Protocol on the Establishment of International Undergraduate Joint Program in Electronics and Communications Engineering between ISTANBUL TECHNICAL UNIVERSITY, TURKEY and INTERNATIONAL UNIVERSITY OF SARAJEVO, BOSNIA AND HERZEGOVINA

SECTION 1

GENERAL TERMS

ARTICLE 1 – Purpose and Background

(1) The purpose of this Protocol is to define the principles and procedures governing the mutual structuring of an international Bachelor of Science joint program between Istanbul Technical University (hereafter referred to as "ITU"), Turkey, and International University of Sarajevo (hereafter referred to as or "IUS"), Bosnia and Herzegovina (both will be referred to as the "parties" or "institutions") comprising the programs of "Electronics and Communications Engineering" in ITU and "Electrical and Electronics Engineering" at IUS.

(2) The institutions agree, by this Protocol, to collaborate with one another on a non-exclusive basis in offering a mutual transfer program of study that will prepare students of both institutions to study their preparatory program (hereinafter: ELS) and first two academic years at IUS and then continue for third and fourth year at ITU, in order that they can complete a Bachelor of Science in Electronics and Communications Engineering (hereinafter referred to as "ECE") at ITU and a Bachelor of Science in Electronics and Communications Engineering at IUS simultaneously.

ARTICLE 2 – Scope

(1) Terms and conditions defined in this Protocol apply to student admission, curriculum, exams and assessment, attendance, leave of absence, maximum time limits, graduation requirements, academic failure, diplomas, tuition fees, and other issues related to the joint program between ITU and IUS.

ARTICLE 3 – Legal Basis

(1) This Protocol has been prepared in accordance with (a). Higher Education Law No. 2547, published in the Official Gazette dated 6.11.1981, numbered 17506, (b). Regulation about joint programs at Turkish Higher Education Institutions, published in the Official Gazette on 06.10.2016, numbered 29849, (c). Regulation about the Transfer between Associate Degree and Bachelor's Degree Programs, Double Major and Minor Programs and Course Credit Transfers between Institutions of Higher Education, published in the Official Gazette dated 24.04.2010, numbered 27561. (d). Regulation about joint programs at ITU, published in the Official Gazette dated 07.03.2018 numbered 30353 and (e). In accordance with the Article 49 of the Law on Higher Education [Official Gazette of Canton Sarajevo no. 33/17] and other relevant regulations concerning the operations of IUS.

(2) ITU and IUS shall have authority and oversight with respect to all matters regarding legal or academic explanations of this protocol, degree programs including but not limited to admission and registration processes, tuition and fees (including increases and in-state/out-of-state rate determinations), conferring of degrees and maintenance of all of their own official student records. Final decisions regarding IUS's participation in the Program shall be made through a comprehensive administrative process by approval of the Ministry of Education, Science and Youth of Canton Sarajevo, Bosnia and Herzegovina.

(3) Admission and placement of ITU students into the Program will be carried out by the Measurement, Selection and Placement Center (hereinafter referred to as "OSYM") in accordance with the Turkish regulations to which ITU is subject to and, the agreed admissions standards established by ITU and OSYM for ITU to implement its admission procedures, as required by Turkish regulations, in accordance with the OSYM timetable.

ARTICLE 4 – Definitions

(1) The concepts and terms used in this Protocol are defined as follows:
"ABET" : Accreditation body for engineering and technology programs
"AICE" : Cambridge Advanced International Certificate of Education
"B.S." : Bachelor of Science
"ECE" : Electrical and Communications Engineering
"ELS" : English Language School
"IB" : International Baccalaureate
"iBT" : Internet based test
"ITU" : Istanbul Technical University, Republic of Turkey
"IUS" : International University of Sarajevo, Bosnia and Herzegovina
"OSYM" : Measurement, Selection and Placement Center
"TOEFL" : Test of English as a Foreign Language
"YOK" : Council of Higher Education of Turkey
"YKS" : Exam for Higher Education Institutions

ARTICLE 5 – Approval of Council of Higher Education of Turkey

(1) This protocol will become effective once it has been approved by the Turkish Council of Higher Education (YÖK). Any changes to this document will also require an approval from YÖK.

SECTION 2
ADMISSIONS

ARTICLE 6 – Student Quotas

(1) The number of students with Turkish and non-Turkish citizenship that will be admitted to the joint program each year will be determined jointly by ITU and IUS, and YOK will be notified for approval. Unless there is a written modification by both institutions,

a) the maximum number of students holding Turkish citizenship to be admitted to the joint program by YKS exam will be fifteen (15) in any given year.

b) the maximum number of students holding Bosnian citizenship to be admitted to the joint program will be fifteen (15) in any given year.

c) the maximum number of transfer students from other departments to be admitted to the joint program will be five (5) in any given year. The application requirements for the relevant students are given in ARTICLE 10.

d) the maximum number of international students to be admitted to the joint program will be 50% out of the total number of annual student quota.

ARTICLE 7 – Admissions of Students holding Turkish citizenship

(1) Students will be placed in the "Electronics and Communications Engineering" joint program by OSYM according to their YKS exam scores upon completion of secondary education in Turkey.

(2) Students will be placed according to the "Quantitative" YKS exam score and, unless declared otherwise, students will be chosen from the top 30000 students in this exam score type.

(3) Student admission criteria shall conform to the norms set down by the appropriate accrediting body with respect to English proficiency as defined in ARTICLE 15.

ARTICLE 8 – Admission of Foreign Students

(1) Foreign students should fulfill the conditions required by ITU in accordance with the ITU Senate Regulations dated 19.04.2016 and numbered 631, entitled as "Regulations for the Application and Registration-Acceptance of Foreign Students to the Undergraduate Programs" to apply and get accepted into the program.

(2) Foreign student admission criteria shall conform to the norms set down by the appropriate accrediting body with respect to English proficiency as defined in ARTICLE 15.

ARTICLE 9 – Admissions of Students holding Bosnian citizenship

(1) Students who are holding Bosnian citizenship should fulfill the conditions listed in public vacancy for enrollment of undergraduate students and those required by the Law on Higher Education of Sarajevo Canton. With the condition that the high school graduation score is at least 3.0/5.0 on the high school transcript obtained in Bosnia and Herzegovina, the applicant is entitled to sit for the entrance exam organized by the IUS committee from the relevant field. The top 15 students who achieved the best total results (average high school score and total points from the entrance exam) will be allowed to apply into joint program.

(2) Students holding Bosnian citizenship admission criteria shall conform to the norms set down by the appropriate accrediting body with respect to English proficiency as defined in ARTICLE 15.

ARTICLE 10 – Admission of Transfer Students from Other Programs into the Joint Program

(1) Any undergraduate student enrolled in ITU or IUS interested in transferring into the joint program may be considered for admission according to the Regulation about the Transfer between Associate Degree and Bachelor's Degree Programs, Double Major and Minor

Programs and Course Credit Transfers between Institutions of Higher Education, published in the Official Gazette dated 24.04.2010, numbered 27561, if they have a cumulative GPA from the previous department or institution (s) of at least 3.0 (out of 4.0) (or the equivalent) and satisfy an interview process of both institutions.

