

2025-2026 AKADEMİK
YILI / Academic Year

EĞİTİMDE KALİTE GÜVENCESİ YILLIK RAPORU

*QUALITY ASSURANCE IN
EDUCATION ANNUAL REPORT*

MÜHENDİSLİK FAKÜLTESİ
FACULTY OF ENGINEERING

BİLGİSAYAR MÜHENDİSLİĞİ LİSANS
PROGRAMI (CS)

*COMPUTER ENGINEERING
UNDERGRADUATE PROGRAM (CS)*



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MÜHENDİSLİK FAKÜLTESİ / FACULTY OF ENGINEERING

BİLGİSAYAR MÜHENDİSLİĞİ LİSANS PROGRAMI - CS / COMPUTER ENGINEERING UNDERGRADUATE PROGRAM - CS

1. BÖLÜM HAKKINDA / ABOUT THE DEPARTMENT

1.1. EĞİTİM AMAÇLARI / EDUCATIONAL OBJECTIVES

Bilkent Üniversitesi Bilgisayar Mühendisliği Bölümü mezunları / Bilkent University Computer Engineering Department graduates;

- 1) Teknoloji değişikliklerine uyum sağlarken güçlü teknik yeterlilik ve yeterlilik sergileyerek bilgisayar mühendisliği ve biliminde başarılı kariyerler oluşturan, / Establish successful careers in computer engineering and science, demonstrating strong technical competence and proficiency while adapting to technology changes;
- 2) Lisansüstü programlarda ileri düzeydeki çalışmaları ve araştırmaları başarıyla tamamlayarak kendi alanlarında tanınan ve etkili uzmanlar haline gelen, / Successfully complete advanced studies and research in graduate programs to become recognized and influential experts in their fields;
- 3) Lisansüstü programlarda ileri düzeydeki çalışmaları ve araştırmaları başarıyla tamamlayarak kendi alanlarında tanınan ve etkili uzmanlar haline gelen, / Develop innovative solutions in computer engineering practice and research using creativity and analytical thinking;
- 4) İşbirliği, liderlik, inisiyatif ve dürüstlük gibi güçlü sosyal beceriler sergileyen örnek profesyonellerdir. / Are model professionals, exhibiting strong soft skills including collaboration, leadership, initiative, and integrity.

1.1.1. DANIŞMA KURULU / ADVISORY BOARD

- Çağrı Kılıboz, Ürün Yöneticisi, Bosch Güvenlik ve Emniyet Sistemleri / Çağrı Kılıboz, Product Manager, Bosch Security and Safety Systems
- Eren Akbaba, Çözüm Mimarı, Amazon Web Hizmetleri / Eren Akbaba, Solutions Architect, Amazon Web Services
- Murat Ergun, Mühendislik Başkan Yardımcısı, Commencis / Murat Ergun, VP Of Engineering, Commencis
- Hacı Mehmet Yüksel, RTOS ve Platform Yönetim Grubu Lideri, Havelsan / Hacı Mehmet Yüksel, RTOS and Platform Management Group Leader, Havelsan
- Abdullah Üstüner, Yazılım Mühendisliği Baş Yöneticisi, Microsoft / Abdullah Üstüner, Principal Software Engineering Manager, Microsoft
- Ahmet Eren Başak, Mühendis, Ubicloud / Ahmet Eren Başak, Engineer, Ubicloud
- C. Doruk Bozağaç, Müdür Yardımcısı, TÜBİTAK BİLGEM İLTAREN / C. Doruk Bozağaç, Deputy Director, TÜBİTAK BİLGEM İLTAREN
- Baykal Mehmet Uçar, Dijital Ürünler ve Hizmetler Yöneticisi, Beko / Baykal Mehmet Uçar, Director of Digital Products and Services, Beko

1.2. LİSANS PROGRAMI / UNDERGRADUATE PROGRAM

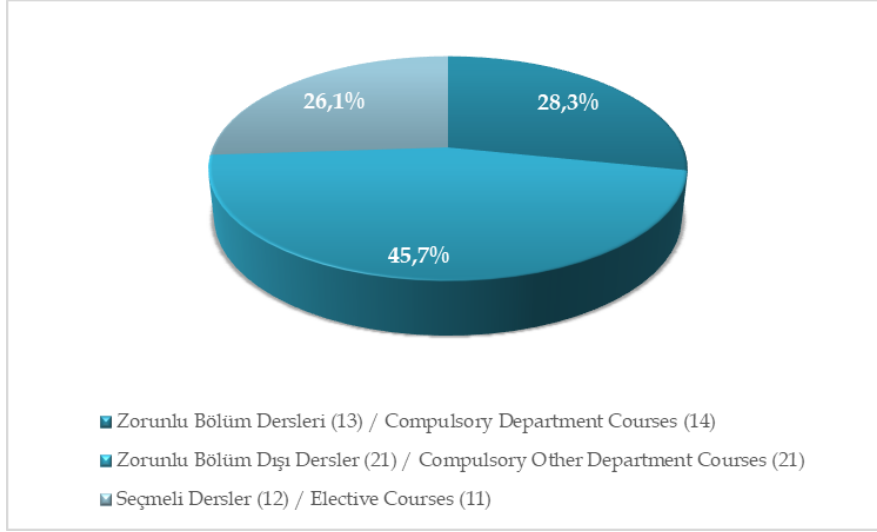
1.2.1. MÜFREDAT / CURRICULUM

Birinci Yıl / First Year					
Güz Dönemi / Fall Semester					
Ders Kod / Course Code	Ders Adı / Course Name	Saatler / Hours		Kredi / Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab / Studio / Others	Bilkent	ECTS
CS 101	Algoritmalar ve Programlama I / Algorithms and Programming I	3	4	4	6,5
ENG 101	İngilizce ve Kompozisyon I / English and Composition I	5	0	3	5
GE 100	Üniversite Hayatına Giriş / Orientation	0	0	1	2
MATH 101	Matematik I / Calculus I	4	0	4	6,5
MBG 110	Modern Biyolojiye Giriş / Introduction to Modern Biology	3	0	3	5
TURK 101	Türkçe I / Turkish I	0	0	2	3,5
Bahar Dönemi / Spring Semester					
Ders Kod / Course Code	Ders Adı / Course Name	Saatler / Hours		Kredi / Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab / Studio / Others	Bilkent	ECTS
CS 102	Algoritmalar ve Programlama II / Algorithms and Programming II	3	4	4	6,5
ENG 102	İngilizce ve Kompozisyon II / English and Composition II	5	0	3	5
MATH 102	Matematik II / Calculus II	4	0	4	6,5
MATH 132	Sonlu ve Kombinasyonel Matematik / Discrete and Combinatorial Mathematics	3	0	3	5
TURK 102	Türkçe II / Turkish II	0	0	2	3,5

İkinci Yıl / Second Year					
Güz Dönemi / Fall Semester					
Ders Kod / Course Code	Ders Adı / Course Name	Saatler / Hours		Kredi / Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab / Studio / Others	Bilkent	ECTS
CS 211	Veri Yapıları / Data Structures	3	0	3	5
CS 223	Sayısal Devre Tasarımı / Digital Design	3	4	4	6,5
GE 250	Üniversite Etkinlik Programı I / Collegiate Activities Program I	0	0	0	1
HUM 111	Kültürler, Medeniyetler ve Düşünceler I / Cultures Civilizations and Ideas I	3	0	3	5
MATH 225	Doğrusal Cebir ve Türevsel Denklemler / Linear Algebra and Differential Equations	4	0	4	6,5
PHYS 101	Genel Fizik I / General Physics I	3	3	4	6,5
Bahar Dönemi / Spring Semester					
Ders Kod / Course Code	Ders Adı / Course Name	Saatler / Hours		Kredi / Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab / Studio / Others	Bilkent	ECTS
CS 224	Bilgisayar Yapısı / Computer Organization	3	4	4	6,5
CS 319	Nesneye Yönelik Yazılım Mühendisliği / Object-Oriented Software Engineering	3	0	4	6,5
GE 251	Üniversite Etkinlik Programı II / Collegiate Activities Program II	0	0	1	2
HUM 112	Kültürler, Medeniyetler ve Düşünceler II / Cultures Civilizations and Ideas II	3	0	3	5
MATH 230	Mühendisler İçin Olasılık ve İstatistik / Probability and Statistics for Engineers	3	0	3	5
PHYS 102	Genel Fizik II / General Physics II	3	3	4	6,5

Üçüncü Yıl/Third Year					
Güz Dönemi/Fall Semester					
Ders Kod/ Course Code	Ders Adı/ Course Name	Saatler/ Hours		Kredi/ Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab/ Studio/ Others	Bilkent	ECTS
CS 299	Yaz Stajı I / Summer Training I	0	0	0	7
CS 311	Yapay Zekanın Matematiksel ve Hesaplamalı Temelleri / Mathematical and Computational Foundations of Artificial Intelligence	3	0	3	5
CS 353	Veri Tabanı Sistemleri / Database Systems	3	0	3	5
CS 473	Algoritmalar I / Algorithms I	3	0	3	5
ENG 401	Teknik Rapor Yazma ve Sunum / Technical Report Writing and Presentation	3	0	3	5
	Temel Sosyal Bilimler Seçmeli Dersi / Social Science Core Elective			3	
Bahar Dönemi/Spring Semester					
Ders Kod/ Course Code	Ders Adı/ Course Name	Saatler/ Hours		Kredi/ Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab/ Studio/ Others	Bilkent	ECTS
CS 342	İşletim Sistemleri / Operating Systems	3	0	4	6,5
CS 476	Otomata Teorisi ve Formal Diller / Automata Theory and Formal Languages	3	0	3	5
GE 301	Bilim, Teknoloji ve Toplum / Science Technology and Society	2	0	2	3,5
HIST 200	Türkiye Tarihi / History of Turkey	3	0	4	6,5
	Mühendislik Seçmeli Dersi / Engineering Core Elective			3	
Dördüncü Yıl/ Fourth Year					
Güz Dönemi/Fall Semester					
Ders Kod/ Course Code	Ders Adı/ Course Name	Saatler/ Hours		Kredi/ Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab/ Studio/ Others	Bilkent	ECTS
CS 399	Yaz Stajı II / Summer Training II	0	0	0	7
IE 400	Mühendislik Yönetiminin İlkeleri / Principles of Engineering Management	3	0	3	5
	Temel Sanat Seçmeli Ders / Arts Core Elective			3	
	Proje Seçmeli Dersi / Project Elective			3	
	Teknik Seçmeli Ders (3) / Technical Elective (3)			9	
Bahar Dönemi/Spring Semester					
Ders Kod/ Course Code	Ders Adı/ Course Name	Saatler/ Hours		Kredi/ Credits	
		Ders / Lecture	Lab / Stüdyo / Diğer / Lab/ Studio/ Others	Bilkent	ECTS
	Genel Seçmeli Ders / General Elective			3	
	Proje Seçmeli Dersi / Project Elective			3	
	Teknik Seçmeli Ders (3) / Technical Elective (3)			9	

1.2.2. DERSLERİN DAĞILIMI / DISTRIBUTION COURSES



Grafik.1.2.2. Bilgisayar Mühendisliği Lisans Programı Müfredatındaki Derslerin Dağılımı / *Graphic.1.2.2. Distribution of Courses in the Computer Engineering Undergraduate Program Curriculum*

1.3. ÖĞRENCİLER / STUDENTS

1.3.1. ÖĞRENCİ SAYILARI / NUMBER OF STUDENTS

Öğrenci Sayıları / Number of Students	
Hazırlık / Prep	62
1. Sınıf / 1. Class	176
2. Sınıf / 2. Class	170
3. Sınıf / 3. Class	222
4. Sınıf / 4. Class	234
Toplam Öğrenci Sayısı / Total Number of Students	864

Tablo.1.3.1. 2025-2026 Akademik Yılı Bilgisayar Mühendisliği Lisans Programı Öğrenci Sayıları / *Table.1.3.1. Number of Students in Computer Engineering Undergraduate Program for the 2025-2026 Academic Year*

1.3.2. YABANCI ÖĞRENCİ SAYILARI / NUMBER OF FOREIGN STUDENTS

Yabancı Öğrenci Sayıları / Number of Foreign Students	
1. Sınıf / 1. Class	19
2. Sınıf / 2. Class	6
3. Sınıf / 3. Class	12
4. Sınıf / 4. Class	24
Toplam Yabancı Öğrenci Sayısı / Total Number of Foreign Students	61

Tablo.1.3.2. 2025-2026 Akademik Yılı Bilgisayar Mühendisliği Lisans Programı Yabancı Öğrenci Sayıları / **Table.1.3.2.** Number of Foreign Students in Computer Engineering Undergraduate Program for the 2025-2026 Academic Year

1.4. ÖĞRETİM ELEMANLARI / FACULTY MEMBERS

1.4.1. ÖĞRETİM ELEMANI SAYILARI / NUMBER OF FACULTY MEMBERS

Öğretim Elemanı Sayıları / Number of Faculty Members	
Profesör Doktor / Professor Doctor	9
Doçent Doktor / Associate Professor	4
Doktor Öğretim Üyesi / Assistant Professor	7
Öğretim Görevlisi / Instructor	15
Araştırma Görevlisi / Research Assistant	1
Toplam Öğretim Elemanı Sayısı / Total Number of Faculty Members	36

Tablo.1.4.1. 2025-2026 Akademik Yılında Bilgisayar Mühendisliği Lisans Programı Kadrolu ve Yarı Zamanlı Öğretim Elemanı Sayıları / **Table.1.4.1.** Number of Full-Time and Part-Time Faculty Members in the Computer Engineering Undergraduate Program in the 2025-2026 Academic Year

