

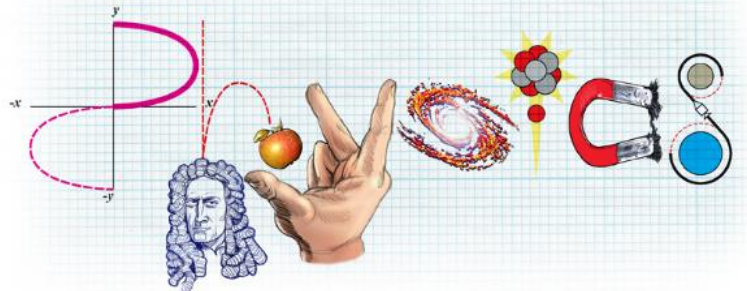
2024-2025 AKADEMİK
YILI / Academic Year

EĞİTİMDE KALİTE GÜVENCESİ GÜZ DÖNEMİ RAPORU

*QUALITY ASSURANCE IN
EDUCATION FALL SEMESTER
REPORT*

FEN FAKÜLTESİ
FACULTY OF SCIENCES

FİZİK LİSANS PROGRAMI (PHYS)
PHYSICS UNDERGRADUATE PROGRAM (PHYS)



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FEN FAKÜLTESİ / FACULTY OF SCIENCES
FİZİK LİSANS PROGRAMI - PHYS / PHYSICS
UNDERGRADUATE PROGRAM - PHYS

1. LİSANS PROGRAMI / UNDERGRADUATE PROGRAM
1.1. 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
CHEM 101	Kimyanın Temelleri I / Principles of Chemistry 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
PHYS 101	Genel Fizik I / General Physics I	3	3	4	6.5
PHYS 120	Fizik Öğrencileri İçin Üniversite Hayatına Giriş / Orientation for Physics Majors	1	0	1	2
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 115	Python ile Programlamaya Giriş / Introduction to Programming in Python	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
PHYS 102	Genel Fizik II / General Physics II	4	0	4	6.5
PHYS 124	Proje / Freshman Project	1	3	2	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
CHEM 201	Malzeme Bilimi ve Teknolojisi / Materials Science and Technology	3	0	3	5
GE 250	Üniversite Etkinlik Programı I / Collegiate Activities Program I	0	0	0	1
HIST 200	Türkiye Tarihi / History of Turkey	3	0	4	6.5
MATH 241	Mühendislik Matematiği I / Engineering Mathematics I	4	0	4	6.5
MBG 110	Modern Biyolojiye Giriş / Introduction to Modern Biology	3	0	3	5
PHYS 211	Dalgalar, Optik ve Termodinamik / Waves, Optics and Thermodynamics	3	0	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
GE 251	Üniversite Etkinlik Programı II / Collegiate Activities Program II	0	0	1	2
MATH 242	Mühendislik Matematiği II / Engineering Mathematics II	4	0	4	6.5
PHYS 212	Modern Fizik / □ Modern Physics	3	0	4	6.5
PHYS 218	Analitik Mekanik / Analytical Mechanics	3	0	3	5
PHYS 242	Fizik Uygulamaları İçin İleri Matematik / Advanced Calculus for Applications in Physics	3	0	3	5
	Seçmeli Ders / Elective			3	

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
COMD 358	Profesyonel İletişim / Professional Communication	3	0	3	5
HUM 111	Kültürler, Medeniyetler ve Düşünceler I / Cultures Civilizations and Ideas I	3	0	3	5
PHYS 291	Yaz Stajı / Summer Practice	0	0	0	7
PHYS 315	Elektromanyetik Teori I / Electromagnetic Theory I	3	0	3	5
PHYS 325	Kuantum Mekanik I / Quantum Mechanics I	3	0	3	5
PHYS 371	Fizikte Sayısal Yöntemler / Numerical Methods in Physics	3	0	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
HUM 112	Kültürler, Medeniyetler ve Düşünceler II / Cultures Civilizations and Ideas II	3	0	3	5
PHYS 334	İstatistiksel Fizik / Statistical Physics	3	0	3	5
PHYS 374	Fiziğin Deneysel Yöntemleri / Experimental Methods of Physics	3	3	4	6.5
	Seçmeli Ders / Elective			3	
	Fizik Seçmeli Dersi / Physics 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
PHYS 491	Bitirme Projesi I / Senior Project I	0	4	4	6,5
	Seçmeli Ders / Elective			3	
	Fizik Seçmeli Dersi / Physics Elective			3	
	Temel Sosyal Bilimler Seçmeli Dersi / Social Science Core Elective			3	
	Teknik Seçmeli Ders / Technical 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
PHYS 492	Bitirme Projesi II / Senior Project II	0	4	4	6,5
	Temel Sanat Seçmeli Dersi / Arts Core Elective			3	
	Seçmeli Ders / Elective			3	
	Fizik Seçmeli Dersi / Physics Elective			3	
	Teknik Seçmeli Ders (2) / Technical Elective (2)			6	