(2) All students admitted in the program are required to achieve adequate English language proficiency as defined in ARTICLE 15.

SECTION 3
PROGRAM FEES

ARTICLE 11 – Tuition and Fees

(1) The joint program student is obliged to pay the fees to IUS within the scope of the study period in the Bosnia and Herzegovina as declared by IUS for the relevant academic years along with the ELS fees if attending English Preparatory school. IUS shall announce and collect all tuition and/or fees required to be paid by the students while they are studying at IUS. IUS may establish an international student development fund applicable to students of joint program. Neither institution shall have any liability to the other for any such uncollected student tuition and/or fees.

(2) The joint program student is obliged to pay the fees to ITU within the scope of the study period in Turkey as declared by ITU for the relevant academic years. ITU shall announce and collect all tuition and/or fees required to be paid by the students while they are studying at ITU.

(3) While taking courses out of their home countries, all students will be responsible for all of their own living costs, including but not limited to: (a) transportation; (b) room and board expenses; (c) medical insurance (all students visiting IUS will be required to purchase IUS's health insurance before assuming their studies at IUS) and health service fees; (d) textbooks; (e) clothing; (f) personal and miscellaneous expenses; and (g) passport, visa, and residence permit costs. IUS and ITU bear no responsibility for providing funds to a student for any purpose.

(4) Prior to the beginning of their studies at IUS, students will be required to verify that each has sufficient means of support for the duration of each stay at IUS.

(5) To the extent available, each institution will offer on-campus housing (upon availability) and meal plans to students at additional cost and based upon their regular rates. Each institution will also provide assistance to the students upon request with locating available off-campus housing.

(6) Annual increase rates will be determined and announced jointly by ITU and IUS.

ARTICLE 12 – Tuition Fee Payment Procedure

(1) The annual tuition fee of the joint program will be paid in accordance with each institution's procedures. Tuition will be paid in two equal installments. First payment will be made at the time of registration at the beginning of academic year, the second payment will be made at the start of second semester.

ARTICLE 13 – Scholarships

(1) Unless specifically authorized by the partner institution, neither institution will make any representations or offer any guarantees to prospective students about the likelihood of awards of financial aid or scholarships or student employment at the other institution.

SECTION 4
THE CONTENT OF THE PROGRAM

ARTICLE 14 – Duration of Study

(1) The duration of study in the joint program will be four (4) academic years. The maximum time limit for a student to complete the 4-year joint program will not exceed seven (7) academic years.

(2) The Freshman/1st and Sophomore/2nd academic years of the joint program will be carried out at IUS while the Junior/3rd and Senior/4th academic years will be carried out at ITU. ELS classes will be given at IUS.

ARTICLE 15 – Medium of Instruction

(1) The medium of instruction in the joint program is English. All students registered in the joint program are required to achieve an adequate score in one of the English language proficiency tests offered by ITU or IUS. Students should fulfill the English language requirements of IUS to be able to attend courses at IUS starting from their freshmen/1st academic year. Prospective students applying for admission to the joint program shall be expected to have equivalent English language proficiency as other international students applying to and accepted by IUS by the time they take courses in the joint program.

(2) The required minimum score to start the program is 65/100 for the ITU proficiency test.

(3) The required minimum score to start the program at IUS is 75/100 for the placement test and minimum 65/100 for the proficiency test.

(4) Those students who cannot meet the language proficiency requirement will have an intensive language program at IUS. The maximum duration of the intensive language program is two (2) years.

(5) Students with Turkish citizenship, who cannot meet the language proficiency requirements by the end of two years may be placed into a program where the medium of instruction is Turkish by OSYM, depending on their YKS score achieved in the relevant year.

(6) In the following cases, prospective students will be exempted from the ELS Proficiency Exam if they have:
   a) passed TOEFL iBT with 79 points and above
   b) obtained a high school/BA/MA diploma/degree in a native English speaking country
   c) high-school diploma from one of the internationally recognized English medium programs below:
   AICE diploma: Cambridge Advanced International Certificate of Education
   IB diploma: International Baccalaureate

ARTICLE 16 – Academic Failure

(1) Students of the joint degree program who are dismissed from any of the higher education institutions on grant of academic failure shall be dismissed from the joint degree program according to Regulation of YÖK published in the Official Gazette on 06.10.2016, numbered 29849.

(2) A student who is dismissed from one of the universities for any other reason than academic failure is also dismissed from the relevant partner university. All student dismissals shall be made through a consultative process between the institutions.

(3) Dismissed students with Turkish citizenship may be placed into a program where the medium of instruction is Turkish by OSYM, depending on their YKS score achieved in the relevant year.

(4) Failed courses will be repeated at the institution where the course is offered.

ARTICLE 17 – Diploma

(1) The students who fulfill the academic requirements of both institutions shall be granted two independent double diplomas, one of which shall be issued by ITU, and the other shall be issued by IUS.

(2) The students cannot qualify for any of the diplomas without successfully fulfilling the academic requirements of both institutions in the joint program.

(3) All joint program students must satisfy both degree requirements at IUS and ITU in order to be jointly and simultaneously awarded their two diplomas from the respective universities. Upon completion of the stated requirements, students cannot be awarded only one of the two diplomas in this joint program.

(4) The degree designations which will appear on the diplomas are defined as follows: “Bachelor of Science in Electronics and Communications Engineering” from ITU and a “Bachelor of Science in Electronics and Communications Engineering” from IUS.

(a) The institutions will certify to one another the name, addresses, and student identification number of each student satisfactorily completing the joint program.

(b) The institutions will confer their B.S. Degree, together with all rights and privileges pertaining thereto, to each student meeting the respective degree course requirements for the joint program as specified in the **APPENDIX 1** attached hereto.

(5) Diploma samples are shown in **APPENDIX 1**.

(6) The phrases which will appear on the diplomas are defined as follows:

On the ITU diploma: *"having satisfactorily completed all the requirements of the Electronics and Communication Engineering Undergraduate Program carried out jointly by the Faculty of Electrical and Electronics Engineering and the International University of Sarajevo has been awarded the degree of Bachelor of Science with all the rights, privileges and honors thereto appertaining."*

On the IUS diploma: *"having satisfactorily completed the required four years of theoretical and practical study (minimum 240 ECTS) of the study program of Electronics and Communications Engineering carried out jointly by the International University of Sarajevo and Istanbul Technical University, has on this (date) been awarded the Degree of Bachelor of Science in Electronics and Communications Engineering with all privileges connected thereunto."*

SECTION 5

PROGRAM PROCEDURES

ARTICLE 18 – Curriculum

(1) The curriculum of the joint program, the definitions and the credits of the activities constituting the program, such as courses, laboratories, implementations, internships and thesis, and the division of the curriculum between ITU and IUS appear in **APPENDIX 2**.

(2) The joint program comprises 240 ECTS in compliance with Turkish Higher Education Qualifications Framework and Baseline of the Qualifications Framework in Bosnia and Herzegovina.