1.4.2. ÖĞRETİM ELEMANLARININ LİSTESİ / LIST OF FACULTY MEMBERS

Öğretim Elemanının Unvanı / Title of Faculty Member	Öğretim Elemanının Çalışma Şekli / Work-mode of Faculty Member	Öğretim Elemanının Adı - Soyadı / Name-Surname of Faculty Member	Öğretim Elemanının Unvanı / Title of Faculty Member	Öğretim Elemanının Çalışma Şekli / Work-mode of Faculty Member	Öğretim Elemanının Adı - Soyadı / Name-Surname of Faculty Member
Araştırma Görevlisi / Research Assistant	Tam Zamanlı / Full Time	Berat Biçer	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Aslı Kurgan Erkurt
Doçent Doktor / Associate Professor	Tam Zamanlı / Full Time	Can Alkan	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Ayşe Semra Mumcu
Doçent Doktor / Associate Professor	Tam Zamanlı / Full Time	Abdullah Ercüment Çiçek	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Mustafa Değerli
Doçent Doktor / Associate Professor	Tam Zamanlı / Full Time	Eray Tüzün	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Haluk Altunel
Doçent Doktor / Associate Professor	Tam Zamanlı / Full Time	Hamdi Dibeklioğlu	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	İlker Burak Kurt
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Doruk Öner	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Alper Sarıkan
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Shervin Rahimzadeh Arashloo	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Mert Bıçakçı
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Ayşegül Dünder Boral	Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Atahan Karaman
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Salih Özgür Ögüz	Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	Aynur Dayanık
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Sinem Sav	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Halil Altay Güvenir
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Anıl Koyuncu	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Özgür Ulusoy
Doktor Öğretim Üyesi / Assistant Professor	Tam Zamanlı / Full Time	Abdullah Talayhan	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Uğur Gündükbay
Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	İpek Sözen	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Uğur Doğrusöz
Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	Sibel Uğurlubilek	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	İbrahim Körpeoğlu
Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	Rabia Üşenmez	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Selim Aksoy
Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	Lori Rae Russell Dağ	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Cevdet Aykanat
Öğretim Görevlisi / Instructor	Tam Zamanlı / Full Time	Ayışığı Başak Sevdik Çallı	Profesör Doktor / Professor Doctor	Tam Zamanlı / Full Time	Fazlı Can
Öğretim Görevlisi / Instructor	Yarı Zamanlı / Part Time	Nur Sağlam	Profesör Doktor / Professor Doctor	Yarı Zamanlı / Part Time	Mohammad Mahmoody Ghidary

Tablo.1.4.2. 2025-2026 Akademik Yılında Bilgisayar Mühendisliği Lisans Programı Kadrolu ve Yarı Zamanlı Öğretim Elemanı Listesi / **Table.1.4.2.** List of Full-Time and Part-Time Faculty Members in the Computer Engineering Undergraduate Program in the 2025-2026 Academic Year

1.5. EĞİTİMDE KALİTE KOMİTESİ / *COMMITTEE OF QUALITY IN EDUCATION*

- ❖ Özgür Ulusoy
- ❖ Abdullah Ercüment Çiçek
- ❖ Selim Aksoy
- ❖ Salih Özgür Ögüz
- ❖ İbrahim Körpeoğlu
- ❖ Doruk Öner
- ❖ Uğur Güdükbay

2. TÜRKİYE YÜKSEKÖĞRETİM YETERLİLİKLER ÇERÇEVESİ - ULUSAL YETERLİLİKLER / *TURKISH HIGHER EDUCATION QUALIFICATIONS FRAMEWORK - NATIONAL QUALIFICATIONS*

Basic Field Qualifications for Engineering (Academic - Weighted) - 6th Level - Bachelor's						
LEVEL OF THEQF	KNOWLEDGE SKILLS -Theoretical -Factual	SKILLS -Cognitive -Practical	COMPETENCIES			
			Ability to Work Independently and Take Responsibility	Learning Competence	Communication and Social Competence	Field-Specific Competence
6th Level Bachelor's	K1. Have sufficient background in mathematics, sciences and their own field of study.	S1. Make use of theoretical and practical knowledge on mathematics, sciences and their own field concurrently for engineering solutions. S2. Identify, define, formulate and solve engineering problems; select and apply analytical methods and modeling techniques appropriate for this purpose.	W1. Assume active responsibility in individual work or multi-disciplinary team work. W2. Accesses information and makes source research for this purpose, uses databases and other information sources.	L1. Know how to access information and do literature survey; and make use of databases and other information resources. L2. Be aware of the need for lifelong learning; keep up with the developments in science and technology and renew themselves continuously. L3. Make use of theoretical and practical knowledge on mathematics, sciences and their own field concurrently for engineering solutions.	C1. Uses information and communication technologies together with computer software required by the field at least Advanced Level of European Computer Driving License. C2. Communicate in oral and written form in a foreign language at minimum B1 level, as defined by the European Language Portfolio. C3. Communicates using technical drawing. C4. Accesses information and makes source research for this purpose, uses databases and other information sources. C5. Becomes aware of the universal and social effects of engineering solutions and applications; become aware of entrepreneurship and innovation and have	F1. Have sense of professional and ethical responsibility. F2. Have consciousness about project management, workplace practices, workers' health, environmental risk evaluation, environmental and work safety; and have awareness about legal consequences of engineering applications. F3. Becomes aware of the universal and social effects of engineering solutions and applications; become aware of entrepreneurship and innovation and have knowledge about the problems of the age.
EQF-LLL: 6th Level		S3. Analyze a system, a system component or a process; make a design in consideration of realistic constraints in order to meet the needs expected; and apply modern design methods.		L4. Identify, define, formulate and solve engineering problems; select and apply analytical methods and modeling techniques appropriate for this purpose.		
QF-EHEA: 1st Cycle		S4. Select and use modern techniques and devices required for engineering applications. S5. Design and conduct experiments, collect data,		L5. Analyze a system, a system component or a process; make a design in consideration of realistic constraints in order to meet		

		analyze and interpret results.		the needs expected; and apply modern design methods. L6. Select and use modern techniques and devices required for engineering applications. L7. Assume active responsibility in individual work or multi-disciplinary team work.	knowledge about the problems of the age.	
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3. PROGRAM ÇIKTILARI / PROGRAM OUTCOMES

3.1. PROGRAM ÇIKTILARININ LİSTESİ / LIST OF PROGRAM OUTCOMES

- a. Mühendislik, fen bilimleri ve matematik ilkelerini uygulayarak karmaşık mühendislik problemlerini tanımlama, formüle etme ve çözme becerisine sahiptir. / *An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.*
- b. Kamu sağlığı, güvenliği ve refahının yanı sıra küresel, kültürel, sosyal, çevresel ve ekonomik faktörleri de dikkate alarak belirlenen ihtiyaçları karşılayacak çözümler üretmek için mühendislik tasarımını uygulama becerisine sahiptir. / *An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental, and economic factors.*
- c. Çeşitli kitlelerle etkili bir şekilde iletişim kurabilme becerisine sahiptir. / *An ability to communicate effectively with a range of audiences.*
- d. Mühendislik pozisyonlarında etik ve profesyonel sorumlulukları tanıma ve mühendislik çözümlerinin küresel, ekonomik, çevresel ve toplumsal bağlamlardaki etkisini dikkate alması gereken bilinçli kararlar verme becerisine sahiptir. / *An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.*

- e.* Tüm üyeleri ile birlikte, liderlik sağlayan, işbirlikçi ve kapsayıcı bir ortam yaratan, hedefler belirleyen, görevleri planlayan ve hedeflere ulaşan bir ekipte etkili bir şekilde çalışabilme becerisine sahiptir. / *An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.*
- f.* Uygun deneyler geliştirme ve yürütme, verileri analiz etme ve yorumlama ve tüm bunlardan sonuç çıkarmak için mühendislik yargısını kullanma becerisine sahiptir. / *An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.*
- g.* Uygun öğrenme stratejilerini kullanarak gerektiğinde yeni bilgi edinme ve uygulama becerisine sahiptir. / *An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.*
- h.* Öğrenciler, derslerin yanı sıra çeşitli ve yaratıcı, sanatsal, kültürel, sportif ve entelektüel faaliyetlere katılarak kampüs hayatından daha fazla faydalanırlar. / *Take advantage of the campus life where students are engaged in diversity, creativity and commitment outside coursework through artistic, cultural, sportive and intellectual activities.*

3.2. ULUSAL YETERLİLİKLER İLE PROGRAM ÇIKTILARI BAĞLANTI TABLOSU / NATIONAL QUALIFICATIONS AND PROGRAM OUTCOMES CONNECTION TABLE

Dersler / Courses	Program Çıktıları / Program Outcomes							
	a	b	c	d	e	f	g	h
CS 101				✓		✓		
CS 102	✓	✓				✓		
CS 211	✓					✓		
CS 223		✓						
CS 224						✓		
CS 299	✓		✓	✓			✓	
CS 311	✓	✓						
CS 319	✓	✓	✓		✓			
CS 342						✓		
CS 353	✓	✓						
CS 399	✓		✓	✓			✓	
CS 473	✓	✓						
CS 476	✓							
ENG 101			✓				✓	
ENG 102			✓				✓	
ENG 401			✓				✓	
GE 100			✓	✓			✓	✓
GE 250			✓				✓	✓
GE 251			✓				✓	✓
GE 301				✓	✓		✓	
HIST 200			✓		✓		✓	
HUM 111			✓				✓	
HUM 112			✓				✓	
IE 400	✓				✓			
MATH 101	✓		✓		✓			
MATH 102	✓		✓		✓			
MATH 132	✓							
MATH 225	✓							
MATH 230	✓							
MBG 110	✓							
PHYS 101	✓	✓			✓		✓	
PHYS 102	✓	✓			✓		✓	
TURK 101			✓				✓	
TURK 102			✓				✓	

Tablo.3.2. Ulusal Yeterlilikler ile Bilgisayar Mühendisliği Lisans Programı Program Çıktıları Bağlantı Tablosu / **Table.3.2.** National Qualifications and Computer Engineering Undergraduate Program Program Outcomes Link Table

4. DERSLER / COURSES

4.1. PROGRAM ÇIKTILARI - DERSLER MATRİSİ / PROGRAM OUTCOMES - COURSES TABLE

Dersler / Courses	Program Çıktıları / Program Outcomes							
	a	b	c	d	e	f	g	h
CS 101				✓		✓		
CS 102	✓	✓				✓		
CS 211	✓					✓		
CS 223		✓						
CS 224						✓		
CS 299	✓		✓	✓			✓	
CS 311	✓	✓						
CS 319	✓	✓	✓		✓			
CS 342						✓		
CS 353	✓	✓						
CS 399	✓		✓	✓			✓	
CS 473	✓	✓						
CS 476	✓							
ENG 101			✓				✓	
ENG 102			✓				✓	
ENG 401			✓				✓	
GE 100			✓	✓			✓	✓
GE 250			✓				✓	✓
GE 251			✓				✓	✓
GE 301				✓	✓		✓	
HIST 200			✓		✓		✓	
HUM 111			✓				✓	
HUM 112			✓				✓	
IE 400	✓				✓			
MATH 101	✓		✓		✓			
MATH 102	✓		✓		✓			
MATH 132	✓							
MATH 225	✓							
MATH 230	✓							
MBG 110	✓							
PHYS 101	✓	✓			✓		✓	
PHYS 102	✓	✓			✓		✓	
TURK 101			✓				✓	
TURK 102			✓				✓	

Tablo.4.1. Bilgisayar Mühendisliği Lisans Programı - Program Çıktıları ve Dersler Tablosu /
Table.4.1. Computer Engineering Undergraduate Program - Program

4.2. PERFORMANS ÖLÇÜMÜNDE KULLANILAN METRİKLER / METRICS TO BE USED IN PERFORMANCE MEASUREMENT

4.2.1. PERFORMANS ÖLÇÜMLERİNDE KULLANILAN DEĞERLENDİRME METOTLARI // EVALUATION METHODS USED IN PERFORMANCE MEASUREMENTS

4.2.1.1. 2025-2026 Akademik Yılı Güz Dönemi için / For 2025-2026 Academic Year Fall Semester;

Course Code	Program Outputs	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS101	d	100	100	M1	50	75				
	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	f	100	100	M1	60	75				
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Lab work	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
CS102	a	30	30	10	30	100	M1	50	75	
	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	b	33	34	33	100	M1	50	75		
	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	f	100	100	M1	60	75				
Course Code	Program Outputs	Lab work	Midterm:Open- Book	Final:Open- book	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
CS223	b	20	40	40	100	M1	50	75		
Course Code	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS224	f	100	100	M1	50	75				

Course Code	Program Outputs	Midterm	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
CS 319	a	100	100	M1	40	75			
	Program Outputs	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	b	100	100	M1	40	75			
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	c	100	100	M1	50	75			
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	e	100	100	M1	50	75			
Course Code	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
CS 342	f	100	100	M1	50	75			
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
CS 353	a	40	40	20	100	M1	40	75	
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	b	100	100	M1	50	75			
Course Code	Program Outputs	Homework	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
CS 473	a	40	25	35	100	M1	30	75	
	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	b	40	60	100	M1	30	75		

Course Code	Program Outputs	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
CS 476	a	100	100	M1	30	75						
Course Code	Program Outputs	Academic Essay 1	Essay	Oral Presentation	Student Led Discussion	Academic Summary and Critical Response Task	Self-progress Reflection Task	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
ENG 101	c	20	25	8	7	10	5	25	100	M1	70	75
	Program Outputs	Academic Essay 1	Essay	Oral Presentation	Student Led Discussion	Academic Summary and Critical Response Task	Self-progress Reflection Task	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	g	20	25	8	7	10	5	25	100	M1	70	75
Course Code	Program Outputs	Library Skills Task	Academic Essay	Oral Presentation	Research Paper Outline	Research essay	Interviews	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
ENG 102	c	5	20	20	10	30	15	100	M1	70	70	
	Program Outputs	Library Skills Task	Academic Essay	Oral Presentation	Research Paper Outline	Research essay	Interviews	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	5	20	20	10	30	15	100	M1	70	70	
Course Code	Program Outputs	Presentations	Written Project Proposal	Written Final Report	Interviews	Interviews	Presentations	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
ENG 401	c	15	20	35	5	5	20	100	M1	70	80	
	Program Outputs	Presentations	Written Project Proposal	Written Final Report	Interviews	Interviews	Presentations	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	15	20	35	5	5	20	100	M1	70	80	
Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
GE 100	c	100	100	M1	12	80						
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
	d	100	100	M1	12	80						

Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
GE 100	g	100	100	M1	12	80					
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	h	100	100	M1	12	80					
Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
GE 251	c	100	100	M1	70	70					
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	g	100	100	M1	70	70					
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	h	100	100	M1	70	70					
Course Code	Program Outputs	Final	Midterm	Quiz	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
GE 301	d	30	20	10	10	10	20	100	M1	45	60
	Program Outputs	Final	Midterm	Quiz	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	e	30	20	10	10	10	20	100	M1	45	60
	Program Outputs	Final	Midterm	Quiz	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	g	30	20	10	10	10	20	100	M1	45	60
Course Code	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
HIST 200	c	10	60	30	100	M1	70	75			
	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	e	10	60	30	100	M1	70	75			

Course Code	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
HIST 200	g	10	60	30	100	M1	70	75			
Course Code	Program Outputs	Quizzes	Course Project	In-class participation	Final Examination	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
HUM 111	c	30	30	10	30	100	M1	60	75		
	Program Outputs	Quizzes	Course Project	In-class participation	Final Examination	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	g	30	30	10	30	100	M1	60	75		
Course Code	Program Outputs	Quizzes	In-class participation	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
HUM 112	c	30	10	30	30	100	M1	60	75		
	Program Outputs	Quizzes	In-class participation	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	g	30	10	30	30	100	M1	60	75		
Course Code	Program Outputs	Midterm:Essay/ written	Quiz	Quiz	Quiz	Quiz	Final:Essay/written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
IE 400	a	25	10	10	10	10	35	100	M1	30	75
	Program Outputs	Midterm:Essay/ written	Quiz	Quiz	Quiz	Quiz	Final:Essay/written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	e	25	10	10	10	10	35	100	M1	30	75
Course Code	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
MATH 101	a	30	30	40	100	M1	40	50			

