECTS) and four-year (240 ECTS) study programmes, respectively.

Graduate level of study consists of second cycle (master's)-(yüksek lisans derecesi) and third cycle (doctorate)-(doktora derecesi) degree programmes. Second cycle is divided into two sub-types named as master without thesis and master with thesis. Master programmes without thesis require 60 to 90 ECTS credits and consist of courses and a semester project. 60 ECTS non-thesis master programmes are exceptional, and exist in a few disciplines. The master programmes with a thesis require 90 to 120 ECTS credits, which consists of courses, a seminar, and a thesis. Third cycle (doctorate) degree programmes are completed having earned a minimum of 180 ECTS credits, which consists of completion of courses, passing a proficiency examination and a doctoral thesis. Specialization in medicine, accepted as equivalent to third cycle programmes are carried out within the faculties of medicine, university hospitals and the training hospitals operated by the Ministry of Health.

Universities consist of graduate schools (Institutes) offering second cycle (master's) and third cycle (doctorate) degree programmes, faculties offering first cycle (bachelor's degree) programmes, four-year higher schools offering first cycle (bachelor's) degree programmes with a vocational emphasis and two-year vocational schools offering short cycle (associate's) degree programmes of a strictly vocational nature.

Since 2003, first cycle degree holders may apply directly to third cycle (doctorate) programmes if their performance at the first cycle degree level is exceptionally high and their national central Graduate Education Entrance Examination (ALES) score is also high and their application is approved. For these students, theoretical part of the programmes requires additional courses of 60 ECTS credits.

Admission of national students to short and first cycle degree programmes is centralized and based on a nationwide one/two-stage examination(s) conducted by an autonomous public body (Assessment, Selection and Placement Centre-ÖSYM). Candidates gain access to institutions of higher education based on their composite scores consisting of the scores on the selection examination and their high school grade point averages. Admission to graduate programmes is directly conducted by the higher education institutions (HEIs) within the frameworks of the publicly available national and institutional regulations. Admission of foreign students to programmes at all levels of higher education can be done by direct applications of candidates to HEIs based on publicly available national and institutional regulations.

The Turkish National Qualifications Framework for Higher Education (TYYÇ) : The National Qualifications Framework for Higher Education in Turkey (TYYÇ) developed with reference to the QF for European Higher Education Area and the EQF for lifelong learning was adopted by the CoHE in 2010. The framework has been developed as a part of a single national qualifications framework, which would eventually consists of 8 level national framework covering all levels of educations on completion of the ongoing work at the national level, in which the higher education levels lie on levels between 5 to 8. The levels of the TYYÇ with reference to the European overarching qualifications frameworks as well as that to ECTS credits and student workload are shown below.

GENERAL STRUCTURE OF THE TURKISH EDUCATION SYSTEM

TYYC LEVELS, QUALIFICATIONS TYPES AND ECTS CREDITS

Higher Education Levels/Cycles			AWARDS/ DEGREES	LENGTH (Year)	TOTAL ECTS CREDITS (Year x 60 ECTS)	TOTAL STUDENT WORKLOAD (h) (1 ECTS= 25-30h)
QF-EHEA	EQF-LLL	TYYÇ LEVELS				
3	8	8	Doctorate / Specialization in Medicine / Doctorate in Art	3 (min.)	180 (min.)	4.500 – 5.400
2	7	7	Master's Degree	1 - 2	60 - 120	1.500 – 3.600
1	6	6	Bachelor's Degree	4	240	6.000 – 7.200
Short Cycle	5	5	Associate's Degree	2	120	3.000 – 3.600