2. PROGRAM ÇIKTILARI / PROGRAM OUTCOMES

2.1. PROGRAM ÇIKTILARININ LİSTESİ / LIST OF PROGRAM OUTCOMES

- Verilen bir problemle ilgili evrensel fiziksel yasaları tanır, bu yasaları matematiksel ve sayısal tekniklerle uygular. / Recognize universal physical laws relevant to a given problem, apply these laws through mathematical and computational techniques.
- Bilimsel bilginin kaynağını, güvenilirliğini ve geçerlilik sınırlarını eleştirel olarak değerlendirir. / Critically assess the source, reliability and limits of validity of scientific knowledge.
- Deneyleri tasarlamak, yürütmek ve analiz etmek için bilimsel yöntemi kullanır. / Use the scientific method to design, execute and analyze experiments.
- Teknolojik kaynakları ve analitik düşünmeyi uygun zaman yönetimi ile kullanarak problem çözme yeteneğini gösterir. / Demonstrate problem solving ability using technological resources and analytical thinking with proper time management.
- Fikirleri, düşünceleri etkili bir şekilde organize edebilir ve bunları çeşitli izleyicilere iletmek için gerekli yazma ve iletişim becerilerini geliştirebilir. / Develop writing and communication skills necessary to effectively organize ideas and thoughts, and to convey them to various audiences.
- Disiplinlerarası çalışmalarda hem bireysel hem de takım üyesi olarak etkin bir şekilde kararlar alır. / Participate efficiently in interdisciplinary work, taking decisions both individually and as a group member.

- g.** Fiziğin küresel, toplumsal, ekonomik ve çevresel etkilerini tanımlar. / *Identify the global impact of physics in societal, economic and environmental contexts.*
- h.** Mevcut bilgi durumunu değerlendirir ve spesifik hedefler için yeni bilgi edinme planını iyileştirir. / *Evaluate current state of knowledge and refine a plan to acquire new knowledge for specific goals.*
- i.** Mesleki ve etik sorumluluğu, iş sağlığı ve işyeri güvenliğini göz önünde bulundurur. / *Demonstrate professional and ethical responsibility, value occupational health and workplace safety.*
- j.** 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.*

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

Dersler / Courses	Program Çıktıları / Program Outcomes										
	a	b	c	d	e	f	g	h	i	j	
CHEM 101	✓	✓	✓								
CHEM 201	✓		✓								
COMD 358					✓	✓			✓		
CS 115				✓							
ENG 101					✓						
ENG 102					✓						
GE 100								✓		✓	
GE 250						✓	✓			✓	
GE 251										✓	
HIST 200					✓	✓					
HUM 111				✓	✓						
HUM 112				✓	✓						
MATH 101	✓	✓		✓							
MATH 102	✓	✓		✓							
MATH 241	✓			✓							
MATH 242	✓			✓							
MBG 110		✓					✓				
PHYS 101	✓	✓			✓						
PHYS 102	✓	✓							✓		
PHYS 120										✓	
PHYS 124		✓						✓	✓		
PHYS 211	✓					✓					
PHYS 212	✓					✓				✓	
PHYS 218	✓					✓		✓			
PHYS 242	✓										
PHYS 291									✓		✓
PHYS 315	✓						✓				
PHYS 325	✓						✓				
PHYS 334	✓										
PHYS 371							✓	✓	✓		
PHYS 374		✓					✓	✓	✓	✓	
PHYS 491		✓					✓	✓	✓		
PHYS 492		✓					✓	✓	✓		
TURK 101									✓		✓
TURK 102	✓										✓

Tablo.2.2. Fizik Lisans Programı - Program Çıktıları ve Dersler Tablosu / **Table.2.2.** Physics Undergraduate Program - Program Outcomes and Courses Table