Course Code	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 101	c	30	30	40	100	M1	40	50				
	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	e	30	30	40	100	M1	40	50				
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 102	a	30	30	40	100	M1	40	50				
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	c	30	30	40	100	M1	40	50				
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	e	30	30	40	100	M1	40	50				
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 132	a	33	33	34	100	M1	40	50				
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Homework	Homework	Homework	Homework	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
MATH 225	a	40	40	4	4	4	4	4	100	M1	40	50
Course Code	Program Outputs	Midterm:Essay/ written	Homework	Homework	Homework	Homework	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
MATH 230	a	40	3	4	4	4	45	100	M1	30	75	

Course Code	Program Outputs	Homework	Quiz	Quiz	Quiz	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
MBG 110	a	7,5	7,5	7,5	7,5	20	25	25	100	M1	50	50
Course Code	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 101	a	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	b	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	15	20	15	5	25	20	100	M1	50	50	
Course Code	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 102	a	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	b	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	15	20	15	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	15	20	15	5	25	20	100	M1	50	50	

Course Code	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
TURK 101	c	70	30	100	M1	70	60	
	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	70	30	100	M1	70	60	
Course Code	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
TURK 102	c	70	30	100	M1	70	60	
	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	70	30	100	M1	70	60	

Ölçümlerde Kullanılan Metotlarla İlgili Açıklamalar / *Explanations About the Methods Used in Measurements*

Bütün metotlar için sadece dersi geçen öğrencilerin notları kullanılacaktır. / *For all methods, only the grades of students who pass the course will be used.*

- G: Öğrencilerin ilgili program çıktısını kazanacağı öngörülen minimum not / *G: Minimum grade at which students attain the relevant program outcome*
- T: Dersin ilgili program çıktısının kazanımı için yeterli sayılacağı eşik öğrenci yüzdesi / *T: Threshold percentage of students for the course to be considered sufficient for the attainment of the relevant program outcome*
- M1: Öğrencilerin %T'sinin dönem toplamlarının en az G olması / *M1: T% of the students to have a semester total of at least G*
- M2: Öğrencilerin %T'sinin dönem toplamlarının en az bölümdeki dönem toplamlarının ortalaması kadar olması / *M2: T% of the students of the department to have a semester total of at least that of the department average*
- M3: Öğrencilerin dönem toplamlarının ortalamasının en az G olması / *M3: Average semester total of students of the department to be at least G*
- M4: Öğrencilerin %T'sinin dönem toplamlarının en az tüm bölümlerdeki tüm öğrencilerin dönem toplamlarının ortalaması kadar olması / *M4: T% of the students of the department to have a semester total of at least average semester total of all students from all departments*

4.2.1.2. 2025-2026 Akademik Yılı Bahar Dönemi için / For 2025-2026 Academic Year Spring Semester;

Course Code	Program Outputs	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS 101	d	100	100	M1	50	75				
	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	f	100	100	M1	60	75				
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Lab work	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
CS 102	a	30	30	10	30	100	M1	50	75	
	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	b	33	34	33	100	M1	50	75		
	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	f	100	100	M1	60	75				
Course Code	Program Outputs	Lab work	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
CS 223	b	20	40	40	100	M1	50	75		
Course Code	Program Outputs	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS 224	f	100	100	M1	50	75				
Course Code	Program Outputs	Midterm	Final	Quiz	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
CS 311	a	35	35	15	15	100	M1	40	75	
	Program Outputs	Project	Project	Project	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	b	25	25	25	25	100	M1	50	75	

Course Code	Program Outputs	Midterm	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS 319	a	100	100	M1	40	75				
	Program Outputs	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	b	100	100	M1	40	75				
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	c	100	100	M1	50	75				
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	e	100	100	M1	50	75				
Course Code	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS 342	f	100	100	M1	50	75				
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
CS 353	a	40	40	20	100	M1	40	75		
	Program Outputs	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	b	100	100	M1	50	75				
Course Code	Program Outputs	Homework	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
CS 473	a	40	25	35	100	M1	30	75		
	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	b	40	60	100	M1	30	75			
Course Code	Program Outputs	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
CS 476	a	100	100	M1	30	75				

Course Code	Program Outputs	Academic Essay 1	Essay	Oral Presentation	Student Led Discussion	Academic Summary and Critical Response Task	Self-progress Reflection Task	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
ENG 101	c	20	25	8	7	10	5	25	100	M1	70	75
	Program Outputs	Academic Essay 1	Essay	Oral Presentation	Student Led Discussion	Academic Summary and Critical Response Task	Self-progress Reflection Task	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	g	20	25	8	7	10	5	25	100	M1	70	75
Course Code	Program Outputs	Library Skills Task	Academic Essay	Oral Presentation	Research Paper Outline	Research essay	Interviews	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
ENG 102	c	5	20	20	10	30	15	100	M1	70	70	
	Program Outputs	Library Skills Task	Academic Essay	Oral Presentation	Research Paper Outline	Research essay	Interviews	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	5	20	20	10	30	15	100	M1	70	70	
Course Code	Program Outputs	Presentations	Written Project Proposal	Written Final Report	Interviews	Interviews	Presentations	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
ENG 401	c	15	20	35	5	5	20	100	M1	70	80	
	Program Outputs	Presentations	Written Project Proposal	Written Final Report	Interviews	Interviews	Presentations	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	15	20	35	5	5	20	100	M1	70	80	
Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
GE 100	c	100	100	M1	12	80						
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
	d	100	100	M1	12	80						
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
	g	100	100	M1	12	80						
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
h	100	100	M1	12	80							

Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
GE 251	c	100	100	M1	70	70					
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	g	100	100	M1	70	70					
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	h	100	100	M1	70	70					
Course Code	Program Outputs	Final	Midterm	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
GE 301	d	35	25	10	10	20	100	M1	45	60	
	Program Outputs	Final	Midterm	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	35	25	10	10	20	100	M1	45	60	
	Program Outputs	Final	Midterm	Quiz	Quiz	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	35	25	10	10	20	100	M1	45	60	
Course Code	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
HIST 200	c	10	60	30	100	M1	70	75			
	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	e	10	60	30	100	M1	70	75			
	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	g	10	60	30	100	M1	70	75			
Course Code	Program Outputs	Quizzes	Course Project	In-class participation	Final Examination	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
HUM 111	c	30	30	10	30	100	M1	60	75		
	Program Outputs	Quizzes	Course Project	In-class participation	Final Examination	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	g	30	30	10	30	100	M1	60	75		

Course Code	Program Outputs	Quizzes	In-class participation	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
HUM 112	c	30	10	30	30	100	M1	60	75			
	Program Outputs	Quizzes	In-class participation	Final:Essay/ written	Project	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
	g	30	10	30	30	100	M1	60	75			
Course Code	Program Outputs	Midterm:Essay/ written	Quiz	Quiz	Quiz	Quiz	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
IE 400	a	25	10	10	10	10	35	100	M1	30	75	
	Program Outputs	Midterm:Essay/ written	Quiz	Quiz	Quiz	Quiz	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	25	10	10	10	10	35	100	M1	30	75	
Course Code	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 101	a	30	30	40	100	M1	40	50				
	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	c	30	30	40	100	M1	40	50				
	Program Outputs	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	e	30	30	40	100	M1	40	50				
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 102	a	30	30	40	100	M1	40	50				
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	c	30	30	40	100	M1	40	50				
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
	e	30	30	40	100	M1	40	50				

Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)				
MATH 132	a	33	33	34	100	M1	40	50				
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Homework	Homework	Homework	Homework	Homework	Quiz	Quiz	Quiz	Quiz
MATH 225	a	40	40	3	3	3	3	3	1	1	1	1
		Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)						
		1	100	M1	40	50						
Course Code	Program Outputs	Midterm:Essay/ written	Homework	Homework	Homework	Homework	Final:Essay/writ ten	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
MATH 230	a	48	1	1	1	1	48	100	M1	30	75	
Course Code	Program Outputs	Homework	Quiz	Quiz	Quiz	Midterm	Midterm	Final	Quiz	Quiz	Quiz	Quiz
MBG 110	a	5	5	5	5	20	25	25	1	1	1	1
		Quiz	Quiz	Quiz	Quiz	Quiz	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
		1	1	1	1	1	1	100	M1	50	50	
Course Code	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 101	a	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	b	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
g	20	20	10	5	25	20	100	M1	50	50		

Course Code	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 102	a	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	b	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	e	20	20	10	5	25	20	100	M1	50	50	
	Program Outputs	Midterm	Midterm	Quiz	Homework	Final	Lab work	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	20	20	10	5	25	20	100	M1	50	50	
Course Code	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
TURK 101	c	70	30	100	M1	70	60					
	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	g	70	30	100	M1	70	60					
Course Code	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
TURK 102	c	70	30	100	M1	70	60					
	Program Outputs	Blog	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	g	70	30	100	M1	70	60					

Ölçümlerde Kullanılan Metotlarla İlgili Açıklamalar / *Explanations About the Methods Used in Measurements*

Bütün metotlar için sadece dersi geçen öğrencilerin notları kullanılacaktır. / *For all methods, only the grades of students who pass the course will be used.*

- G: Öğrencilerin ilgili program çıktısını kazanacağı öngörülen minimum not / *G: Minimum grade at which students attain the relevant program outcome*

- T: Dersin ilgili program çıktısının kazanımı için yeterli sayılacağı eşik öğrenci yüzdesi / *T: Threshold percentage of students for the course to be considered sufficient for the attainment of the relevant program outcome*
- M1: Öğrencilerin %T'sinin dönem toplamlarının en az G olması / *M1: T% of the students to have a semester total of at least G*
- M2: Öğrencilerin %T'sinin dönem toplamlarının en az bölümdeki dönem toplamlarının ortalaması kadar olması/ *M2: T% of the students of the department to have a semester total of at least that of the department average*
- M3: Öğrencilerin dönem toplamlarının ortalamasının en az G olması / *M3: Average semester total of students of the department to be at least G*
- M4: Öğrencilerin %T'sinin dönem toplamlarının en az tüm bölümlerdeki tüm öğrencilerin dönem toplamlarının ortalaması kadar olması / *M4: T% of the students of the department to have a semester total of at least average semester total of all students from all departments*

4.2.2. PERFORMANS ÖLÇÜMLERİNDE KULLANILAN METOTLAR VE PERFORMANS SONUÇ DETAYLARI/ METHODS USED IN PERFORMANCE MEASUREMENTS AND PERFORMANCE RESULT DETAILS

4.2.2.1. 2025-2026 Akademik Yılı Güz Dönemi için / For 2025-2026 Academic Year Fall Semester;

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
CS 101 - Algoritmalar ve Programlama I / CS 101 - Algorithms and Programming I													
d	M1	50	75	132	120	93.76	93.7	132	120	100	100	Yeterli ✓ / Sufficient ✓	100
f	M1	60	75	132	120	94.11	94.42	132	120	100	100	Yeterli ✓ / Sufficient ✓	100
CS 102 - Algoritmalar ve Programlama II / CS 102 - Algorithms and Programming II													
a	M1	50	75	37	36	73.45	73.37	37	36	100	100	Yeterli ✓ / Sufficient ✓	100
b	M1	50	75	37	36	71.09	71.01	37	36	100	100	Yeterli ✓ / Sufficient ✓	100
f	M1	60	75	37	36	93.2	93.1	37	36	100	100	Yeterli ✓ / Sufficient ✓	100
CS 223 - Sayısal Devre Tasarımı / CS 223 - Digital Design													
b	M1	50	75	125	125	75	75	121	121	96.8	96.8	Yeterli ✓ / Sufficient ✓	96.8
CS 224 - Bilgisayar Yapısı / CS 224 - Computer Organization													
f	M1	50	75	64	64	87.69	87.69	61	61	95.31	95.31	Yeterli ✓ / Sufficient ✓	95.31
CS 319 - Nesneye Yönelik Yazılım Mühendisliği / CS 319 - Object-Oriented Software Engineering													
a	M1	40	75	139	139	61.33	61.33	132	132	94.96	94.96	Yeterli ✓ / Sufficient ✓	94.96
b	M1	40	75	139	139	70.83	70.83	137	137	98.56	98.56	Yeterli ✓ / Sufficient ✓	98.56
c	M1	50	75	139	139	91.81	91.81	139	139	100	100	Yeterli ✓ / Sufficient ✓	100
e	M1	50	75	139	139	91.81	91.81	139	139	100	100	Yeterli ✓ / Sufficient ✓	100
CS 342 - İşletim Sistemleri / CS 342 - Operating Systems													
f	M1	50	75	31	30	89.34	89.86	31	30	100	100	Yeterli ✓ / Sufficient ✓	100

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
CS 353 - Veri Tabanı Sistemleri / CS 353 - Database Systems													
a	M1	40	75	79	73	60.81	61.44	71	66	89.87	90.41	Yeterli ✓ / Sufficient ✓	90.41
b	M1	50	75	79	73	87.58	87.68	78	72	98.73	98.63	Yeterli ✓ / Sufficient ✓	98.63
CS 473 - Algoritmalar I / CS 473 - Algorithms I													
a	M1	30	75	190	188	63.43	63.71	189	188	99.47	100	Yeterli ✓ / Sufficient ✓	100
b	M1	30	75	190	188	69.2	69.56	187	186	98.42	98.94	Yeterli ✓ / Sufficient ✓	98.94
CS 476 - Otomata Teorisi ve Formal Diller / CS 476 - Automata Theory and Formal Languages													
a	M1	30	75	67	67	48.33	48.33	52	52	77.61	77.61	Yeterli ✓ / Sufficient ✓	77.61
ENG 101 - İngilizce ve Kompozisyon I / ENG 101 - English and Composition I													
c	M1	70	75	1478	129	83.35	87.41	1377	126	93.17	97.67	Yeterli ✓ / Sufficient ✓	97.67
g	M1	70	75	1478	129	83.35	87.41	1377	126	93.17	97.67	Yeterli ✓ / Sufficient ✓	97.67
ENG 102 - İngilizce ve Kompozisyon II / ENG 102 - English and Composition II													
c	M1	70	70	535	42	86.02	90.46	521	41	97.38	97.62	Yeterli ✓ / Sufficient ✓	97.62
g	M1	70	70	535	42	86.02	90.46	521	41	97.38	97.62	Yeterli ✓ / Sufficient ✓	97.62
ENG 401 - Teknik Rapor Yazma ve Sunum / ENG 401 - Technical Report Writing and Presentation													
c	M1	70	80	322	137	90.17	90.48	317	134	98.45	97.81	Yeterli ✓ / Sufficient ✓	97.81
g	M1	70	80	322	137	90.17	90.48	317	134	98.45	97.81	Yeterli ✓ / Sufficient ✓	97.81
GE 100 - Üniversite Hayatına Giriş / GE 100 - Orientation													
c	M1	12	80	1518	130	96.71	98.62	1518	130	100	100	Yeterli ✓ / Sufficient ✓	100
d	M1	12	80	1518	130	96.71	98.62	1518	130	100	100	Yeterli ✓ / Sufficient ✓	100