(3) Involved departments at each institution will review and approve all core curriculum course offerings in the joint program to ensure that the courses taught at each institution are comparable in content and structure. The course review may include, but is not limited to: (a) the overall course composition, (b) the content and related description for each course which is part of the joint program, (c) texts and other teaching materials appropriate to each course, and (d) qualifications of instructors. The institutions will continue to interact and provide this same review or modification on an annual basis.

(4) For the approval of this Protocol by competent bodies in Turkey and Bosnia and Herzegovina, involved departments will upon request officially send to each other the list of academic staff responsible for their part of curricula along with official CV's and decisions on holding academic promotions (including scientific field/courses).

ARTICLE 19 – Grading Systems

(1) Requirements for academic success in each course and the general academic achievement of the student shall be determined in accordance with the regulations of the institution of current study.

(2) The transcript of the student will be sent to partner institution at the end of each academic year.

(3) The grading system of ITU appears in **APPENDIX 3.**

(4) The grading system of IUS appears in **APPENDIX 4.**

ARTICLE 20 – Student Transition Requirements between Partner Institutions

(1) After successful completion of two (2) years' (four-semesters) of study at IUS, with good academic, behavioral and financial standing, students will be permitted to transfer their course grades between the institutions for satisfaction of the B.S. Degree requirements at each institution, provided the following requirements are met:
   (a) In order for a student to transfer between the institutions (from IUS to ITU), a minimum cumulative GPA of 2.5 on a 4.0 scale or greater will be required.
   (b) Students will go through each institution's transition processes and therefore must meet all applicable requirements and deadlines pertaining to application for admission, orientation and registration, and payment of tuition and fees.
   (c) Students will abide by all applicable policies and procedures in effect at the institution they are attending.

ARTICLE 21 – Leave of Absence

(1) The joint program student may be granted a leave of absence for a semester or an academic year on condition that he has documented force majeure and/or medical reasons and submits the relevant documents as required by the respective institution that he/she is attending.
(2) The duration of the approved leave of absence shall not be counted towards the maximum duration of study.
(3) The total duration of the leave of absence cannot exceed 50 percent of the legally designated period of education or the period permitted by the applicable regulations of the respective institution.

ARTICLE 22 – Disciplinary Action

(1) Provisions applicable at the university of current study are applied in handling the disciplinary act and behaviors of students.

(2) Each institution shall be solely responsible for student conduct and discipline matters relating to its academic operations, including grade appeals, allegations of cheating, plagiarism or classroom rules.

ARTICLE 23 – Transfer out of the program

(1) ITU students may apply for a transfer to the same university in the joint program or another joint

program conducted in the same field in another university in accordance with the provisions concerning "Transfer between Associate Degree and Bachelor's Degree Programs, Double Major and Minor Programs and Course Credit Transfers between Institutions of Higher Education" published in the Official Gazette dated 24.04.2010 and numbered 27561.

(2) Transfers by ITU students from the joint program to another program within the country can be made in accordance with the provisions of the regulations set by the first item of this Article.

(3) Transfers by IUS students from the joint program to another program within Bosnia and Herzegovina or from the program within the country to an international program can be made in accordance with the provisions of the regulations set by the IUS transfer procedure, upon communication with ITU.

SECTION 6
MISCELLANEOUS AND FINAL PROVISIONS

ARTICLE 24 – Additional Provisions

(1) Any issue not expressly specified in this Protocol shall be subject to the provisions stated in Article 3.

(2) Use of Names: Subject to IUS's prior approval, ITU will be authorized to use IUS's name and logo on a non-exclusive basis in conjunction with ITU joint program brochures, publications, advertisements, letterhead, and material, which make reference to this Protocol agreement. Subject to ITU's prior approval, IUS will be authorized to use ITU's name and logo on a non-exclusive basis in conjunction with IUS's joint program brochures, publications, advertisements, letterhead, and material, which make reference to this Protocol. Each institution agrees to follow any reasonable trademark usage and/or branding guidelines provided by the other institution in connection with its exercise of this license.

(3) Annual Visits: IUS and ITU agree that an annual visit by a representative from each institution to the other institution would be beneficial, although it is not a required part of this Protocol. Senior officials/faculty members on such visits will be received with local hospitality.

(4) Notices: Any notices relating to this Protocol should be in writing (which includes facsimile or e-mail) and shall be sent to the recipient's address set forth above (or at such other addresses as may be stated in notices similarly given) and directed to the Rector and Vice-Rector of IUS and the Rector and Vice-Rector of ITU, and/or such other representatives as designated in writing by the institutions.

ARTICLE 25 – Term and Enforcement

(1) This Protocol shall be effective for five (5) years starting from the date of the approvals by the official authorities.The protocol may be renewed for successive five (5) year periods upon mutual agreement approved by YÖK.

ARTICLE 26 – Termination

(1) Either institution may terminate this Protocol early upon giving written notice thereof to the other institution at least ninety (90) days before the end of any semester. Such early termination notice shall be effective for the upcoming semester and without further liability or obligation to the other institution. Any provision of this Protocol that by its nature is intended to survive termination and/or expiration of this Protocol, shall survive termination and/or expiration of this Protocol.

(2) In the event that this Protocol expires and/or is terminated early, the institutions commit that they shall formulate a "teach-out" plan applicable to all then enrolled students who are at any stage of the joint program, including permitting such affected students to pursue alternative transfer options or course completion methods to the extent permitted under the Protocol established herein. The institutions agree that any early termination shall be made through a consultative process and that all affected students shall be notified of the same as soon as possible along with all available alternative options.

(3) This Protocol will be terminated upon official change of non-profitable nature of IUS operation as defined in the Article 1 item (3) of this Protocol.

ARTICLE 27 – Dispute Resolution

(1) Any dispute arising out of the interpretation, amendment, performance or breach of this Protocol shall be settled amicably through negotiations between the partner institutions.

ARTICLE 28 – Confidentiality

(1) Confidential Information: Both institutions will keep confidential all information provided by the other institution which is marked, identified and/or reasonably understood as confidential at the time of disclosure other than to the extent disclosure is required to perform this Protocol or required by law or legal process to be disclosed.

(2) Student Records: Both institutions recognize that IUS is bound to comply with the Law on Higher Education in Canton Sarajevo and the Statute of IUS approved by Ministry of Education, Science and Youth of Canton Sarajevo, as it may be amended from time to time, in the handling of educational records of students enrolled at IUS. The institutions' transmittal of all student records shall be in accordance with local privacy laws and if required, the home institution will obtain written student consents and/or releases for the same. All student records will be used by the institutions for registration, admission and academic purposes only.

ARTICLE 29 – Student Residence Permit

(1) Once admitted into the joint program, students will be considered enrolled at the institution which they are physically attending and considered as non-enrolled but maintaining registration at the institution in which they are not physically attending. Students from IUS will apply for Bosnian student residence permits by the start of their Freshman/1st Academic year for study (which might include language preparatory program) all until the completion of their Sophomore/2nd Academic year. During the ITU students' Junior/3rd Academic year and

Senior/4th Academic year, ITU will provide confirmation of all students' enrollment and physical presence at ITU at the start of each academic year therein. IUS makes no promise, representation of guarantee of students obtaining the necessary residence permit for study in the Bosnia and Herzegovina. Students holding Bosnian citizenship must obtain Turkish student residence permit. ITU makes no promise, representation of guarantee of students obtaining the necessary residence permit for study in Turkey.