3. PERFORMANS ÖLÇÜMLERİNDE KULLANILACAK METRİKLER / METRICS TO BE USED IN PERFORMANCE MEASUREMENT

3.1. PERFORMANS ÖLÇÜMLERİNDE KULLANILACAK DEĞERLENDİRME METOTLARI / EVALUATION METHODS USED IN PERFORMANCE MEASUREMENTS

Course Code	Program Outputs	Lab work	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade							
CHEM 101	a	50	50	100	M3	50							
	Program Outputs	Lab work	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade							
	b	50	50	100	M3	50							
	Program Outputs	Lab work	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade							
	c	50	50	100	M3	50							
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
CHEM 201	a	30	30	40	100	M1	50	70					
	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	50	70					
Course Code	Program Outputs	Homework	Homework	Homework	Homework	Midterm	Project	Term project	Presentations	In-class participation	Total Contribution	Qualification Calculation Method	
COMD 358	e	5	5	5	5	25	30	10	10	5	100	M1	
		(Average) Qualification Grade	Qualification Threshold (%)										
		60	70										

Course Code	Program Outputs	Homework	Homework	Homework	Homework	Midterm	Project	Term project	Presentations	In-class participation	Total Contribution	Qualification Calculation Method	
COMD 358	f	5	5	5	5	25	30	10	10	5	100	M1	
		(Average) Qualification Grade	Qualification Threshold (%)										
		60	70										
	Program Outputs	Homework	Homework	Homework	Homework	Midterm	Project	Term project	Presentations	In-class participation	Total Contribution	Qualification Calculation Method	
	i	5	5	5	5	25	30	10	10	5	100	M1	
		(Average) Qualification Grade	Qualification Threshold (%)										
60		70											
Course Code	Program Outputs	Lab exam	Midterm:Essay/written	Final:Essay/written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
CS 115	d	40	20	40	100	M1	40	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	e	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	e	5	20	20	10	30	15	100	M1	70	70		
Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)							
GE 100	h	100	100	M1	12	80							
	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)							
	j	100	100	M1	12	80							

Course Code	Program Outputs	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
GE 251	j	100	100	M1	70	70					
Course Code	Program Outputs	Oral presentation	Research essay	Performance	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)			
HIST 200	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 (%)			
	f	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	d	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 (%)		
	e	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	d	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 (%)		
	e	30	10	30	30	100	M1	60	75		
Course Code	Program Outputs	Midterm	Midterm	Final	Quiz	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
MATH 101	a	25	25	30	10	10	100	M1	40	50	

Course Code	Program Outputs	Midterm	Midterm	Final	Quiz	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
MATH 101	b	25	25	30	10	10	100	M1	40	50		
	Program Outputs	Midterm	Midterm	Final	Quiz	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	d	25	25	30	10	10	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 (%)				
	b	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 (%)				
d	30	30	40	100	M1	40	50					
Course Code	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Quiz	Quiz	Quiz	Quiz	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
MATH 241	a	35	35	6	6	6	6	6	100	M1	25	75
	Program Outputs	Midterm:Essay/ written	Final:Essay/ written	Quiz	Quiz	Quiz	Quiz	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	d	35	35	6	6	6	6	6	100	M1	25	75
Course Code	Program Outputs	Midterm:Essay/ written	Quiz	Homework	Final:Essay/ written	MATLAB	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
MATH 242	a	30	30	5	30	5	100	M1	30	75		
	Program Outputs	Midterm:Essay/ written	Quiz	Homework	Final:Essay/ written	MATLAB	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	d	30	30	5	30	5	100	M1	30	75		

Course Code	Program Outputs	Quiz	Quiz	Quiz	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
MBG 110	b	5	5	5	25	30	30	100	M1	50	50	
	Program Outputs	Quiz	Quiz	Quiz	Midterm	Midterm	Final	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	g	5	5	5	25	30	30	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	10	10	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	10	10	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	10	10	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	10	10	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	10	10	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	10	10	25	20	100	M1	50	50	
Course Code	Program Outputs	In-class attendance	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
PHYS 120	c	50	50	100	M1	50	50					
	Program Outputs	In-class attendance	In-class participation	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)					
	i	50	50	100	M1	50	50					