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
GE 100 - Üniversite Hayatına Giriş / GE 100 - Orientation													
g	M1	12	80	1518	130	96.71	98.62	1518	130	100	100	Yeterli ✓ / Sufficient ✓	100
h	M1	12	80	1518	130	96.71	98.62	1518	130	100	100	Yeterli ✓ / Sufficient ✓	100
GE 251 - Üniversite Etkinlik Programı II / GE 251 - Collegiate Activities Program II													
c	M1	70	70	889	61	92.49	95.16	799	58	89.88	95.08	Yeterli ✓ / Sufficient ✓	95.08
g	M1	70	70	889	61	92.49	95.16	799	58	89.88	95.08	Yeterli ✓ / Sufficient ✓	95.08
h	M1	70	70	889	61	92.49	95.16	799	58	89.88	95.08	Yeterli ✓ / Sufficient ✓	95.08
GE 301 - Bilim, Teknoloji ve Toplum / GE 301 - Science Technology and Society													
d	M1	45	60	358	64	85.47	86.19	358	64	100	100	Yeterli ✓ / Sufficient ✓	100
e	M1	45	60	358	64	85.47	86.19	358	64	100	100	Yeterli ✓ / Sufficient ✓	100
g	M1	45	60	358	64	85.47	86.19	358	64	100	100	Yeterli ✓ / Sufficient ✓	100
HIST 200 - Türkiye Tarihi / HIST 200 - History of Turkey													
c	M1	70	75	1022	107	91.01	93.36	1006	107	98.43	100	Yeterli ✓ / Sufficient ✓	100
e	M1	70	75	1022	107	91.01	93.36	1006	107	98.43	100	Yeterli ✓ / Sufficient ✓	100
g	M1	70	75	1022	107	91.01	93.36	1006	107	98.43	100	Yeterli ✓ / Sufficient ✓	100
HUM 111 - Kùltürler, Medeniyetler ve Düşünceler I / HUM 111 - Cultures Civilizations and Ideas I													
c	M1	60	75	1273	127	83.63	88.19	1262	126	99.14	99.21	Yeterli ✓ / Sufficient ✓	99.21
g	M1	60	75	1273	127	83.63	88.19	1262	126	99.14	99.21	Yeterli ✓ / Sufficient ✓	99.21
HUM 112 - Kùltürler, Medeniyetler ve Düşünceler II / HUM 112 - Cultures Civilizations and Ideas II													
c	M1	60	75	289	44	83.97	87.29	285	44	98.62	100	Yeterli ✓ / Sufficient ✓	100
g	M1	60	75	289	44	83.97	87.29	285	44	98.62	100	Yeterli ✓ / Sufficient ✓	100

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
IE 400 - Mühendislik Yönetiminin İlkeleri / IE 400 - Principles of Engineering Management													
a	M1	30	75	122	117	65.34	65.96	120	115	98.36	98.29	Yeterli ✓ / Sufficient ✓	98.29
e	M1	30	75	122	117	65.34	65.96	120	115	98.36	98.29	Yeterli ✓ / Sufficient ✓	98.29
MATH 101 - Matematik I / MATH 101 - Calculus I													
a	M1	40	50	690	134	55.03	60.24	547	118	79.28	88.06	Yeterli ✓ / Sufficient ✓	88.06
c	M1	40	50	690	134	55.03	60.24	547	118	79.28	88.06	Yeterli ✓ / Sufficient ✓	88.06
e	M1	40	50	690	134	55.03	60.24	547	118	79.28	88.06	Yeterli ✓ / Sufficient ✓	88.06
MATH 102 - Matematik II / MATH 102 - Calculus II													
a	M1	40	50	183	43	59.14	68.16	150	42	81.97	97.67	Yeterli ✓ / Sufficient ✓	97.67
c	M1	40	50	183	43	59.14	68.16	150	42	81.97	97.67	Yeterli ✓ / Sufficient ✓	97.67
e	M1	40	50	183	43	59.14	68.16	150	42	81.97	97.67	Yeterli ✓ / Sufficient ✓	97.67
MATH 132 - Sonlu ve Kombinyasyon Matematik / MATH 132 - Discrete and Combinatorial Mathematics													
a	M1	40	50	155	52	63.28	67.06	144	50	92.9	96.15	Yeterli ✓ / Sufficient ✓	96.15
MATH 225 - Doğrusal Cebir ve Türevsel Denklemler / MATH 225 - Linear Algebra and Differential Equations													
a	M1	40	50	230	81	62.43	64.85	206	76	89.57	93.83	Yeterli ✓ / Sufficient ✓	93.83
MATH 230 - Mühendisler İçin Olasılık ve İstatistik / MATH 230 - Probability and Statistics for Engineers													
a	M1	30	75	223	135	65.13	67.52	223	135	100	100	Yeterli ✓ / Sufficient ✓	100
MBG 110 - Modern Biyolojiye Giriş / MBG 110 - Introduction to Modern Biology													
a	M1	50	50	449	126	77.45	81.87	433	126	96.44	100	Yeterli ✓ / Sufficient ✓	100
PHYS 101 - Genel Fizik I / PHYS 101 - General Physics I													
a	M1	50	50	638	130	73.77	78.27	613	127	96.08	97.69	Yeterli ✓ / Sufficient ✓	97.69
b	M1	50	50	638	130	73.77	78.27	613	127	96.08	97.69	Yeterli ✓ / Sufficient ✓	97.69

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
PHYS 101 - Genel Fizik I / PHYS 101 - General Physics I													
e	M1	50	50	638	130	73.77	78.27	613	127	96.08	97.69	Yeterli ✓ / Sufficient ✓	97.69
g	M1	50	50	638	130	73.77	78.27	613	127	96.08	97.69	Yeterli ✓ / Sufficient ✓	97.69
PHYS 102 - Genel Fizik II / PHYS 102 - General Physics II													
a	M1	50	50	179	44	64.59	69.3	152	40	84.92	90.91	Yeterli ✓ / Sufficient ✓	90.91
b	M1	50	50	179	44	64.59	69.3	152	40	84.92	90.91	Yeterli ✓ / Sufficient ✓	90.91
e	M1	50	50	179	44	64.59	69.3	152	40	84.92	90.91	Yeterli ✓ / Sufficient ✓	90.91
g	M1	50	50	179	44	64.59	69.3	152	40	84.92	90.91	Yeterli ✓ / Sufficient ✓	90.91
TURK 101 - Türkçe I / TURK 101 - Turkish I													
c	M1	70	60	1373	108	87.67	90.3	1347	108	98.11	100	Yeterli ✓ / Sufficient ✓	100
g	M1	70	60	1373	108	87.67	90.3	1347	108	98.11	100	Yeterli ✓ / Sufficient ✓	100
TURK 102 - Türkçe II / TURK 102 - Turkish II													
c	M1	70	60	592	48	88.83	90.93	588	47	99.32	97.92	Yeterli ✓ / Sufficient ✓	97.92
g	M1	70	60	592	48	88.83	90.93	588	47	99.32	97.92	Yeterli ✓ / Sufficient ✓	97.92

4.2.2.2. 2025-2026 Akademik Yılı Bahar Dönemi için / For 2025-2026 Academic Year Spring Semester;

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
CS 101 - Algoritmalar ve Programlama I / CS 101 - Algorithms and Programming I													
d	M1	50	75	57	52	95.53	95.47	57	52	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
f	M1	60	75	57	52	94.79	94.96	57	52	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
CS 102 - Algoritmalar ve Programlama II / CS 102 - Algorithms and Programming II													
a	M1	50	75	90	87	72.11	72.55	90	87	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
b	M1	50	75	90	87	69.20	69.71	84	82	93.33	94.25	Yeterli ✓ / Sufficient ✓	94.25
f	M1	60	75	90	87	97.06	96.95	90	87	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
CS 223 - Sayısal Devre Tasarımı / CS 223 - Digital Design													
b	M1	50	75	45	45	75.64	75.64	44	44	97.78	97.78	Yeterli ✓ / Sufficient ✓	97.78
CS 224 - Bilgisayar Yapısı / CS 224 - Computer Organization													
f	M1	50	75	116	112	86.94	89.51	109	108	93.97	96.43	Yeterli ✓ / Sufficient ✓	96.43
CS 311 - Yapay Zekanın Matematiksel ve Hesaplamalı Temelleri / CS 311 - Mathematical and Computational Foundations of Artificial Intelligence													
a	M1	40	75	23	23	60.29	60.29	19	19	82.61	82.61	Yeterli ✓ / Sufficient ✓	82.61
b	M1	50	75	23	23	93.22	93.22	22	22	95.65	95.65	Yeterli ✓ / Sufficient ✓	95.65
CS 319 - Nesneye Yönelik Yazılım Mühendisliği / CS 319 - Object-Oriented Software Engineering													
a	M1	40	75	74	72	68.74	69.60	70	69	94.59	95.83	Yeterli ✓ / Sufficient ✓	95.83
b	M1	40	75	74	72	61.54	62.28	62	61	83.78	84.72	Yeterli ✓ / Sufficient ✓	84.72
c	M1	50	75	74	72	76.59	77.69	73	72	98.65	100.00	Yeterli ✓ / Sufficient ✓	100.00
e	M1	50	75	74	72	76.59	77.69	73	72	98.65	100.00	Yeterli ✓ / Sufficient ✓	100.00
CS 342 - İşletim Sistemleri / CS 342 - Operating Systems													
f	M1	50	75	184	179	95.57	95.80	184	179	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
CS 353 - Veri Tabanı Sistemleri / CS 353 - Database Systems													
a	M1	40	75	121	121	67.21	67.21	120	120	99.17	99.17	Yeterli ✓ / Sufficient ✓	99.17
b	M1	50	75	121	121	93.60	93.60	121	121	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
CS 473 - Algoritmalar I / CS 473 - Algorithms I													
a	M1	30	75	45	45	43.69	43.69	35	35	77.78	77.78	Yeterli ✓ / Sufficient ✓	77.78
b	M1	30	75	45	45	39.60	39.60	30	30	66.67	66.67	İyileştirmeye Açık! / Insufficient!	66.67
CS 476 - Otomata Teorisi ve Formal Diller / CS 476 - Automata Theory and Formal Languages													
a	M1	30	75	126	125	53.76	53.74	115	114	91.27	91.20	Yeterli ✓ / Sufficient ✓	91.20
ENG 101 - İngilizce ve Kompozisyon I / ENG 101 - English and Composition I													
c	M1	70	75	672	41	81.86	83.90	623	37	92.71	90.24	Yeterli ✓ / Sufficient ✓	90.24
g	M1	70	75	672	41	81.86	83.90	623	37	92.71	90.24	Yeterli ✓ / Sufficient ✓	90.24
ENG 102 - İngilizce ve Kompozisyon II / ENG 102 - English and Composition II													
c	M1	70	70	1314	123	85.76	89.18	1284	123	97.72	100.00	Yeterli ✓ / Sufficient ✓	100.00
g	M1	70	70	1314	123	85.76	89.18	1284	123	97.72	100.00	Yeterli ✓ / Sufficient ✓	100.00
ENG 401 - Teknik Rapor Yazma ve Sunum / ENG 401 - Technical Report Writing and Presentation													
c	M1	70	80	314	59	90.66	90.63	312	58	99.36	98.31	Yeterli ✓ / Sufficient ✓	98.31
g	M1	70	80	314	59	90.66	90.63	312	58	99.36	98.31	Yeterli ✓ / Sufficient ✓	98.31
GE 100 - Üniversite Hayatına Giriş / GE 100 - Orientation													
c	M1	12	80	545	36	95.50	96.94	545	36	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
d	M1	12	80	545	36	95.50	96.94	545	36	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
g	M1	12	80	545	36	95.50	96.94	545	36	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
h	M1	12	80	545	36	95.50	96.94	545	36	100.00	100.00	Yeterli ✓ / Sufficient ✓	100.00
GE 251 - Üniversite Etkinlik Programı II / GE 251 - Collegiate Activities Program II													
c	M1	70	70	1401	148	93.93	95.78	1301	142	92.86	95.95	Yeterli ✓ / Sufficient ✓	95.95
g	M1	70	70	1401	148	93.93	95.78	1301	142	92.86	95.95	Yeterli ✓ / Sufficient ✓	95.95
h	M1	70	70	1401	148	93.93	95.78	1301	142	92.86	95.95	Yeterli ✓ / Sufficient ✓	95.95