ARTICLE 30 - Quality Assurance and Inspection by YÖK

(1) ITU will continually monitor the quality of the program and conduct audits and quality reviews at least once in a year.

(2) After this protocol becomes effective, both institutions agree to be audited by YÖK at any given date.

This Protocol has been signed by the authorized representatives of the institutions on the dates set forth below in four copies in Turkish and English all texts being equally authentic. In case of any divergence of interpretation, the English text shall prevail. ITU and IUS expressly consent and agree that electronic or scanned signatures appearing on this Protocol shall be treated for purposes of validity, enforceability as well as admissibility, the same as hand-written signatures.

This Protocol provides to timely submit applications to YOK (by ITU) and Ministry of Science, Education and Youth of the Canton Sarajevo (by IUS) where it becomes effective upon final approval issued by competent bodies in both countries.

AGREED AND ACCEPTED:

For IUS:	For ITU:
International University of Sarajevo	**Istanbul Technical University**
_____	_____
Prof. Dr. Ahmet Yıldırım	Prof. Dr. Mehmet Karaca
Rector	Rector
Dated:	Dated:

APPENDICES:

APPENDIX 1 – Diploma samples concerning the joint program

APPENDIX 2 – Curriculum of the joint program

APPENDIX 3 – The grading system of ITU

APPENDIX 4 – The grading system of IUS

APPENDIX 1 – Diploma samples concerning the joint program

TÜRKİYE CUMHURİYETİ
İSTANBUL TEKNİK ÜNİVERSİTESİ

REPUBLIC OF TURKEY
ISTANBUL TECHNICAL UNIVERSITY

Xxxx Xxxxx

ELEKTRİK - ELEKTRONİK FAKÜLTESİ
ile ULUSLARARASI SARAYBOSNA ÜNİVERSİTESİ
arasında ortak yürütülen
ELEKTRONİK VE HABERLEŞME MÜHENDİSLİĞİ Lisans Programının

having satisfactorily fulfilled all the requirements of
the ELECTRONICS AND COMMUNICATION ENGINEERING Undergraduate
Program carried out jointly by the FACULTY OF ELECTRICAL AND
ELECTRONICS ENGINEERING and the INTERNATIONAL UNIVERSITY OF
SARAJEVO

tüm gerekliliklerini başarı ile tamamlayarak

has been awarded the degree of

Elektronik ve Haberleşme Mühendisi

Bachelor of Science

unvanını ve lisans derecesini bütün onur,
yetki ve sorumluluklarıyla birlikte almaya hak kazanmıştır.

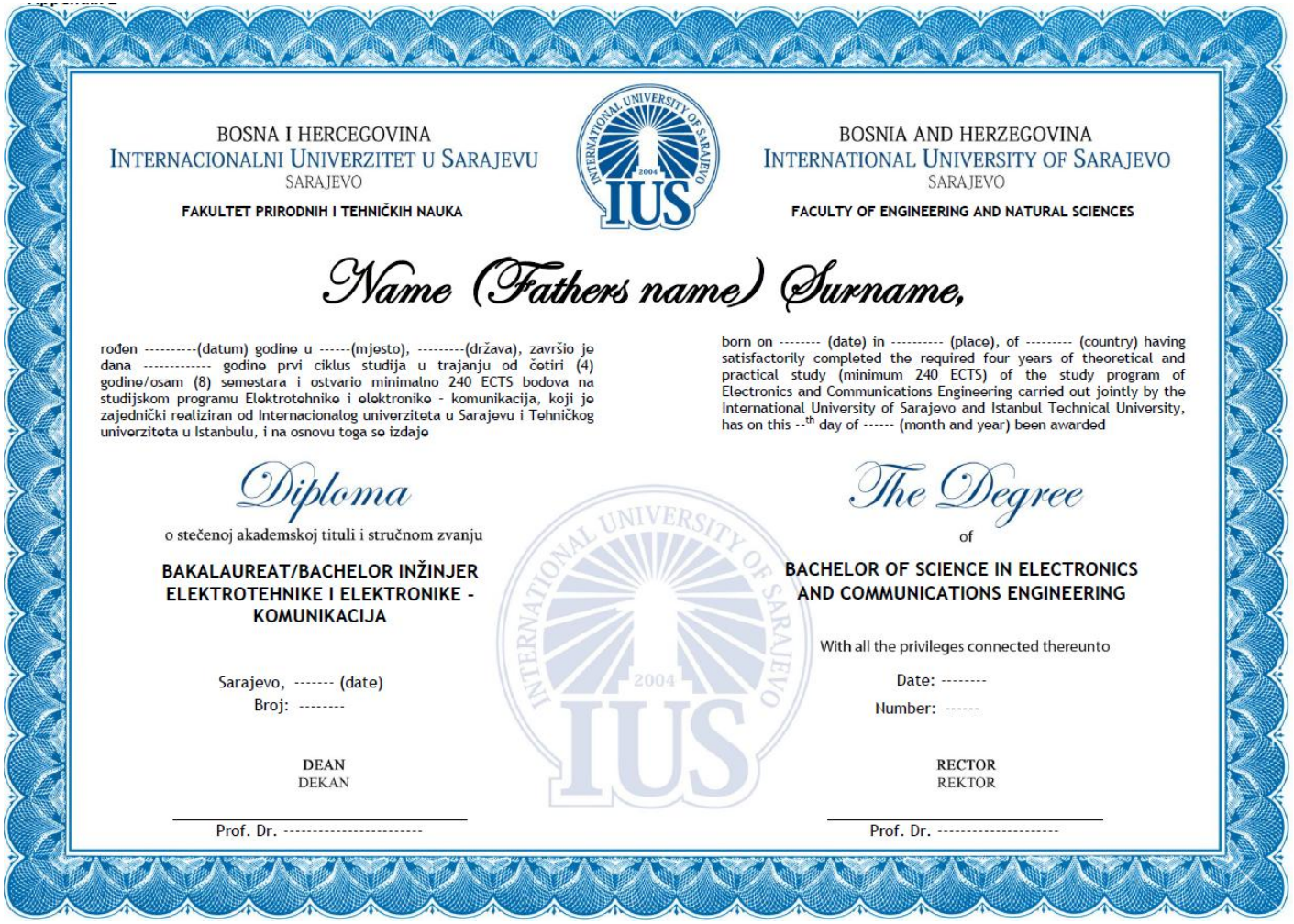
with all the rights, privileges and honors
thereto appertaining.