Course Code	Program Outputs	Final:Essay/ written	Midterm:Essay/ written	Project	Homework	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
PHYS 211	a	25	20	30	10	15	100	M1	50	50
	Program Outputs	Final:Essay/ written	Midterm:Essay/ written	Project	Homework	Quiz	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	c	25	20	30	10	15	100	M1	50	50
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Homework	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 315	a	25	25	15	35	100	M1	50	50	
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Homework	Final:Essay/ written	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	c	25	25	15	35	100	M1	50	50	
Course Code	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
PHYS 325	a	25	25	35	15	100	M1	50	50	
	Program Outputs	Midterm:Essay/ written	Midterm:Essay/ written	Final:Essay/ written	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	c	25	25	35	15	100	M1	50	50	
Course Code	Program Outputs	Quiz	Project	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
PHYS 371	c	25	40	35	100	M1	50	50		
	Program Outputs	Quiz	Project	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	d	25	35	40	100	M1	50	50		
	Program Outputs	Quiz	Project	Homework	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)		
	e	25	35	40	100	M1	50	50		

Course Code	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
PHYS 491	b	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	c	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	d	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	e	20	40	40	100	M1	50	50
Course Code	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
PHYS 492	b	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	c	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	d	20	40	40	100	M1	50	50
	Program Outputs	Papers(s)/ Reports	Presentations	Papers(s)/ Reports	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	e	20	40	40	100	M1	50	50
Course Code	Program Outputs	Blog	Final Exam	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
TURK 101	e	70	30	100	M1	70	60	
	Program Outputs	Blog	Final Exam	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)	
	h	70	30	100	M1	70	60	

Course Code	Program Outputs	Blog	Final Exam	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
TURK 102	a	70	30	100	M1	70	60
	Program Outputs	Blog	Final Exam	Total Contribution	Qualification Calculation Method	(Average) Qualification Grade	Qualification Threshold (%)
	h	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 = Bölüm tarafından belirlenmiş olan başarılı sayılabilecek minimum not / G = Minimum grade that can be considered successful as determined by the department
- T = Program çıktısı başarısı için eşik değer / T = Threshold value for program output success
- M1: Öğrencilerin %T'sinin not ortalamasının G veya üzerinde olması / M1: T% of students have a grade point average of G or above
- M2: Öğrencilerin %T'sinin bölüm ortalaması üzerinde not almış olması / M2: %T of students have received grades above the department average
- M3: Öğrencilerin not ortalamasının G veya üzerinde olması / M3: Students' grade point average should be G or above
- M4: Öğrencilerin %T'sinin not ortalamasının dersi alan tüm öğrencilerin ortalamasına eşit veya daha yüksek olması / M4: The GPA of %T of students is equal to or higher than the average of all students taking the course

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

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Treshold 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
CHEM 101 - Kimyanın Temelleri I / CHEM 101 - Principles of Chemistry I													
a	M3	50		115	33	75.86	78.22	114	33	99.13	100	Yeterli ✓ / Sufficient ✓	78.22
b	M3	50		115	33	75.86	78.22	114	33	99.13	100	Yeterli ✓ / Sufficient ✓	78.22
c	M3	50		115	33	75.86	78.22	114	33	99.13	100	Yeterli ✓ / Sufficient ✓	78.22
CHEM 201 - Malzeme Bilimi ve Teknolojisi / CHEM 201 - Materials Science and Technology													
a	M1	50	70	123	30	67.69	68.1	107	26	86.99	86.67	Yeterli ✓ / Sufficient ✓	86.67
c	M1	50	70	123	30	67.69	68.1	107	26	86.99	86.67	Yeterli ✓ / Sufficient ✓	86.67
COMD 358 - Profesyonel İletişim / COMD 358 - Professional Communication													
e	M1	60	70	501	24	83.99	83.29	493	24	98.4	100	Yeterli ✓ / Sufficient ✓	100
f	M1	60	70	501	24	83.99	83.29	493	24	98.4	100	Yeterli ✓ / Sufficient ✓	100
i	M1	60	70	501	24	83.99	83.29	493	24	98.4	100	Yeterli ✓ / Sufficient ✓	100
CS 115 - Python ile Programlamaya Giriş / CS 115 - Introduction to Programming in Python													
d	M1	40	75	378	6	76.5	78.96	377	6	99.74	100	Yeterli ✓ / Sufficient ✓	100
ENG 101 - İngilizce ve Kompozisyon I / ENG 101 - English and Composition I													
e	M1	70	75	1702	33	82.4	88.71	1593	33	93.6	100	Yeterli ✓ / Sufficient ✓	100
ENG 102 - İngilizce ve Kompozisyon II / ENG 102 - English and Composition II													
e	M1	70	70	616	7	86.42	96.06	603	7	97.89	100	Yeterli ✓ / Sufficient ✓	100
GE 100 - Üniversite Hayatına Giriş / GE 100 - Orientation													
h	M1	12	80	1678	33	97.32	99.24	1678	33	100	100	Yeterli ✓ / Sufficient ✓	100
j	M1	12	80	1678	33	97.32	99.24	1678	33	100	100	Yeterli ✓ / Sufficient ✓	100
GE 251 - Üniversite Etkinlik Programı II / GE 251 - Collegiate Activities Program II													
j	M1	70	70	974	10	92.76	95.5	898	10	92.2	100	Yeterli ✓ / Sufficient ✓	100