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort. / Average (All Std.)	Dept. Öğrenci Ort. / Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
GE 301 - Bilim, Teknoloji ve Toplum / GE 301 - Science Technology and Society													
d	M1	45	60	258	109	83.61	83.68	254	107	98.45	98.17	Yeterli ✓ / Sufficient ✓	98.17
e	M1	45	60	258	109	83.61	83.68	254	107	98.45	98.17	Yeterli ✓ / Sufficient ✓	98.17
g	M1	45	60	258	109	83.61	83.68	254	107	98.45	98.17	Yeterli ✓ / Sufficient ✓	98.17
HIST 200 - Türkiye Tarihi / HIST 200 - History of Turkey													
c	M1	70	75	917	37	91.63	91.56	900	37	98.15	100.00	Yeterli ✓ / Sufficient ✓	100.00
e	M1	70	75	917	37	91.63	91.56	900	37	98.15	100.00	Yeterli ✓ / Sufficient ✓	100.00
g	M1	70	75	917	37	91.63	91.56	900	37	98.15	100.00	Yeterli ✓ / Sufficient ✓	100.00
HUM 111 - Kültürler, Medeniyetler ve Düşünceler I / HUM 111 - Cultures Civilizations and Ideas I													
c	M1	60	75	504	36	81.94	83.90	500	36	99.21	100.00	Yeterli ✓ / Sufficient ✓	100.00
g	M1	60	75	504	36	81.94	83.90	500	36	99.21	100.00	Yeterli ✓ / Sufficient ✓	100.00
HUM 112 - Kültürler, Medeniyetler ve Düşünceler II / HUM 112 - Cultures Civilizations and Ideas II													
c	M1	60	75	1009	134	85.11	87.87	1002	133	99.31	99.25	Yeterli ✓ / Sufficient ✓	99.25
g	M1	60	75	1009	134	85.11	87.87	1002	133	99.31	99.25	Yeterli ✓ / Sufficient ✓	99.25
IE 400 - Mühendislik Yönetiminin İlkeleri / IE 400 - Principles of Engineering Management													
a	M1	30	75	134	105	61.00	60.76	129	101	96.27	96.19	Yeterli ✓ / Sufficient ✓	96.19
e	M1	30	75	134	105	61.00	60.76	129	101	96.27	96.19	Yeterli ✓ / Sufficient ✓	96.19
MATH 101 - Matematik I / MATH 101 - Calculus I													
a	M1	40	50	220	38	52.69	58.19	149	31	67.73	81.58	Yeterli ✓ / Sufficient ✓	81.58
c	M1	40	50	220	38	52.69	58.19	149	31	67.73	81.58	Yeterli ✓ / Sufficient ✓	81.58
e	M1	40	50	220	38	52.69	58.19	149	31	67.73	81.58	Yeterli ✓ / Sufficient ✓	81.58
MATH 102 - Matematik II / MATH 102 - Calculus II													
a	M1	40	50	618	128	49.37	53.30	432	97	69.90	75.78	Yeterli ✓ / Sufficient ✓	75.78
c	M1	40	50	618	128	49.37	53.30	432	97	69.90	75.78	Yeterli ✓ / Sufficient ✓	75.78
e	M1	40	50	618	128	49.37	53.30	432	97	69.90	75.78	Yeterli ✓ / Sufficient ✓	75.78

Program Çıktısı/ Program Outcome	Yeterlilik Hesaplama Yöntemi/ Method	(Ortalama) Yeterlilik Notu/ Minimum Successful Grade	Yeterlilik Eşiği (%) / Threshold Percentage (%)	Toplam Öğrenci Sayısı / Number of Students (All)	Toplam Dept. Öğrenci Sayısı / Number of Students (Dept.)	Tüm Öğrenci Ort./ Average (All Std.)	Dept. Öğrenci Ort./ Average (Dept. Std.)	Yeterliliği Sağlayan Öğrenci Sayısı (Toplam) / Number of Succ. Students (All)	Yeterliliği Sağlayan Öğrenci Sayısı (Dept.) / Number of Succ. Students (Dept.)	Yeterlilik Oranı (Toplam Öğrenci) / Success Ratio (All)	Yeterlilik Oranı (Bölüm Öğrenci) / Success Ratio (Dept.)	Performans / Performance	Yeterlilik Oranı / Success Ratio
MATH 132 - Sonlu ve Kombinyon Matematik / MATH 132 - Discrete and Combinatorial Mathematics													
a	M1	40	50	276	118	56.78	61.35	235	106	85.14	89.83	Yeterli ✓ / Sufficient ✓	89.83
MATH 225 - Doğrusal Cebir ve Türevsel Denklemler / MATH 225 - Linear Algebra and Differential Equations													
a	M1	40	50	201	126	64.19	65.71	190	119	94.53	94.44	Yeterli ✓ / Sufficient ✓	94.44
MATH 230 - Mühendisler İçin Olasılık ve İstatistik / MATH 230 - Probability and Statistics for Engineers													
a	M1	30	75	103	71	54.48	55.18	92	64	89.32	90.14	Yeterli ✓ / Sufficient ✓	90.14
MBG 110 - Modern Biyolojiye Giriş / MBG 110 - Introduction to Modern Biology													
a	M1	50	50	570	39	70.51	76.39	517	39	90.70	100.00	Yeterli ✓ / Sufficient ✓	100.00
PHYS 101 - Genel Fizik I / PHYS 101 - General Physics I													
a	M1	50	50	197	24	65.15	77.13	157	23	79.70	95.83	Yeterli ✓ / Sufficient ✓	95.83
b	M1	50	50	197	24	65.15	77.13	157	23	79.70	95.83	Yeterli ✓ / Sufficient ✓	95.83
e	M1	50	50	197	24	65.15	77.13	157	23	79.70	95.83	Yeterli ✓ / Sufficient ✓	95.83
g	M1	50	50	197	24	65.15	77.13	157	23	79.70	95.83	Yeterli ✓ / Sufficient ✓	95.83
PHYS 102 - Genel Fizik II / PHYS 102 - General Physics II													
a	M1	50	50	649	140	66.67	69.56	570	130	87.83	92.86	Yeterli ✓ / Sufficient ✓	92.86
b	M1	50	50	649	140	66.67	69.56	570	130	87.83	92.86	Yeterli ✓ / Sufficient ✓	92.86
e	M1	50	50	649	140	66.67	69.56	570	130	87.83	92.86	Yeterli ✓ / Sufficient ✓	92.86
g	M1	50	50	649	140	66.67	69.56	570	130	87.83	92.86	Yeterli ✓ / Sufficient ✓	92.86
TURK 101 - Türkçe I / TURK 101 - Turkish I													
c	M1	70	60	597	39	85.40	88.54	578	39	96.82	100.00	Yeterli ✓ / Sufficient ✓	100.00
g	M1	70	60	597	39	85.40	88.54	578	39	96.82	100.00	Yeterli ✓ / Sufficient ✓	100.00
TURK 102 - Türkçe II / TURK 102 - Turkish II													
c	M1	70	60	1352	107	88.98	92.29	1335	106	98.74	99.07	Yeterli ✓ / Sufficient ✓	99.07
g	M1	70	60	1352	107	88.98	92.29	1335	106	98.74	99.07	Yeterli ✓ / Sufficient ✓	99.07

4.3. PERFORMANS ÖLÇÜM SONUÇLARI / PERFORMANCE MEASUREMENT RESULTS

4.3.1. PROGRAM ÇIKTILARI PERFORMANS TABLOSU / PROGRAM OUTCOMES PERFORMANCE TABLE

4.3.1.1. 2025-2026 Akademik Yılı Güz Dönemi için / For 2025-2026 Academic Year Fall Semester;

Dersler/ Courses	Program Çıktıları / Program Outcomes								Dersler/ Courses	Program Çıktıları / Program Outcomes							
	a	b	c	d	e	f	g	h		a	b	c	d	e	f	g	h
CS 101				100		100			HIST 200			100		100		100	
CS 102	100	100				100			HUM 111			99.21				99.21	
CS 223		96.8							HUM 112			100				100	
CS 224						95.31			IE 400	98.29				98.29			
CS 319	94.96	98.56	100		100				MATH 101	88.06		88.06		88.06			
CS 342						100			MATH 102	97.67		97.67		97.67			
CS 353	90.41	98.63							MATH 132	96.15							
CS 473	100	98.94							MATH 225	93.83							
CS 476	77.61								MATH 230	100							
ENG 101			97.67				97.67		MBG 110	100							
ENG 102			97.62				97.62		PHYS 101	97.69	97.69			97.69		97.69	
ENG 401			97.81				97.81		PHYS 102	90.91	90.91			90.91		90.91	
GE 100			100	100			100	100	TURK 101			100				100	
GE 251			95.08				95.08	95.08	TURK 102			97.92				97.92	
GE 301				100	100		100										

Tablo.4.3.1.1. 2025-2026 Akademik Yılı Güz Dönemi Bilgisayar Mühendisliği Lisans Programı Program Çıktıları Performans Tablosu /
Table.4.3.3.1. 2025-2026 Academic Year Fall Semester Computer Engineering Undergraduate Program - Program Outcomes Performance Table

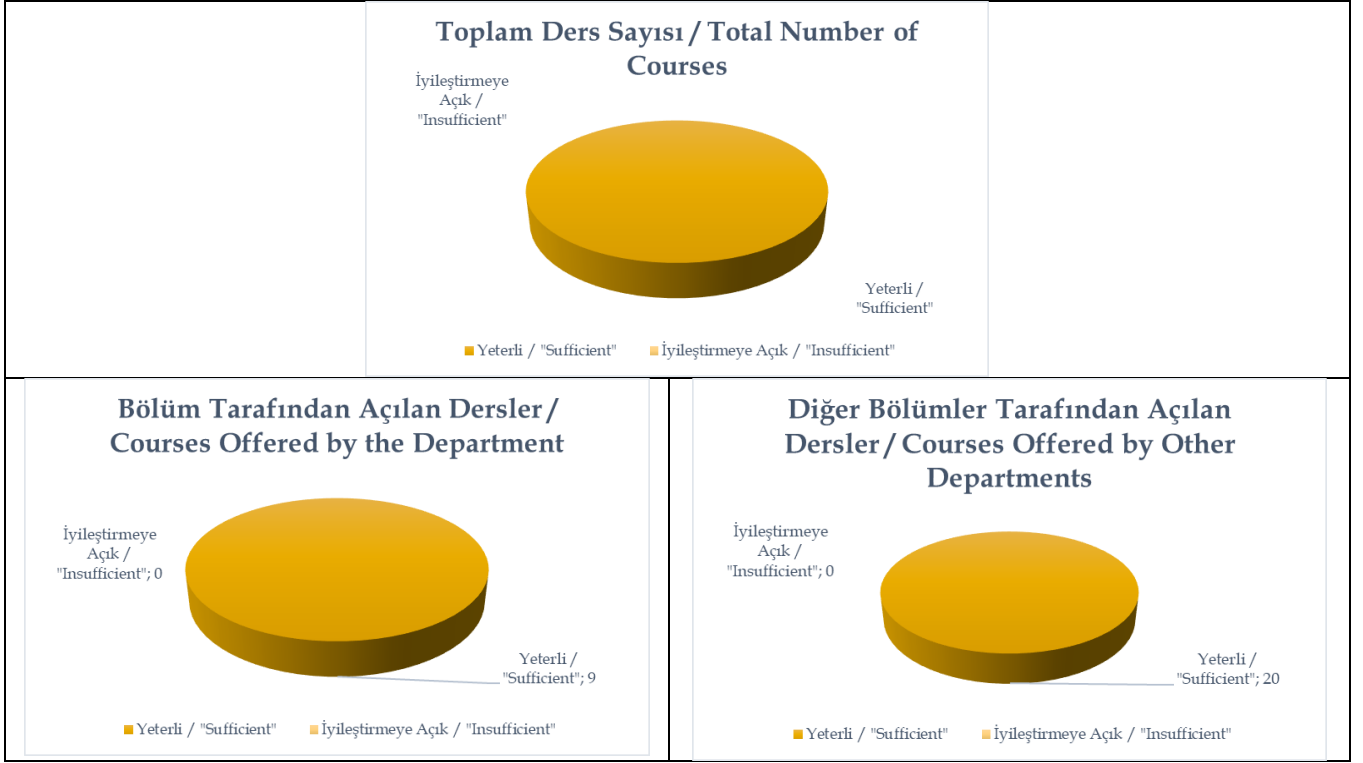
4.3.1.2. 2025-2026 Akademik Yılı Bahar Dönemi için / For 2025-2026 Academic Year Spring Semester;

Dersler / Courses	Program Çıktıları / Program Outcomes								Dersler / Courses	Program Çıktıları / Program Outcomes							
	a	b	c	d	e	f	g	h		a	b	c	d	e	f	g	h
CS 101				100.00		100.00			GE 301				98.17	98.17		98.17	
CS 102	100.00	94.25				100.00			HIST 200			100.00		100.00		100.00	
CS 223		97.78							HUM 111			100.00				100.00	
CS 224						96.43			HUM 112			99.25				99.25	
CS 311	82.61	95.65							IE 400	96.19				96.19			
CS 319	95.83	84.72	100.00		100.00				MATH 101	81.58		81.58		81.58			
CS 342						100.00			MATH 102	75.78		75.78		75.78			
CS 353	99.17	100.00							MATH 132	89.83							
CS 473	77.78	66.67							MATH 225	94.44							
CS 476	91.20								MATH 230	90.14							
ENG 101			90.24				90.24		MBG 110	100.00							
ENG 102			100.00				100.00		PHYS 101	95.83	95.83			95.83		95.83	
ENG 401			98.31				98.31		PHYS 102	92.86	92.86			92.86		92.86	
GE 100			100.00	100.00			100.00	100.00	TURK 101			100.00				100.00	
GE 251			95.95				95.95	95.95	TURK 102			99.07				99.07	

Tablo.4.3.1.1. 2025-2026 Akademik Yılı Bahar Dönemi Bilgisayar Mühendisliği Lisans Programı Program Çıktıları Performans Tablosu /
Table.4.3.3.1. 2025-2026 Academic Year Spring Semester Computer Engineering Undergraduate Program - Program Outcomes Performance Table

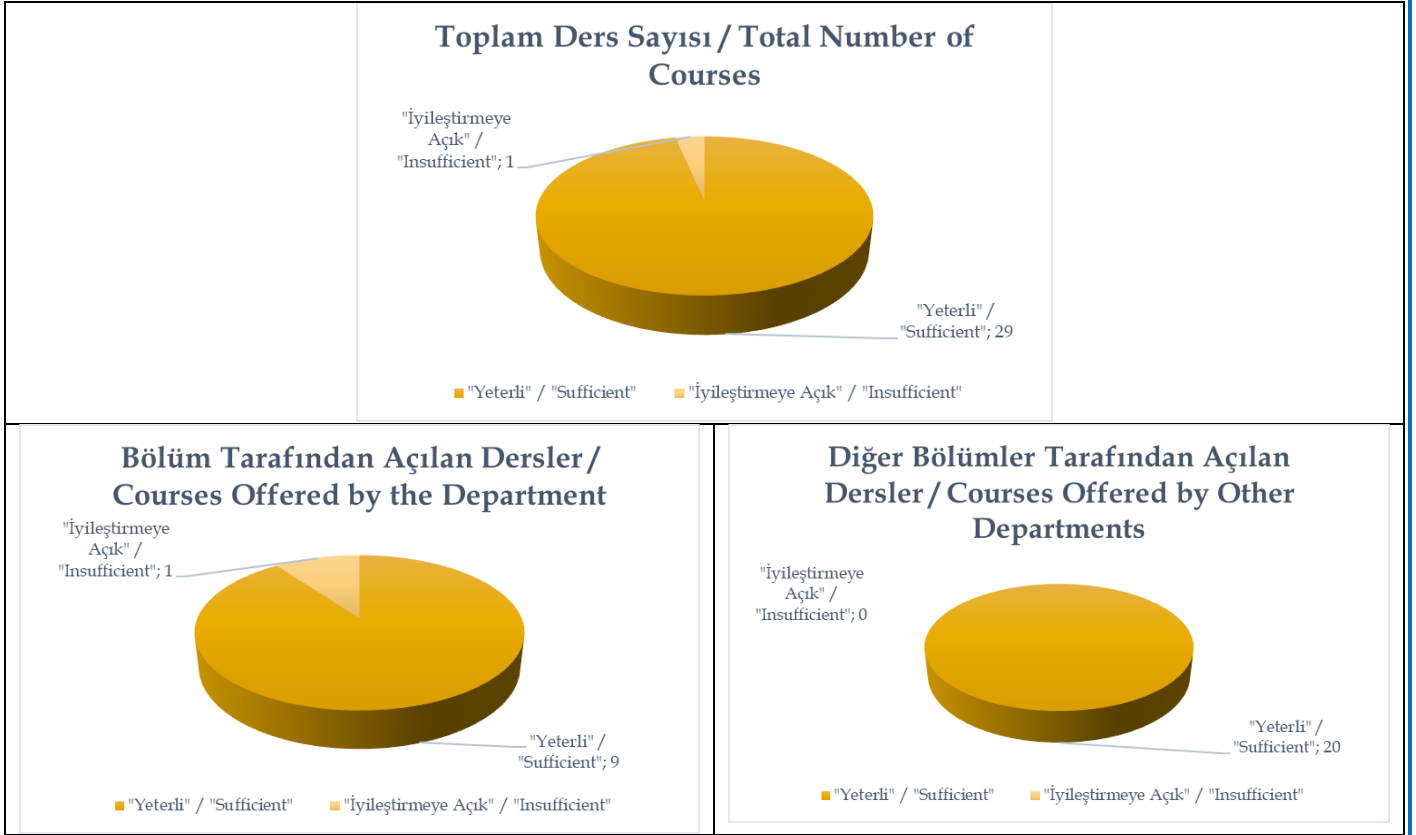
4.3.2. PROGRAM ÇIKTILARI PERFORMANS ANALİZLERİ / PROGRAM OUTCOMES PERFORMANCE ANALYSIS