İSTANBUL TEKNİK ÜNİVERSİTESİ
1773

Prof. Dr. Xxxxxxx XXXXXXXX
Dekan / Dean

Prof. Dr. Xxxxxxx XXXXXXXX
Rektör / Rector

Diploma No: xxxxxxxxxx
Mezuniyet Tarihi / Date of Graduation: xxxxxxxxxx



BOSNA I HERCEGOVINA
INTERNACIONALNI UNIVERZITET U SARAJEVU
SARAJEVO
FAKULTET PRIRODNIH I TEHNIČKIH NAUKA

BOSNIA AND HERZEGOVINA
INTERNATIONAL UNIVERSITY OF SARAJEVO
SARAJEVO
FACULTY OF ENGINEERING AND NATURAL SCIENCES

Name (Fathers name) Surname,

rođen ----------(datum) godine u ------(mjesto), ---------(država), završio je dana ---------- godine prvi ciklus studija u trajanju od četiri (4) godine/osam (8) semestara i ostvario minimalno 240 ECTS bodova na studijskom programu Elektrotehnike i elektronike - komunikacija, koji je zajednički realiziran od Internacionalog univerziteta u Sarajevu i Tehničkog univerziteta u Istanbulu, i na osnovu toga se izdaje

born on -------- (date) in ---------- (place), of --------- (country) having satisfactorily completed the required four years of theoretical and practical study (minimum 240 ECTS) of the study program of Electronics and Communications Engineering carried out jointly by the International University of Sarajevo and Istanbul Technical University, has on this --th day of ------ (month and year) been awarded

Diploma

o stečenoj akademskoj tituli i stručnom zvanju

BAKALAUREAT/BACHELOR INŽINJER ELEKTROTEHNIKE I ELEKTRONIKE - KOMUNIKACIJA

Sarajevo, ------- (date)
Broj: --------

DEAN
DEKAN

Prof. Dr. ----------

The Degree

of

BACHELOR OF SCIENCE IN ELECTRONICS AND COMMUNICATIONS ENGINEERING

With all the privileges connected thereunto

Date: --------
Number: ------

RECTOR
REKTOR

Prof. Dr. ----------

APPENDIX 2 – Curriculum of the Joint Program

FIRST YEAR (Taken at IUS)					
Fall Semester			**Spring Semester**		
Code	**Title**	**Credits (ECTS)**	**Code**	**Title**	**Credits (ECTS)**
ELIT113	Technical English	3	ENS203	Electrical Circuits I	6
ENS205	Materials Science	3	ENS213	Programming for Engineers	6
MATH101	Calculus I	6	MATH102	Calculus II	6
NS102	Physics	6	NS105	Physics II	6
ENS221	Introduction to Engineering	3	MATH201	Linear Algebra	6
NS104	General Chemistry	6	ELIT213	Introduction to Academic Writing	3
		27			33
SECOND YEAR (Taken at IUS)					
Fall Semester			**Spring Semester**		
Code	**Title**	**Credits (ECTS)**	**Code**	**Title**	**Credits (ECTS)**
EE201	Analog Electronics I	6	CS303	Digital Design	6
EE202	Electrical Circuits II	6	EE301	Analog Electronics II	6
EE221	Object Oriented Programming	6	ENS201	Electromagnetism I	6
MATH202	Differential Equations	6	ENS211	Signals and Systems	6
MATH203	Introduction to Probability and Statistics	6	MATH205	Numerical Analysis	6
		30			30
THIRD YEAR (Taken at ITU)					
Fall Semester			**Spring Semester**		
Code	**Title**	**Credits (ECTS)**	**Code**	**Title**	**Credits (ECTS)**
EHB 311E	Intr.to Electronics Laboratory	2.5	EHB 362E	Microwave Engineering	4.5
EHB 313E	Electromagnetic Waves	5.5	KON 317E	Control Systems	5
EHB 315E	Digital Signal Processing	5	EHB 322E	Digital Electronic Circuits	5
EHB 351E	Analog Communications	5.5	EHB 352E	Digital Communications	5
EHB 335E	Analog Electronic Circuits	5	DAN 301	Kariyer Danışmanlığı	1
	5th Sem.Elect.Course (TM)	4		6th Sem.Elect.Course I (MT)	4
	5th Sem. Elective Course(TB)	4/5/6		6th Sem.Elect.Course II (MT)	5/5.5/6
				6th Sem.Elect.Course (ITB)	4
	31.5 – 33.5			33.5 – 34.5	
FOURTH YEAR (Taken at ITU)					
Fall Semester			**Spring Semester**		
Code	**Title**	**Credits (ECTS)**	**Code**	**Title**	**Credits (ECTS)**
ATA 101	Atatürk İlk & İnkılap Trh I	2	ATA 102	Atatürk İlk & İnkılap Trh II	2
EHB 4901E	Elect.&Comm. Eng. Design I	-	EHB 4902E	Elect.&Comm. Eng. Design II	-
TUR 101	Türk Dili I	2	TUR 102	Türk Dili II	2
	7th Sem.Elect.Course (ITB)	4		8th Sem.Elect.Course (ITB)	4
	7th Sem.Elect.Course I (MT)	5/6		8th Sem.Elect.Course I (MT)	5/5.5
	7th Sem.Elect.Course II (MT)	5/6		8th Sem.Elect.Course II (MT)	5/5.5
	7th Sem.Elect.Course III (MT)	5/6		8th Sem.Elect.Course III (MT)	5/5.5
	7th Sem.Elect.Course IV (MT)	5/6		8th Semester Elct. Course (SNT)	5/5.5
		28 - 32			28 – 30

Minimum 30 days of internship is compulsory at ITU.

Course Catalog Descriptions for Required Courses taken at IUS:

CS303 Digital Design: A standard introductory course on building blocks of digital electronics. Students will learn the axioms of Boolean algebra, number systems and representation, functionality of logic gates, encoders, decoders, multiplexers, demultiplexers, adders, subtractors, flip-flops etc. The course includes analysis and design of simple finite state machines. Physical implementation of different circuit families is briefly studied as well as architecture of digital memory. Students will also learn to implement digital circuits in programmable logic devices using VHDL.

EE201 Analog Electronics I: Conduction. Semiconductors, carriers, p-type and -type doping, drift and diffusion mechanisms, physical structure and behavior of the pn junction. Ideal diode, practical diode, electrical behavior and current-voltage curve. Diode model. DC analysis methods for diode circuits (constant voltage drop model, fixed point iteration with the exponential model). Small signal approximation, diode small signal equivalent and AC analysis of the diode circuits, DC power supply design (rectifiers, analysis of the topology with filter capacitor). Zener diode and regulation. Body resistance and parasitic capacitors. Other diode types. Physical structure and behavior of the bipolar-junction transistor (BJT), the Early phenomenon, BJT operation regions, electrical model (Ebers-Moll) and characteristics. DC biasing and thermal stability of BJT circuits. Physical structure and behavior of MOSFET, operation regions, characteristics, important secondary effects (channel length modulation, body effect). DC biasing and thermal stability of MOSFET circuits. Switching applications of BJT and MOSFET, the conceptual usage in digital circuits.

EE202 Electrical Circuits II: State and output equations of higher-order dynamic circuits. State transition matrix and properties. Zerostate, zero-input and total responses. Sinusoidal steady state. Finding the state and output equations of dynamic networks and systems in jw- domain. Phasors. Power. Three-phase systems. Finding the state and output equations of dynamic networks and systems in s-domain. Impedance and admittance. Stability and Routh Criteria. Network functions and parameters. Block and signal flow diagrams. Bode diagrams.