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Treshold 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
HIST 200 - Türkiye Tarihi / HIST 200 - History of Turkey													
e	M1	70	75	1036	20	93.59	94.37	1026	20	99.03	100	Yeterli ✓ / Sufficient ✓	100
f	M1	70	75	1036	20	93.59	94.37	1026	20	99.03	100	Yeterli ✓ / Sufficient ✓	100
HUM 111 - Kùltürler, Medeniyetler ve Düşünceler I / HUM 111 - Cultures Civilizations and Ideas I													
d	M1	60	75	1139	21	84.61	87.67	1135	21	99.65	100	Yeterli ✓ / Sufficient ✓	100
e	M1	60	75	1139	21	84.61	87.67	1135	21	99.65	100	Yeterli ✓ / Sufficient ✓	100
HUM 112 - Kùltürler, Medeniyetler ve Düşünceler II / HUM 112 - Cultures Civilizations and Ideas II													
d	M1	60	75	287	13	84.87	89.02	285	13	99.3	100	Yeterli ✓ / Sufficient ✓	100
e	M1	60	75	287	13	84.87	89.02	285	13	99.3	100	Yeterli ✓ / Sufficient ✓	100
MATH 101 - Matematik I / MATH 101 - Calculus I													
a	M1	40	50	682	32	63.69	69.99	607	30	89	93.75	Yeterli ✓ / Sufficient ✓	93.75
b	M1	40	50	682	32	63.69	69.99	607	30	89	93.75	Yeterli ✓ / Sufficient ✓	93.75
d	M1	40	50	682	32	63.69	69.99	607	30	89	93.75	Yeterli ✓ / Sufficient ✓	93.75
MATH 102 - Matematik II / MATH 102 - Calculus II													
a	M1	40	50	258	9	53.52	67.01	181	8	70.16	88.89	Yeterli ✓ / Sufficient ✓	88.89
b	M1	40	50	258	9	53.52	67.01	181	8	70.16	88.89	Yeterli ✓ / Sufficient ✓	88.89
d	M1	40	50	258	9	53.52	67.01	181	8	70.16	88.89	Yeterli ✓ / Sufficient ✓	88.89
MATH 241 - Mühendislik Matematiđi I / MATH 241 - Engineering Mathematics I													
a	M1	25	75	153	21	57.13	57.47	153	21	100	100	Yeterli ✓ / Sufficient ✓	100
d	M1	25	75	153	21	57.13	57.47	153	21	100	100	Yeterli ✓ / Sufficient ✓	100
MATH 242 - Mühendislik Matematiđi II / MATH 242 - Engineering Mathematics II													
a	M1	30	75	81	17	58.3	57.72	78	16	96.3	94.12	Yeterli ✓ / Sufficient ✓	94.12
d	M1	30	75	81	17	58.3	57.72	78	16	96.3	94.12	Yeterli ✓ / Sufficient ✓	94.12