4.3.2.1. 2025-2026 Akademik Yılı Güz Dönemi için / For 2025-2026 Academic Year Fall Semester;



Tablo.4.3.2.1. 2025-2026 Akademik Yılı Güz Dönemi Bilgisayar Mühendisliği Lisans Programı Program Çıktıları Performans Analizleri Tablosu (Dersler için) / **Table.4.3.2.1.** 2025-2026 Academic Year Fall Semester Computer Engineering Undergraduate Program - Program Outcomes Performance Analysis Table (For Courses)

4.3.2.2. 2025-2026 Akademik Yılı Bahar Dönemi için / For 2025-2026 Academic Year Spring Semester;



Tablo.4.3.2.2. 2025-2026 Akademik Yılı Bahar Dönemi Bilgisayar Mühendisliği Lisans Programı Program Çıktıları Performans Analizleri Tablosu (Dersler için) / **Table.4.3.2.2.** 2025-2026 Academic Year Spring Semester Computer Engineering Undergraduate Program - Program Outcomes Performance Analysis Table (For Courses)



CS 473 için b program çıktısında yeterlilik kriteri sağlanamamıştır. / The qualification criteria for CS 473, program outcome b was insufficient.

5. DEĞERLENDİRME / EVALUATION

5.1. PROGRAM ÇIKTILARI ÖLÇÜM SONUÇLARININ DEĞERLENDİRİLMESİ / EVALUATION OF PROGRAM OUTCOMES MEASUREMENT RESULTS

The Program Outcomes of the Bachelor of Science in Computer Engineering program are given below:

- a) An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- b) An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental, and economic factors.
- c) An ability to communicate effectively with a range of audiences.
- d) An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- e) An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- f) An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
- g) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
- h) Take advantage of the campus life where students are engaged in diversity, creativity and commitment outside coursework through artistic, cultural, sportive and intellectual activities.

To support the continuous improvement of the program, the Program Outcomes are regularly assessed and reviewed. Each outcome is associated with a set of required courses in the curriculum that are designated for assessment purposes.

For course-based assessment of Program Outcomes, data are collected from all students enrolled in the relevant courses. However, only students who successfully complete the course are included in the analysis. Accordingly, students who receive grades of W, F, FX, FZ, or U are excluded from the evaluation. Program Outcomes are assessed using the following metric:

M1: At least T% of students achieve a grade of G or higher, where G represents the minimum grade considered indicative of satisfactory attainment of the relevant Program Outcome, and T denotes the threshold percentage of successful students. For departmental courses, the faculty-wide benchmark is currently set at 75%. The value of G is determined individually for each course based on the expected level of achievement associated with the course's contribution to the corresponding Program Outcome.

The following assessment summarizes the extent to which the Program Outcomes are attained through the required courses included in the curriculum.

- Program Outcome (a)

The curriculum includes 15 required courses that assess students' ability to identify, formulate, and solve complex engineering problems. These courses are CS 102, CS 311, CS 319, CS 353, CS 473, CS 476, IE 400, MATH 101, MATH 102, MATH 132, MATH 225, MATH 230, MBG 110, PHYS 101, and PHYS 102. Student performance in all assessed courses meets the established criterion; therefore, no corrective actions are required.

- Program Outcome (b)

Students' ability to apply the engineering design process to develop solutions that meet specified needs is assessed through eight courses: CS 102, CS 223, CS 311, CS 319, CS 353, CS 473, PHYS 101, and PHYS 102. The assessment results indicate that this learning outcome has been achieved at a satisfactory level in all courses except CS 473, and no further action is required. CS 473 course, however, has been placed under monitoring for future semesters.

- Program Outcome (c)

The curriculum contains 13 courses that directly evaluate students' communication skills: CS 319, ENG 101, ENG 102, ENG 401, GE 100, GE 251, HIST 200, HUM 111, HUM 112, MATH 101, MATH 102, TURK 101, and TURK 102. Student achievement in these courses is within the acceptable range, indicating successful attainment of the outcome.

- Program Outcome (d)

Students' ability to recognize ethical and professional responsibilities and to make informed judgments considering the broader impact of engineering solutions is assessed through CS 101, GE 100, and GE 301. The assessment results demonstrate satisfactory performance; consequently, no actions are required.

- Program Outcome (e)

The ability to function effectively as a member of a team is evaluated through eight courses: CS 319, GE 301, HIST 200, IE 400, MATH 101, MATH 102, PHYS 101, and PHYS 102. Student performance meets the established benchmark in all assessed courses, and therefore no corrective measures are needed.

- Program Outcome (f)

Students' ability to develop and conduct experiments, analyze and interpret data, and use engineering judgment to draw conclusions is assessed through CS 101, CS 102, CS 224, and CS 342. The assessment results indicate satisfactory attainment of this outcome, and no further action is required.

- Program Outcome (g)

The ability to acquire and apply new knowledge using appropriate learning strategies is evaluated through 13 courses: ENG 101, ENG 102, ENG 401, GE 100, GE 251, GE 301, HIST

200, HUM 111, HUM 112, PHYS 101, PHYS 102, TURK 101, and TURK 102. Student achievement in these courses satisfies the established criterion, indicating successful attainment of the outcome.

- Program Outcome (h)

This university-wide Program Outcome focuses on fostering student engagement in diversity, creativity, and commitment through participation in artistic, cultural, athletic, and intellectual activities beyond the classroom. Attainment of this outcome is assessed through GE 100 and GE 251. Assessment results demonstrate satisfactory student performance, and no additional actions are required.

Overall, the assessment results indicate that all Program Outcomes are being successfully achieved through the required courses included in the curriculum. But CS 473 course for (b) program outcome was insufficient, It has been placed under monitoring for the upcoming periods. Student performance consistently meets the established benchmarks, demonstrating that the curriculum effectively supports the attainment of the program's educational objectives. Consequently, no corrective actions are deemed necessary based on the current assessment cycle.

In addition to direct assessment methods based on coursework, the program also employs an indirect assessment mechanism through the Graduation Survey, which is administered at the end of each academic year. The survey is conducted online and distributed to all students who are expected to graduate within the same calendar year. One section of the survey is specifically designed to evaluate the attainment of the Program Outcomes and consists of a total of ten questions.

The assessment results obtained from this section of the Graduation Survey conducted at the end of the 2024–2025 academic year are presented in Table.A.1 of Appendix A. Students were asked to indicate their level of agreement regarding the extent to which the Program Outcomes had been achieved using a five-point Likert scale, where 1 represents the lowest level of agreement and 5 represents the highest. For assessment purposes, a mean score of 3.0 was established as the minimum acceptable level of attainment.

The results indicate that the mean scores for all questions corresponding to Program Outcomes (a) through (h) are substantially above the established threshold of 3.0 out of 5. These findings suggest that graduating students perceive the Program Outcomes to have been successfully achieved. Therefore, no corrective actions or improvement recommendations are deemed necessary based on the results of the most recent Graduation Survey.

Curriculum Changes in the 2025-2026 Academic Year

Beginning with the 2025–2026 Academic Year, two new required courses, CS 211 and CS 311, have been introduced into the undergraduate curriculum.

CS 211 (Data Structures) replaces the former courses CS 201 and CS 202, both of which have been removed from the program. The data structures topics previously distributed across CS 201 and CS 202 have been consolidated and streamlined into CS 211, providing students with a more integrated and coherent treatment of the subject.

The second new course, CS 311 (Mathematical and Computational Foundations of Artificial Intelligence), has been added to provide students with the theoretical foundations necessary for advanced study in artificial intelligence. The course is designed to prepare students for the AI-related courses offered within the Technical Electives group by establishing a strong mathematical and computational background. It covers the fundamental concepts required for the analysis and development of intelligent systems, including linear algebra, probability theory, calculus, optimization, and statistical inference.

Another curriculum revision has been the introduction of two new capstone design courses, CS 493 (Industrial Design Project I) and CS 494 (Industrial Design Project II), into the Senior Project Elective pool. These courses are designed to provide students with the opportunity to undertake technical and innovative team-based projects in collaboration with industry partners. Emphasizing engineering design principles, the courses enable students to address real-world problems and develop practical solutions in specialized areas of computer science and engineering while gaining valuable industry experience.

The remaining updates to the undergraduate curriculum can be summarized as follows. The number of Technical Elective courses has been increased from five to six, providing students with greater flexibility to pursue specialized areas of interest. The content of CS 101 (Algorithms and Programming I) has been revised to reflect current developments and emerging trends in programming. In addition, the semester placement of several required courses has been adjusted to ensure coherence and alignment with the broader curriculum revisions.

A summary of all curriculum modifications is provided in Table.B.1 of Appendix B.

Involvement of QME Members

At the beginning of the 2025–2026 academic year, the QME team of the Computer Engineering Department was reconstituted. The current faculty members of the team are:

- Prof. Dr. Özgür Ulusoy
- Prof. Dr. Uğur Güdükbay
- Prof. Dr. İbrahim Körpeoğlu
- Dr. Öğretim Üyesi Özgür Öğüz
- Dr. Öğretim Üyesi Doruk Öner

To encourage active student involvement in quality assurance and continuous improvement activities, the department's QME Team also includes student representatives. The undergraduate student membership was renewed at the beginning of the 2025–2026 academic year. In addition, starting from the Spring semester, two graduate students joined the team to further strengthen student participation and representation.

The current student members of the Computer Engineering Department QME Team are:

- Berke Kuzey Ardıç (undergraduate student)
- Atahan Akar (undergraduate student)
- Fatih Pehlivan (MS student)

- Serkan Demirci (PhD student)

The inclusion of both undergraduate and graduate student representatives ensures that the perspectives and feedback of students at different levels of the program are incorporated into the department's quality improvement processes.

During the past academic year, the QME Team of the Computer Engineering Department held three meetings, the minutes of which are included in Appendix C.

The first meeting took place on October 17, 2025. During this meeting, the newly appointed faculty and student members were introduced to the university-wide quality assurance initiatives carried out within the framework of the Bilkent University Quality Assurance System, as well as the operation of the Quality Management in Education (QME) System, which constitutes an integral component of the university's overall quality assurance framework. The team members were also briefed on the department's ongoing QME activities, including the periodic assessment of program outcomes and educational objectives, and the evaluation studies for the undergraduate program scheduled to be conducted during the Fall semester of the 2025–2026 academic year. In addition, information was provided regarding the planned assessment and evaluation processes for the program outcomes of department's M.S. and Ph.D. programs, which were initiated beginning with the 2025–2026 academic year. Faculty and student representatives were invited to share their views on these topics, and their feedback, suggestions, and questions were discussed during the meeting.

The second meeting of the QME Team of the Computer Engineering Department was held on February 12, 2026. During this meeting, the newly appointed graduate student representatives were informed about the structure and operation of the QME system, as well as the department's quality assurance activities, including the periodic evaluation of program outcomes and educational objectives. The results of the program outcome assessment and evaluation activities conducted during the Fall semester of the 2025–2026 academic year were presented and reviewed with the team members. Feedback, comments, and suggestions from both faculty members and student representatives regarding the evaluation results were collected and discussed. In addition, the team reviewed the assessment and evaluation processes for the department's M.S. and Ph.D. program outcomes, which had been initiated at the beginning of the Fall semester. The meeting provided an opportunity to discuss the progress of these activities, address questions, and gather input from team members regarding their implementation and future development.

The third meeting was held on June 17, 2026. During the meeting, the assessment results of the Undergraduate Program Outcomes for the Spring semester of the 2025–2026 academic year were reviewed by the QME Committee members and student representatives. Feedback and suggestions regarding the content of the Annual QME Report, which documents the evaluation and continuous improvement activities of the department's undergraduate program, were collected, and the preparation of the 2025–2026 Academic Year report was initiated. Also, the committee reviewed the assessment activities and measurement results related to the M.S. and Ph.D. Program Outcomes for the Spring semester of the 2025–2026 academic year.

5.2. EĞİTİM AMAÇLARININ DEĞERLENDİRİLMESİ / *EVALUATION OF EDUCATIONAL OBJECTIVES*

The Educational Objectives of the Bachelor of Science in Computer Engineering program are as follows:

Bilkent University Computer Engineering Department graduates

- 1) establish successful careers in computer engineering and science, demonstrating strong technical competence and proficiency while adapting to technology changes;
- 2) successfully complete advanced studies and research in graduate programs to become recognized and influential experts in their fields;
- 3) develop innovative solutions in computer engineering practice and research using creativity and analytical thinking;
- 4) are model professionals, exhibiting strong soft skills including collaboration, leadership, initiative, and integrity.

The Educational Objectives are evaluated through the External Advisory Board (EAB) Meetings and the Graduation Survey.

The External Advisory Board consists of both employers and alumni. The board typically meets annually or biennially, and most of its membership is renewed at each consecutive meeting. In at least two out of every three successive EAB meetings, the agenda includes a review of the Educational Objectives. During these meetings, employers and alumni are invited to provide feedback regarding the expected competencies of graduates from the Computer Engineering Department at Bilkent University.