EE221 Object Oriented Programming: Data types, Control Statements, Loops, Arrays, Functions, Pointers, Dynamic memory, Abstraction & Encapsulation, Class, Object, Constructor & Destructor, Inheritance & Polymorphism, Class hierarchy, Superclass, Subclass, Abstract classes, Interface, Virtual method, Operator overloading.

EE301 Analog Electronics II: Amplification and the gain concept, desiBell concept, voltage amplifier / current amplifier / transconductance circuit / transresistance circuit models, conceptual function of the transistor in amplification. DC analysis of transistorized (BJT, MOSFET) circuits. Small signal equivalents and terminal resistances of BJT and MOSFET. AC analysis of BJT and MOSFET amplifiers: Gain and input/output resistance of basic amplifier stages, analysis of cascade (direct/capacitivelycoupled) amplifiers. Cascode structure, Darlington structure. Differential amplifier, differential and common-mode gains, common mode rejection ratio. Current sources, active-loaded circuits. Operational amplifier, ideal and practical behavior, internal structure of a sample OpAmp. Linear and non-linear applications of the OpAmp, effect of nonidealities on the behavior. Power amplifiers.

EENS221 Introduction to Engineering: This course is an orientation course for the Engineering depatment first year students. It aims to make the adaptation for the students easier, and to inform them on the general subject matter of electronics as well as telecommunications engineering, engineering ethics and quality. Various faculty members give presentations to the students. Examples of applications are provided, plus engineering code of ethics, ethical responsibilities, quality issue in design and applications are discussed.

ELIT113 Technical English: This course is designed to improve students' reading skills by reading and analyzing technical and academic texts and academic and technical writing skills by using the elicited information. Students not only learn about the requirements of Academic and Technical English but also improve their other linguistic and critical thinking skills. Students are expected to extensively describe an object and mechanism by using proper technical language, to classify the information they researched and write an analytic composition on their classification, to cite all the information they utilized throughout the process.

ELIT213 Introduction to Academic Writing: The course designed to teach the organizational and critical

thinking skills necessary for logical written expression. The course focuses on writing a research paper of at least 3000 words based on sound scholarly sources on a topic of interest related to a student's field by conforming to the APA standards of writing without committing plagiarism. In this course the whole research process is taught step by step through skills including research, source selection, choice of topic, construction and defense of a thesis statement, citing sources, outlining, organizing a "References" page and note taking. Critical elements of the course are instruction in paraphrasing and summarizing techniques, use of quotations and the incorporation of these research findings in the paper together with the inclusion of personal comments, avoidance of plagiarism and conforming to ethical rules.

ENS201 Electromagnetism I: Vector analysis, vectorial differential operators, static electric field, electric potential, electrostatic field analysis in conductors and dielectric media, electrostatic energy, electrostatic boundary conditions, magnetostatic field, vector potential, magnetic circuits, magnetic energy, magnetostatik boundary conditions, quasi-static fields, time varying fields and Maxwell equations

ENS203 Electrical Circuits I: Electric circuits, Models and Circuits elements. Kirchhoff's laws: Kirchhoff's voltage law and Kirchhoff's current law. Graph theory, element graph: Branch currents, branch voltages, Graph matrices. Tellegen Theorem and Conservation of energy. Two terminal elements: resistor, capacitor and inductor. Independent sources, dependent sources. Three terminal elements: Gyrator, transistor, transformer. Nonlinear elements Linearized models. Node voltage method and mesh current method for resistive circuits. Thevenin and Norton equivalent circuits. RLC circuits: First order and second order circuits. State equation and state variables for linear time invariant circuits. Solution of second order state equations.

ENS205 Materials Science: Introduction to materials science and classification of atomic structures of the materials. Crystal structures and imperfections. Mechanical and physical properties of the engineering materials. Solid-state diffusion. Phase diagrams and solidification. Ferrous / non-ferrous alloys and heat treatment. Electrical, optical, thermal and magnetic properties associated with electron band structures of the materials. Metallic corrosion and prevention from corrosion. Principle geomaterials, their properties and application areas. Deterioration of geomaterials.

ENS211 Signals and Systems: Classification of signals, basic signals, classification and properties of systems, time domain characterization of Linear Time Invariant (LTI) systems, Continuous-Time and Discrete-Time Fourier Series, Continuous-Time and Discrete-Time Fourier Transforms, frequency domain characterization of Linear Time Invariant (LTI) systems, Sampling, z-transform and its applications.

ENS213 Programming for Engineers: Programming for Engineers, Introduction to Scientific and Engineering Computing, Introduction to Program Computing Environment, Variables, Operations and Simple Plot, Algorithms and Logic Operators, Flow Control, Errors and Source of Errors, Functions, Linear Algebra Applications, Solving Equations Applications, Polynomials Examples, Curve Fitting Applications, Interpolation Applications, Numerical Integration Applications, Symbolic Mathematics, ODE Solutions with built-in functions

MATH101 Calculus I: Functions of a Single Variable, Limits and Continuity, Derivatives, Applications of Derivatives, Sketching Graphs of Functions, Asymptotes, Integration, Fundamental Theorem of Calculus, Applications of Integrals, Polar Coordinates, Transcendental Functions, Techniques of Integration, Indeterminate Forms, L'Hopital's Rule.

MATH102 Calculus II: Improper Integrals, Infinite sequences and series, Vectors in Space, Vector-Valued Functions, Multivariable Functions and Partial Derivatives, Multiple Integrals, Integration on vector fields

MATH201 Linear Algebra: Matrices and System of Equations, Systems of Linear Equations, Row Echelon Form, Matrix Algebra, Elementary Matrices, Determinants, Vector Spaces, Subspaces, Linear Independence, Basis and Dimension, Change of Basis, Row Space end Column Space, Ortogonallik, Orthogonal Subspaces, Orthonormal Sets, The Gram-Schmidt Orthogonalization Process, Eigenvalues and Eigen vectors, Diagonalization

MATH202 Differential Equations: First Order Differential Equations, Second Order Linear Equations, Higher Order Linear Equations, Series Solutions of Second Order Linear Equations, The Laplace Transform, Systems of First Order Linear Equations

MATH203 Introduction to Probability and Statistics: Product rule, permutation, combination, concept of Probability (Kolmogorov axioms), conditional probability and independency, random variables, Probability density

function, distribution function, discrete distributions: Bernoulli, Binomial, Poisson, continuous distributions: Normal, Gamma, Exponential, Expectation, Moment generating function, mean, variance, standard deviation, covariance, correlation, Chebchev's inequality, Estimator and its properties, maximum likelihood estimators, Confidence intervals, Hypothesis testing, One and two sample test for means, Regression.

MATH205 Numerical Analysis: Description of Numerical Methods and application of them particularly in engineering. Error analyses in numerical methods, analitical solutions, numerical methods for the solution of systems (lineer and non linear), approximation methods, interpolation, linear regression, numerical integration.