The most recent EAB meeting was held on May 5, 2025, where the Educational Objectives were reviewed along with other agenda items. Details of this meeting were included in the Annual QME Report for the 2024–2025 academic year. As reported previously, all EAB members considered the existing Program Educational Objectives to be well-defined, appropriate, and satisfactory, and recommended their continuation without modification. Based on this feedback, no changes to the Educational Objectives were deemed necessary. A summary of the EAB meeting minutes is provided in Appendix D.

In addition to the EAB meetings, the Educational Objectives are also assessed through the Graduation Survey. Students' views regarding the Educational Objectives of the program are collected in the final section of the survey.

In the Graduation Survey administered at the end of the 2024–2025 academic year, students were asked the following question:

“What would you like to achieve in your career in three to five years after graduation?”

Students were then presented with the list shown in Table.A.2 of Appendix A and asked to indicate their preferences. The table summarizes the scores assigned to each characteristic by graduating students. The results indicate that students generally consider all listed characteristics to be important.

Appendix A. Graduation Survey Results

TableA.1. Graduation Survey Results on Program Outcomes

	Mean
(a) Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	4.37
(b) Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	4.31
(c) Communicate effectively with a range of audiences.	
• Communicate effectively in writing with a range of audiences.	4.50
• Perform effective oral communication with a range of audiences	4.42
(d) Ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	4.19
(e) Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	
• Function on a team whose members together provide leadership, create a collaborative and inclusive environment.	4.27
• Establish goals, plan tasks, and meet objectives individually and also in teams.	4.42
(f) Develop and conduct experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.29
(g) Acquire and apply new knowledge if needed, using appropriate learning strategies.	4.65
(h) Take advantage of the campus life through artistic, cultural, sportive and intellectual activities.	3.65

Table.A.2. Graduation Survey Results on Educational Objectives

Characteristic	Response (%)	Response Count
Establish successful careers in computer engineering and science, and demonstrating strong technical competence and proficiency while adapting to technology changes	72.50	37
Successfully complete advanced studies and research in graduate programs	43.10	22
Able to develop innovative solutions in computer engineering practice and research using creativity and analytical thinking, and become a recognized and influential expert in your field	54.90	28
Be a role model as a professional, exhibit strong soft skills including collaboration, leadership, initiative, and integrity	52.90	27

Appendix B. 2025 Curriculum Update

Table.B.1. Summary of changes

Course	Action	Effective from
CS 101	Content change	2025 Fall
CS 211	New course in CS_BS program	2027 Spring
CS 311	New course in CS_BS program	2027 Fall
CS 493	New course in CS_BS program CS_PRJ (Project Elective) pool	2025 Fall
CS 494	New course in CS_BS program CS_PRJ (Project Elective) pool	2026 Spring
CS 315	Status changed from mandatory in CS_BS to elective in CS_BS program CS_RE (Technical Elective) pool	2025 Fall
CS 319	Moved from 3rd year 1st semester to 2nd year 2nd semester	2027 Spring
CS 353	Moved from 3rd year 2nd semester to 3rd year 1st semester	2027 Fall
CS 473	Moved from 3rd year 2nd semester to 3rd year 1st semester	2025 Fall
CS 476	Moved from 4th year 2nd semester to 3rd year 2nd semester	2026 Fall (from 4.2 to 4.1), 2028 Spring (from 4.1 to 3.2)
MATH 225	Moved from 2nd year 2nd semester to 2nd year 1st semester	2026 Fall
MATH 230	Moved from 3rd year 1st semester to 2nd year 2nd semester	2027 Spring
HIST 200	Moved from 2nd year 2nd semester to 4th year 2nd semester	2026 Spring
Engineering Elective (CS_EE)	Moved from 4th year 1st semester to 3rd year 2nd semester	2026 Spring
Technical Elective (CS_RE)	Increased from 5 to 6 courses	2025 Fall

Appendix C. QME Team Meeting Logs

Bilkent Üniversitesi

Bilgisayar Mühendisliği Bölümü

Eğitimde Kalite Güvencesi (QME) Komitesi Toplantısı

Tarih	Saat	Yer
17 Ekim 2025	13:30	EA-516

Katılımcılar:

- Özgür ULUSOY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Başkanı
- Uğur GÜDÜKBAY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- İbrahim KÖRPEOĞLU, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Özgür Salih ÖĞÜZ, Doktor Öğretim Üyesi, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Doruk ÖNER, Doktor Öğretim Üyesi, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Berke Kuzey ARDIÇ, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Bölüm Öğrenci Temsilcisi
- Atakan AKAR, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Bölüm Öğrenci Temsilcisi

Gündem:

1. Bilkent Üniversitesi Eğitimde Kalite Güvence Sistemi (QME) hakkında yenilenen bölüm komitesi üyelerinin ve öğrenci temsilcilerinin komite başkanı Özgür ULUSOY tarafından bilgilendirilmesi, üyelerin ve öğrenci temsilcilerinin görüşlerinin alınması.
2. Bilgisayar Mühendisliği Bölümü QME çalışmaları hakkında bölüm komite üyelerinin ve öğrenci temsilcilerinin bilgilendirilmesi, üyelerin ve öğrenci temsilcilerinin görüşlerinin alınması.
3. Bilgisayar Mühendisliği Bölümü Lisans eğitimi program çıktıları ve program eğitim amaçlarının 2025 – 2026 Güz dönemi ölçme ve değerlendirme çalışmaları hakkında bölüm komite üyelerinin ve öğrenci temsilcilerinin bilgilendirilmesi, üyelerin ve öğrenci temsilcilerinin görüşlerinin alınması.
4. Yüksek Lisans ve Doktora Programları için üniversite genelinde 2025 – 2026 Güz döneminden itibaren yürürlüğe girecek olan program çıktıları ve program eğitim

amaçlarının ölçme-değerlendirme çalışmaları hakkında bölüm komite üyelerinin ve öğrenci temsilcilerinin bilgilendirilmesi, üyelerin ve öğrenci temsilcilerinin görüşlerinin alınması.

Görüşülenler - Kararlar:

Gündem.1

Bilkent Üniversitesi Kalite Güvence Sistemi kapsamında üniversite genelinde yürütülmekte olan çalışmalar ve bu sistemin bir bileşeni olan Eğitimde Kalite Güvence Sistemi (QME)'nin işleyişi hakkında Bilgisayar Mühendisliği Bölümü'nün yenilenen QME komitesi üyeleri ve öğrenci temsilcileri, QME bölüm komitesi başkanı Özgür ULUSOY tarafından bilgilendirilmiştir. Komite üyelerinin ve öğrencilerin konu hakkındaki görüşleri alınmış, soruları cevaplandırılmıştır.

Gündem.2

Bilgisayar Mühendisliği Bölümü tarafından yürütülen QME çalışmaları hakkında komite üyeleri ve öğrenci temsilcileri bilgilendirilmiştir. Bu çalışmalar kapsamında gerçekleştirilen, program çıktıları ve program eğitim amaçları periyodik ölçme-değerlendirme faaliyetleri üzerinden gidilmiştir. Komite üyelerinin ve öğrencilerin konu hakkındaki görüşleri alınmış, soruları cevaplandırılmıştır.

Gündem.3

2025-2026 Güz döneminde yürütülecek olan Bilgisayar Mühendisliği Bölümü Lisans Programı'nın program çıktıları ile program eğitim amaçlarının ölçme ve değerlendirme çalışmalarına ilişkin değerlendirmeler yapılmıştır. Geçmiş dönemler için elde edilen sonuçlar değerlendirilmiş, müfredatta yapılan değişiklikler de göz önüne alınarak mevcut dönem ve sonrası için alınması gereken tedbirler üzerinde görüşler alınmıştır.

Gündem.4

Yüksek Lisans ve Doktora Programları için 2025-2026 Güz döneminden itibaren uygulanacak program çıktıları ile program eğitim amaçlarının ölçme ve değerlendirme çalışmalarına ilişkin değerlendirmeler yapılmıştır. Bu kapsamda, Bilgisayar Mühendisliği Bölümü tarafından başlatılan çalışmalar ve alınan önlemler üzerine görüş alışverişinde bulunulmuştur.

Bilkent Üniversitesi

Bilgisayar Mühendisliği Bölümü

Eğitimde Kalite Güvencesi (QME) Komitesi Toplantısı

Tarih	Saat	Yer
12 Şubat 2026	10:30	EA-409

Katılımcılar:

- Özgür ULUSOY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Başkanı
- Uğur GÜDÜKBAY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- İbrahim KÖRPEOĞLU, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Özgür Salih ÖĞÜZ, Doktor Öğretim Üyesi, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Doruk ÖNER, Doktor Öğretim Üyesi, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Berke Kuzey ARDIÇ, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Lisans Programı Öğrenci Temsilcisi
- Fatih PEHLİVAN, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Yüksek Lisans Programı Öğrenci Temsilcisi
- Serkan DEMİRCİ, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Doktora Programı Öğrenci Temsilcisi

Gündem:

- Bilkent Üniversitesi Eğitimde Kalite Güvence Sistemi (QME) ve Bilgisayar Mühendisliği Bölümü QME Komitesinin bu sistem kapsamında yürütmekte olduğu çalışmalar hakkında komiteye yeni katılan Yüksek Lisans ve Doktora öğrenci temsilcilerinin komite başkanı Özgür ULUSOY tarafından bilgilendirilmesi, öğrenci temsilcilerinin görüşlerinin alınması.
- Bilgisayar Mühendisliği Bölümü Lisans eğitimi program çıktılarının 2025 – 2026 Güz dönemi ölçüm sonuçlarının bölüm QME Komitesi üyeleri ve öğrenci temsilcileri tarafından değerlendirilmesi.
- Yüksek Lisans ve Doktora Programları için üniversite genelinde 2025 – 2026 Güz döneminden itibaren başlatılan ve Bilgisayar Mühendisliği Bölümü QME Komitesinin bu kapsamda yürütmekte olduğu program çıktıları ölçme-değerlendirme çalışmaları hakkında bölüm komite üyelerinin ve öğrenci temsilcilerinin komite başkanı Özgür ULUSOY tarafından bilgilendirilmesi, üyelerin ve öğrenci temsilcilerinin görüşlerinin alınması.

4. Bilgisayar Mühendisliği Bölümü Lisans, Yüksek Lisans ve Doktora eğitimi program çıktılarının 2025 – 2026 Bahar dönemi ölçme-değerlendirme çalışmalarına yönelik olarak dönem başında yapılan hazırlıklarla ilgili bilgilendirme yapılması, görüşlerin alınması.

Görüşülenler - Kararlar:

Gündem.1

Bilgisayar Mühendisliği Bölümü Eğitimde Kalite Güvence Sistemi (QME) Komitesine Yüksek Lisans öğrencilerini temsilen seçilen Fatih PEHLİVAN ve Doktora öğrencilerini temsilen seçilen Serkan DEMİRCİ, Komite üyeleri ile tanıştırılmış; komite başkanı Özgür ULUSOY tarafından öğrenci temsilcilerine üniversitenin QME sistemi ve bölümümüzün bu sistem kapsamında yürütmekte olduğu çalışmalar hakkında bilgilendirme yapılmıştır. Öğrenci temsilcilerinin konu hakkındaki soruları cevaplandırılmış ve görüşleri alınmıştır.

Gündem.2

2025 – 2026 Güz dönemi Bilgisayar Mühendisliği Bölümü Lisans eğitimi program çıktılarının ölçüm sonuçlarına ilişkin değerlendirmeler bölüm QME Komitesi üyeleri ve öğrenci temsilcileri tarafından yapılmıştır. Ölçüm yapılan tüm program çıktıları için, ölçümde kullanılan bölüm ve servis derslerinin öngörülen başarı düzeyinin üzerinde destek sağladığı gözlemlenmiştir. Mevcut Bahar dönemi sonunda gerçekleştirilecek ölçümlerin ardından komite yeniden toplanacak ve 2025 – 2026 eğitim-öğretim yılının her iki dönemine ilişkin elde edilen sonuçları birlikte değerlendirerek, dersler özelinde alınması gereken önlemler hakkında karar alacaktır.

Gündem.3

Bilkent Üniversitesi Eğitimde Kalite Güvence Sistemi (QME) çalışmaları kapsamında 2025 – 2026 Güz döneminden itibaren başlatılan Yüksek Lisans ve Doktora Programları için program çıktıları ölçme-değerlendirme çalışmaları hakkında bölüm komite üyeleri ve öğrenci temsilcileri komite başkanı Özgür ULUSOY tarafından bilgilendirilmiştir. Bu kapsamda, Bilgisayar Mühendisliği Bölümü tarafından başlatılan çalışmalar ve elde edilen ilk sonuçlar üzerine görüş alışverişinde bulunulmuştur.

Gündem.4

2025 – 2026 Bahar dönemi Bilgisayar Mühendisliği Bölümü Lisans, Yüksek Lisans ve Doktora eğitim programı çıktılarının ölçme-değerlendirme çalışmalarına yönelik olarak dönem başında yapılan hazırlıklar kapsamında, bölüm komite üyeleri ile öğrenci temsilcileri arasında görüş alışverişi yapılmış ve değerlendirmelerde bulunulmuştur.

Bilkent Üniversitesi

Bilgisayar Mühendisliği Bölümü

Eğitimde Kalite Güvencesi (QME) Komitesi Toplantısı

Tarih	Saat	Yer
17 Haziran 2026	14:00	EA-409

Katılımcılar:

- Özgür ULUSOY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Başkanı
- Uğur GÜDÜKBAY, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- İbrahim KÖRPEOĞLU, Profesör Doktor, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Özgür Salih ÖĞÜZ, Doktor Öğretim Üyesi, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi Üyesi
- Berke Kuzey ARDIÇ, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Lisans Programı Öğrenci Temsilcisi
- Fatih PEHLİVAN, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Yüksek Lisans Programı Öğrenci Temsilcisi
- Serkan DEMİRCİ, Bilgisayar Mühendisliği Bölümü, Eğitimde Kalite Güvencesi (QME) Komitesi, Doktora Programı Öğrenci Temsilcisi

Gündem:

- Bilgisayar Mühendisliği Bölümü Lisans Programı çıktılarının 2025 - 2026 Bahar dönemine ait ölçüm sonuçlarının, bölüm QME Komitesi üyeleri ve öğrenci temsilcileri tarafından değerlendirilmesi.
- Bilgisayar Mühendisliği Bölümü Lisans Programına ilişkin 2025 - 2026 Akademik Yılı Eğitimde Kalite Güvence Sistemi Raporu hazırlık çalışmalarının başlatılması ve raporun kapsamı ve içeriğine yönelik görüş ve önerilerin alınması.
- Yüksek Lisans ve Doktora Programları için 2025 - 2026 Güz döneminden itibaren yürütülmekte olan program çıktıları ölçme ve değerlendirme çalışmalarının gözden geçirilmesi ve 2025 - 2026 Bahar dönemi ölçüm sonuçlarının değerlendirilmesi.

Görüşülenler - Kararlar:

Gündem.1

2025 - 2026 Bahar dönemi Bilgisayar Mühendisliği Bölümü Lisans Programı çıktılarının ölçüm sonuçları, bölüm QME Komitesi üyeleri ve öğrenci temsilcileri tarafından değerlendirilmiştir. Yapılan incelemeler sonucunda, ölçümü gerçekleştirilen tüm program çıktıları açısından, değerlendirmede kullanılan bölüm ve servis derslerinin öngörülen başarı düzeyinin üzerinde katkı sağladığı gözlemlenmiştir.

Gündem.2

Bilgisayar Mühendisliği Bölümü Lisans Programına ilişkin 2025 - 2026 Akademik Yılı Eğitimde Kalite Güvence Sistemi Raporunun kapsamı ve içeriği hakkında bölüm QME Komitesi üyeleri ve öğrenci temsilcilerinin görüş ve önerileri alınmıştır. Yapılan değerlendirmeler sonucunda raporda, 2025 - 2026 Akademik Yılında gerçekleştirilen müfredat güncelleme çalışmaları, Güz ve Bahar dönemlerine ait program çıktıları ölçüm sonuçları ve bu sonuçlara ilişkin değerlendirmeler, program eğitim amaçlarının değerlendirilmesi ile eğitim-öğretim faaliyetlerine yönelik diğer bilgilerin yer almasına karar verilmiştir.

Gündem.3

2025 - 2026 Güz döneminden itibaren yürütülmekte olan Yüksek Lisans ve Doktora Programları çıktılarına yönelik ölçme ve değerlendirme çalışmaları ile 2025 - 2026 Bahar dönemine ait ölçüm sonuçları, bölüm QME Komitesi üyeleri ve öğrenci temsilcileri tarafından değerlendirilmiştir.

Appendix D. External Advisory Board Meeting Minutes

The meeting included **eight guests** from companies like Amazon, UbiCloud, Commencis, Bosch Security Systems, Microsoft, Beko, Havelsan, and TÜBİTAK BİLGEM İLTAREN, alongside **18 faculty members and seven teaching assistants**.

Department Overview and Current Status:

- **Curriculum:** The department aims for strong undergraduate education with **compulsory and technical elective courses**. The curriculum is primarily compulsory in the first and second years, becoming more elective after the third year. They offer a variety of technical electives, including artificial intelligence, machine learning, robotics, and computer graphics.
- **Senior Projects:** The senior project structure is distinct, encouraging students to **develop and mature their own ideas with professors**. There's a future goal to make these projects company-supported. In 2024, there were **33 projects involving 162 students and 16 sponsoring companies**, with team and individual awards given. The annual CS Fair is a key event, with 15 sponsors this year.
- **Undergraduate Research:** Undergraduate research is encouraged through two elective courses (390-490) where students work individually with instructors. These courses are popular, with 26 students accepted this semester.
- **Demand and Graduates:** The department observes **increasing demand for computer engineering** based on rising base scores over the last eight years. Approximately **half of the graduates work abroad** (popular destinations include USA, England, Germany, Canada), and the other half work in Turkey; these statistics remain consistent yearly. About half of graduates work in the information technologies and science sector, while others pursue careers in academia, banking, finance, defense, industry, trade, telecommunications, research centers, and public sectors, showcasing a wide range of employment.

Guest Introductions and Backgrounds:

- **Eren Akbaba (Amazon):** Graduated Bilkent Computer Engineering in 2014, with 11 years of experience, previously at Oracle, SAP, and IBM. Currently at EWS for 3 years, focusing on architecture and project implementation for customers.
- **Baykal Mehmet Uçar (Beko):** Graduated Boğaziçi Computer Engineering in 2007, working at Beko in corporate brand IT Communication since then. Works with software teams developing digital products and services.
- **Murat Ergun (Commencis):** Graduated Sabancı in 2007, with a Master's in Computer Science and Engineering from Sabancı. Has been at Commencis for 14 years, where the company focuses on digital transformation for clients like İş Bankası and Pegasus.
- **Çağrı Kılıboz (Bosch Security Systems):** Graduated Bilkent University Computer Engineering in 2010. Experienced in business setup, public sector (Ministry of Industry and Technology), and defense industry. Currently a Product Manager at Bosch Security Systems in the Netherlands, focusing on product management for sound and visual systems.

- **Ahmet Eren Başak (UbiCloud):** Graduated with a Bachelor's in 2014 and a Master's in 2017. Worked at Aselsan, Cycus Data (acquired by Microsoft), and UbiCloud as a software developer and team leader.
- **Doruk Bozağaç (TÜBİTAK BİLGEM İLTAREN):** Graduated Bilkent in 2003 (Computer Engineering), earned his Master's from Bilkent in 2006, and Doctorate from METU. Has been at TÜBİTAK since 2003, where his team grew from 10 to 400 people, focusing on software, system projects, and defense industries. Currently responsible for software and simulation technologies.
- **Abdullah Üstünel (Microsoft):** Graduated Bilkent Computer Engineering in 2001. Spent 20 years at Microsoft Headquarters in the US, working on Windows, Visual Studio, Xbox, Office, and Azure. Returned to Turkey 3 years ago and is now in R&D at Microsoft's Turkey software development center, focusing on Distributed Database systems.
- **Mehmet Yüksel (Havelsan):** Graduated Bilkent University Computer Engineering in 1999, Master's in 2002. Worked at Cybersoft before joining Havelsan as a software engineer. Served as team leader for the Peace Eagle project and held various project and group management roles. Currently a modelling and simulation software group leader at Havelsan, developing simulators for real platforms like Airbus 320 and Boeing 737.

Key Discussion Points and Agenda Items:

1. Review of Educational Objectives:

- **Student Outcomes:** The department identifies **seven general skills** expected of graduates, reviewed in ABET assessment. These include solving complex engineering problems using scientific and mathematical principles, designing solutions with consideration for health, safety, cultural, social, environmental, and economic factors, strong written and verbal communication, ethical and professional responsibility, teamwork, data analysis and experimentation skills, and a commitment to lifelong learning.
- **Program Education Objectives:** These define characteristics and skills expected **after graduation**, focusing on successful careers in computer engineering, advanced academic studies, developing innovative solutions, and demonstrating creativity, analytical thinking, ethical values, and leadership.
- **Industry Feedback:** Guests generally agreed that the objectives are sufficiently generic. Abdullah Üstünel highlighted that Bilkent's education, especially in **English usage and technical literature**, prepared them well for working abroad, comparing favorably to top US programs. Baykal Mehmet Uçar suggested emphasising lifelong learning, ethical/legal/social effects of software, and cultural diversity within the objectives. Selim Aksoy clarified that student outcomes apply at graduation, while program education objectives refer to career success five years post-graduation.

2. Curriculum Change Plan:

- **Motivations:** The department identified **overlaps in introductory courses** and concerns about students taking many math courses (some forgotten by senior

year, potentially demotivating due to lack of immediate use). The goal is to establish a more advanced compulsory undergraduate course as a bridge. They also aim to **increase the number of electives** to support diverse student interests and move compulsory prerequisites to earlier years.

- **Inputs:** Curriculum changes were informed by student course evaluations, student representatives' suggestions, external consultants' opinions, a survey of graduates on programming language usage in the industry, and recommendations from ACM/IEEE Computer Science Curriculum and other universities.
- **Proposed Changes:**
 - **CS101/CS102:** Three weeks of object-oriented concepts (inheritance, polymorphism, abstract classes, interfaces) from CS102 will be moved to CS101, allowing for earlier project starts. CS102 will cover basic concepts like computational complexity analysis, sorting/search algorithms, lists, stacks, and queues. Java will continue to be the primary language for these courses.
 - **CS201/CS202:** These two data structures courses will be combined into a single course, CS211, to reduce overlaps. The transition from Java (CS101/102) to C++ (CS211) will be critical, with intensive coverage of pointers and dynamic memory management early in CS211.
 - **Mathematics Courses:** Linear Algebra (Math 225) will move from the second to the first year, and Probability and Statistics (Math 230) from the third to the second year, ensuring more consecutiveness and serving as prerequisites for later courses.
 - **CS319 (Object-Oriented Software Engineering):** This course will be moved from the third year to the second year (replacing the vacated CS202 slot), to provide students with more practical software engineering concepts earlier, especially beneficial for internships.
 - **New Course (CS311):** A mandatory course, "Mathematical and Computational Foundation of Artificial Intelligence," will be introduced to bridge math courses and other CS courses, providing a mathematical infrastructure for AI. Its prerequisites include Discrete Mathematics, Linear Algebra, Probability, and Data Structures. It aims to teach students to code from scratch, using Python primarily but potentially C++ for some projects, focusing on mathematical foundations rather than just tool usage.
 - **CS315 (Programming Languages):** Will no longer be compulsory and become a technical elective.
 - **Automata:** The Automata course, previously a fourth-year compulsory course, will be moved to the second semester of the third year, ensuring all compulsory courses are completed by the third year.
 - **History Course:** The history course was moved from the fourth year's second semester. While not a prerequisite, the move aims to mitigate

the risk of graduation delays if it was the only mandatory course left at the end. It is also offered in summer school.

- **Discussions:**

- **Mathematics Relevance:** Çağrı Kılıboz suggested making math courses, especially Discrete Mathematics, more CS-oriented to improve student motivation and understanding of real-world applications. Selim Aksoy acknowledged the difficulty as math courses are provided by the math department and shared across engineering faculties.
- **Course Load:** Eren Akbaba and Ahmet Eren Başak raised concerns about the heavy load in the second year, especially the first semester, with courses like Data Structures, Digital Design, Physics, and Linear Algebra. Selim Aksoy stated efforts to balance credits, but acknowledged some terms might remain challenging.
- **Debugging Tools:** Abdullah Üstünel strongly recommended integrating structured debugging and troubleshooting practices into CS101/CS102, noting its critical importance in professional work. Selim Aksoy mentioned current practices using automatic testing frameworks and hidden tests, but agreed that more practical emphasis on debugging tools could be beneficial.

3. **Internship Discussions:**

- **Mandatory Internships:** Students are expected to complete two mandatory internships, typically at the end of their second and third years.
- **Duration Challenges:** While the university recommends making internships as long as possible (covering insurance for extended periods), the minimum mandatory duration is 20 working days (four weeks). Industry representatives like Ahmet Eren Başak and Uğur Doğrusöz noted that many large companies only accept interns for four weeks due to administrative overhead (orientation, setup) and limited productive time, making longer internships difficult to secure. Abdullah Üstünel contrasted this with the US system, where 12-week internships are standard and highly productive for both students and companies. Microsoft Turkey has started offering 12-week internships.
- **Candidate Engineers:** Havelsan employs third and fourth-year undergraduate students part-time as "candidate-engineers" for 2 days a week, offering valuable early work experience and aiding post-graduation employment. Selim Aksoy, however, advised caution with this approach, prioritising students' academic commitments.

4. **Industry-Focused Graduation Projects:**

- **New Model:** The department aims to shift towards a model where companies propose projects, supplementing the current student-initiated projects. This change is driven by student requests, potential job opportunities, and a desire to avoid repetitive project ideas.
- **Process:** Companies will submit project proposals, creating a pool from which students will apply with statements of purpose. A matching process will occur in the summer to ensure projects are clear by the semester's start. Projects will

typically involve a company mentor, a university coordinator, and academic advisors. Regular review meetings (e.g., every two weeks) are planned, functioning like sprints, with expected outputs like requirements and preliminary design (by 2nd month) and an MVP/prototype (by 4th month).

- **Challenges:** Mehmet Yüksel highlighted the importance of clear work area definitions and consideration for IP (intellectual property) rights, especially for projects that might lead to marketable products. Abdullah Üstünel raised concerns that IP issues might deter companies from offering real projects, pushing them towards "intern toy projects". Confidentiality and bureaucracy in defense industry projects were also noted as potential challenges.
- **Project Scope:** The department wants students to solve real engineering problems and go through a full design process (understanding, defining, designing, solving), documenting their work comprehensively. The goal is not just simple "data-cleaning scripts" but interesting challenges that provide a holistic product as an output. On-site work at companies is an option, especially beneficial for projects involving hardware integration.

5. Expectations from Graduates and Integration of New Tools:

- **AI/Generative AI:** There's a strong emphasis on understanding and using AI tools (ChatGPT, Copilot), which significantly **increase software developer productivity**. Companies are integrating these tools into their interview processes, raising the bar for candidates who are expected to solve more complex problems faster with current tools. Abdullah Üstünel argued that AI will "supercharge" software engineering, and effectively using these tools will be crucial for success.
- **Educational Integration:** The department is exploring how to integrate AI tools into education. While strictly forbidden in first-year courses to ensure fundamental understanding (e.g., writing data structures from scratch), their use is encouraged in later courses with an emphasis on understanding the underlying mechanisms and interpreting AI outputs critically.
- **Beyond Software Development:** Mehmet Yüksel stressed a shift from an "only develops software" mindset to understanding integration problems, knowing AI infrastructure, and considering how software products fit into broader systems. He highlighted the growing importance of **hardware-software integration**, particularly in robotics and simulators, which requires deep CS knowledge beyond pure software coding.
- **Ethics and Confidentiality:** Doruk Bozağaç and Abdullah Üstünel raised concerns about the ethical implications of using public AI tools with confidential company IP, as these tools can learn from input data. They emphasized the need for awareness among students regarding data privacy and the use of company-specific, closed-network AI models for sensitive data.

6. Comparison of Bilkent Graduates with Other Universities:

- **Strengths:** Bilkent graduates are observed to be **more inclined to teamwork, creative, and possess strong communication skills**, enabling them to easily understand and solve problems. They are considered **more practical, brave,**

and effective in handling large-scale projects and designs due to extensive project experience (five major projects before graduation) compared to graduates from some other universities that provide smaller, input-output-focused projects. Their **strong English skills and presentation abilities** also set them apart. Historically, Bilkent graduates have been highly sought after by major international companies like Microsoft.

- **Challenges and Trends:** Many talented graduates pursue opportunities abroad due to a combination of economic, social, and political factors, and the Turkish sector's limited depth. The increasing number of CS graduates from Bilkent and other universities means tougher competition, with some employers potentially preferring programmers from other universities (e.g., CTIS) who might be cheaper and better suited for certain roles, even if Bilkent graduates are "overqualified". However, Bilkent graduates are still seen as leaders and innovators in the field.