NS102 Physics: Vectors. Motion in one and two dimensions. Newton's laws and its applications. Work and energy. Conservation of mechanical energy. Momentum and motion of systems. Static equilibrium of rigid bodies. Rotation and angular momentum. Newton's law universal gravitation.

NS104 General Chemistry: The scope of chemistry and stoichiometry, atoms and the atomic theories, the periodic table and some atomic properties, chemical bonding, molecular geometry, gases and gas laws, liquids, solids, solutions and their physical properties, thermochemistry, principles of chemical equilibrium, acids and bases, thermodynamic.

NS105 Physics II: Coulomb laws and electrical field. Gauss law. Electrical potential. Capacitance. Electrostatic energy and properties of insulators. Current and resistance. DC circuits. The magnetic field. Sources of magnetic field. Faradays law. Inductance. Magnetic field in the matter. Electro Magnetic oscillations and AC circuits. Maxwells equations and electromagnetic waves

Course Catalog Descriptions for Required Courses taken at ITU:

ATA 101 Atatürk's Principles and History of Turkish Revolution I: A definition of Revolution/Renovation. The aim and the importance of the Turkish history of renovation. General state of the Ottoman Empire, the reason for the decline. Efforts to save the Ottoman Empire. The current ideals. The First World War. Societies. Mustafa Kemal in Anatolia and the Congresses. The opening of the Great Turkish National Assembly. Reactions to the National Government. National and International policy. The Mudanya treaty. Lousanne conference.

ATA 102 Atatürk's Principles and History of Turkish Revolution II: The declaration of the Republic. The importance of the leader and the staff in the revolution. Constitutional solutions to the problems related to the Lausanne Conference. The participation of Turkey in pacts and in international organizations. Reactions to the new governmental structure. Trials in the multi party system. The Home and foreign policy of the Republic of Turkey. Atatürk s foreign policy to inspire confidence in the future of Turkey. Kemalism: the Principles of Atatürk.

DAN 301 Career Consultancy: In this course, academic advisors will provide consultancy to students regarding their career preferences. Differences between making a career in academia and industry will be analyzed and the students will be informed so that they can make the optimum career choices that will fit their character the best.

EHB 311E Introduction to Electronics Laboratory: DC Power Supplies, DC characteristics of BJTs and MOSFETs, transistorised amplifiers, linear applications of operational amplifiers, lojic gates and flipflops, non-linear applications of operational amplifiers

EHB 313E Electromagnetic Waves: Maxwell's equations, Wave concept and time dependent wave equation, Time harmonic waves, Phasor (complex) representation, Helmholtz equation and it's solutions. Monochromatic plane waves. Polarization. Reflection and refraction of plane waves from planar boundaries. Wave-guides, Mode and cut-off frequency concepts

EHB 315E Digital Signal Processing: Introduction to discrete-time systems, and digital signal processing. Discrete time linear systems, difference equations, discrete convolution, stability. Discrete-time Fourier transform, analog-to-digital and digital-to-analog conversion, örnekleme. z-transform. Discrete Fourier transform (DFT). Fast Fourier transform (FFT). Digital filter design and implementation. Fundamentals of statistical signal processing. Random processes and power spectrum. Wiener filter. Fundamentals of adaptive filtering. Steepest descent and LMS algorithms. Fundamentals of time-frequency analysis. Short-time-Fourier Transform (STFT). Spectrogram. Introductionto time-scale analysis and wavelet transforms

EHB 322E Digital Electronic Circuits: Introduction and basic definitions, NMOS and CMOS inverters and their static and dynamic behaviors, NOR and NAND gates, complex static gates, pass logic (NMOS and CMOS), flip-flops, synchronization of digital electronic circuits, dynamic gates: cascading methods; domino, NORA, zipper logics, semiconductor memories: ROM, static and dynamic RAM, gate arrays:

EHB 335E Analog Electronic Circuits: Frequency response: Bode diagrams, low and high frequency responses, transistor internal capacitors, transition frequency, Miller theorem. Wideband amplifiers: Gain-bandwidth product, compensation, cascode amplifier, differential amplifier. Feedback: Definitions, types, effects, negative feedback topologies. Stability in feedback amplifiers: criteria, Bode and Nyquist analyses. Pulse response of amplifiers: Rise time, tilt, ringing. Oscillators: Barkhausen criterion, sinusoidal oscillators, relaxation oscillators.

EHB 351E Analog Communications: Introduction to communication systems, modulation techniques, limitations in communication. Spectral analysis. Energy and power spectral density. Transmission of signals over linear systems. The amplitude modulation (AM) techniques: Carrier amplitude modulation, suppressed carrier double sideband modulation, single sideband modulation, vestigial sideband modulation. Amplitude modulators, demodulators. Exponential modulation techniques: Frequency and phase (FM, PM) modulation. Frequency modulators, demodulators. Frequency division multiplexing (FDM). AM radio broadcasting, FM radio broadcasting, superheterodyne receivers. Stereo FM. Television broadcasting.

EHB 352E Digital Communications: Sampling theorem, Nyquist criterion, ideal, natural and flat-top sampling. Pulse modulation techniques: Pulse amplitude modulation, pulse code modulation, quantization, delta modulation, differential pulse code modulation. Baseband data transmission: intersymbol interference, Nyquist channel, bandwidth efficiency. Signal-space analysis, error performance analysis. Binary digital modulation techniques: Binary amplitude shift keying, binary frequency and phase shift keying. M-li bant geçiren modülasyon, enformasyon ve entropi kavramlarına giriş.

EHB 362E Microwave Engineering: Current and voltage waves in TEM mode transmission lines, frequency and time domain analysis, power and energy flow, impedance matching. Smith Chart, microstrip lines, pulse transmission on lines. Basic principles of circuit analysis by S parameters. Basic properties of microwave radio propagation and introduction to antennas

EHB 4901E: Electronics and Communications Engineering Design I: Students form project groups and prepare project proposals for their senior design project under the supervision of their project advisors. They submit their proposals once they receive the approval of their project advisors. At the end of the semester, students also submit the project logbook, which contains a summary of all the actions taken during the semester regarding the project.

EHB 4902E: Electronics and Communications Engineering Design II: Students implement the project proposal that they chose for their senior design work. At mid-semester, project interim report and project logbook should be submitted. At the end of the semester, students should finish the final project report and the final project logbook. Project groups present their senior design work in front of a committee composed of department academicians.

KON 317E Control Systems: Signals and Systems, Feedback, Modeling and transfer function of systems, Modeling of mechanical and electromechanical systems, Modeling of Electrical systems, Modeling of Thermal systems, Time domain criterions, Stability analysis, Root-locus method, Controller structures and PID controller, Frequency domain analysis, Nyquist diagram and stability criterion.

TUR 101 Turkish I: Definition of Language, Language and Thought, Language and Culture, World Languages (In Point of Origin and Structure), The Significance of Turkish Language among World Languages, The Historical Development of Turkish Language, The Structure of Turkish Language, Turkish Phonetics, Todays Turkish Language,The Act of Writing and the Rules of Writing (Orthography), Spelling Rules, The Right Expression of Thought, Scientific Language and Turkish as a Scientific Language, Turkish Poetry and Poetry Language.

TUR 102 Turkish II: Written Expression, Method and Planning of Written Expression, Writing Exercise, Scientific Texts (Article-Report-Critic), Official Texts (Petition-Resume), Genres of Literature, Essay, Column, Travel Writing, Biography, Story, Novel, Verbal Literature, Verbal Expression and Communication

ITU 5th Semester Basic Sciences (TB) Elective Courses:

BIO 301E	Fundamentals of Biology
EHB 227E	Introduction to Optics
EHB 235E	Theory of Complex Functions
FIZ 201E	Modern Physics

ITU 5th Semester Core Engineering (TM) Elective Courses:

BLG 368E	Operations Research
DNK 201E	Dynamics
ELK 214E	Electromech.Energy Conversion
ELK 234E	Thermodynamics &Hydrodynamics
KON 224E	Measurement&Instrumentation

ITU 6th Semester Human and Society (İTB) Elective Courses:
See the list of courses in ITU Undergraduate Catalog.
http://www.sis.itu.edu.tr/tr/dersplan/plan/EHBE/20181063.html

ITU 6th Semester Engineering Technical (MT) Elective I Courses:

EHB 312E	Analog Elec. Circuits Lab.
EHB 324E	Logic Design Lab.

ITU 6th Semester Engineering Technical (MT) Elective II Courses:

BLG 212E	Microprocessor Systems
EHB 332E	Network Synthesis
EHB 334E	Random Signals and Noise

ITU 7th Semester Human and Society (İTB) Elective Courses:
See the list of courses in ITU Undergraduate Catalog.
http://www.sis.itu.edu.tr/tr/dersplan/plan/EHBE/20181063.html

ITU 7th Semester Engineering Technical (MT) Elective Courses:

BLG 212E	Microprocessor Systems
BLG 252E	Object Oriented Programming
BLG 441E	R-Time Sys.Dsg by Dig.Sig.Proc
EHB 326E	Intr.to Embedded Systems
EHB 328E	Machine Learning for Sig.Proc.
EHB 405E	Analog Integrated Circuits
EHB 413E	VLSI Circuit Design I
EHB 415E	Data Communications
EHB 417E	RF Microelectronics
EHB 418E	RF Electronics Applications
EHB 419E	Digital System Design
EHB 420E	Artificial Neural Networks
EHB 421E	Intr. to Medical Electronics
EHB 422E	The Orgn &Snsing M.of Bio.Sig.
EHB 424E	Ultrasaund and App.in Medicine
EHB 436E	Digital System Design Applic.
EHB 442E	Semiconductor Devices
EHB 451E	Active Microwave Circuits
EHB 453E	Intr.to Mobile Communications
EHB 454E	Communication Theory
EHB 456E	Antennas
EHB 458E	Micrwv Measurement Meth.& App.
EHB 473E	Microwave and RF Communication
EHB 474E	Introduction to Optimization
EHB 477E	Fundm.of Electrmgn.Compt.
EHB 481E	Des.&Applic.of Basic Comm.Sys.

ELK 331E Power Electronic Circuits

ITU 8th Semester Human and Society (İTB) Elective Courses:

EKO 201E Economics
HUK 201 İş Hukuku

ITU 8th Semester Engineering Technical (MT) Elective Courses:

EHB 334E Random Signals and Noise
EHB 408E Wireless Com.Networks
EHB 425E VLSI Circuit Design II
EHB 426E Microelectr.Analog Syst.Design
EHB 427E Microelectronics Technology
EHB 428E Industrial Electronics
EHB 429E Communic.Elect.Circuits
EHB 431E Design & Appl.Digital Com.Sys.
EHB 433E Digital Filters and Systems
EHB 437E Biomedical Devices
EHB 440E Comp.Aided Devices in Medicine
EHB 445E Medical Instr.,Design and App.
EHB 463E Communication Systems
EHB 464E Satellite Communications
EHB 465E Fiberoptic Com. Systems
EHB 466E Remote Sensing
EHB 467E Radar Systems
EHB 468E Princ of Elec.Compt.Measurmnts
EHB 472E Image Processing Fundamentals
EHB 475E Digital Speech Processing
KON 424E Mod.&Cntrl of Biological Sys.

ITU 8th Semester Arts (SNT) Elective Courses:

SNT 103E Drawing
SNT 104E Mythology and Art
SNT 105E Film Art
SNT 106E Traditional Turkish Art&Crafts
SNT 107E Ancient Civilizat.in Anatolia
SNT 112E Theater
SNT 113E Art and Interpretation
SNT 114E Contemporary Art
SNT 116E The Art of Communication
SNT 117E Jazz Appreciation
SNT 121E World Music Cultures
SNT 123E Film Production
SNT 211E Istanbul:Hist.,Art and Society
SNT 212E Art,Culture and Society
SNT 215E Balkan Musics
SNT 226E Philosophy of Art
SNT 227E Sound and Society

APPENDIX 3 – The grading system at ITU

Grade	Grade Points
AA	4.0
BA	3.5
BB	3.0
CB	2.5
CC	2.0
DC	1.5
DD	1.0
F	Failure
VF	Failure for Non-attendance
BL	Successful
BZ	Unsuccessful

APPENDIX 4 – The grading system at IUS

Grading scheme and grade distribution guidance

Grading Scale	*International Letter Grade*	*Grade Point Value*	*Letter Grade in B&H*	*Numerical Grade in B&H*
0 - 44	F	0	F	5
45 - 54	E	1		
55 - 64	C	2	E	6
65 - 69	C+	2.3	D	7
70 -74	B-	2.7		
75 - 79	B	3	C	8
80 - 84	B+	3.3		
85 - 94	A-	3.7	B	9
95 - 100	**A**	4	A	10

(2) Student's final achievements shown in column *Letter Grade in B&H* as above are graded in line with the following criteria:

g) 10 (A) – exceptional achievement, without errors, or with minimal errors, 95 – 100 points;
h) 9 (B) – above average achievement, with a few errors, 85 – 94 points;
i) 8 (C) – average achievement, with noticeable errors, 75 – 84 points;
j) 7 (D) – generally good achievement, with significant imperfections, 65 – 74 points;
k) 6 (E) – meets minimal criteria for achievement, 55 – 64 points;
l) 5 (F, FX) – does not meet minimal criteria, less than 55 points.

(4) Letter marks which are not affecting student's CGPA:

e) "**IP" – In progress** is assigned for recording unfulfilled student obligations related to thesis preparation.
f) "**S" – Satisfactory** is assigned to student who passed the examinations that are not numerically graded, or whose written assignment has been accepted.
g) "**U" – Unsatisfactory** is assigned to student who failed to pass the examinations that are not numerically graded.
h) "**W" – Withdrawal** signifies that student has withdrawn from the relevant course.

(5) Additional letter mark that affects student's CGPA is **"N/A" – Not attending** and it is assigned to student who is suspended from the course or who does not meet minimal requirement for attendance on lectures or tutorials.