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
MBG 110 - Modern Biyolojiye Giriş / MBG 110 - Introduction to Modern Biology													
b	M1	50	50	487	18	68.05	75.15	432	18	88.71	100	Yeterli ✓ / Sufficient ✓	100
g	M1	50	50	487	18	68.05	75.15	432	18	88.71	100	Yeterli ✓ / Sufficient ✓	100
PHYS 101 - Genel Fizik I / PHYS 101 - General Physics I													
a	M1	50	50	620	33	65.09	69.11	568	31	91.61	93.94	Yeterli ✓ / Sufficient ✓	93.94
b	M1	50	50	620	33	65.09	69.11	568	31	91.61	93.94	Yeterli ✓ / Sufficient ✓	93.94
e	M1	50	50	620	33	65.09	69.11	568	31	91.61	93.94	Yeterli ✓ / Sufficient ✓	93.94
PHYS 102 - Genel Fizik II / PHYS 102 - General Physics II													
a	M1	50	50	201	11	64.05	74.27	171	10	85.07	90.91	Yeterli ✓ / Sufficient ✓	90.91
b	M1	50	50	201	11	64.05	74.27	171	10	85.07	90.91	Yeterli ✓ / Sufficient ✓	90.91
e	M1	50	50	201	11	64.05	74.27	171	10	85.07	90.91	Yeterli ✓ / Sufficient ✓	90.91
PHYS 120 - Fizik Öğrencileri İçin Üniversite Hayatına Giriş / PHYS 120 - Orientation for Physics Majors													
c	M1	50	50	43	43	49.64	49.64	40	40	93.02	93.02	Yeterli ✓ / Sufficient ✓	93.02
i	M1	50	50	43	43	49.64	49.64	40	40	93.02	93.02	Yeterli ✓ / Sufficient ✓	93.02
PHYS 211 - Dalgalar, Optik ve Termodinamik / PHYS 211 - Waves, Optics and Thermodynamic													
a	M1	50	50	40	32	70.57	71.41	39	32	97.5	100	Yeterli ✓ / Sufficient ✓	100
c	M1	50	50	40	32	70.57	71.41	39	32	97.5	100	Yeterli ✓ / Sufficient ✓	100
PHYS 315 - Elektromanyetik Teori I / PHYS 315 - Electromagnetic Theory I													
a	M1	50	50	34	32	61.56	62.03	28	26	82.35	81.25	Yeterli ✓ / Sufficient ✓	81.25
c	M1	50	50	34	32	61.56	62.03	28	26	82.35	81.25	Yeterli ✓ / Sufficient ✓	81.25
PHYS 325 - Kuantum Mekanik I / PHYS 325 - Quantum Mechanics I													
a	M1	50	50	41	35	64.91	64.51	36	30	87.8	85.71	Yeterli ✓ / Sufficient ✓	85.71
c	M1	50	50	41	35	64.91	64.51	36	30	87.8	85.71	Yeterli ✓ / Sufficient ✓	85.71

Program Çıktısı / Program Outcome	Yeterlilik Hesaplama Yöntemi / Method	(Ortalama) Yeterlilik Notu / Minimum Successful Grade	Yeterlilik Eşiği (%) / Treshold 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 371 - Fizikte Sayısal Yöntemler / PHYS 371 - Numerical Methods in Physics													
c	M1	50	50	36	36	81.72	81.72	36	36	100	100	Yeterli ✓ / Sufficient ✓	100
d	M1	50	50	36	36	82.15	82.15	36	36	100	100	Yeterli ✓ / Sufficient ✓	100
e	M1	50	50	36	36	82.15	82.15	36	36	100	100	Yeterli ✓ / Sufficient ✓	100
PHYS 491 - Bitirme Projesi I / PHYS 491 - Senior Project I													
b	M1	50	50	14	14	90.36	90.36	14	14	100	100	Yeterli ✓ / Sufficient ✓	100
c	M1	50	50	14	14	90.36	90.36	14	14	100	100	Yeterli ✓ / Sufficient ✓	100
d	M1	50	50	14	14	90.36	90.36	14	14	100	100	Yeterli ✓ / Sufficient ✓	100
e	M1	50	50	14	14	90.36	90.36	14	14	100	100	Yeterli ✓ / Sufficient ✓	100
PHYS 492 - Bitirme Projesi II / PHYS 492 - Senior Project II													
b	M1	50	50	1	1	85	85	1	1	100	100	Yeterli ✓ / Sufficient ✓	100
c	M1	50	50	1	1	85	85	1	1	100	100	Yeterli ✓ / Sufficient ✓	100
d	M1	50	50	1	1	85	85	1	1	100	100	Yeterli ✓ / Sufficient ✓	100
e	M1	50	50	1	1	85	85	1	1	100	100	Yeterli ✓ / Sufficient ✓	100
TURK 101 - Türkçe I / TURK 101 - Turkish I													
e	M1	70	60	1541	26	88.03	90.87	1519	26	98.57	100	Yeterli ✓ / Sufficient ✓	100
h	M1	70	60	1541	26	88.03	90.87	1519	26	98.57	100	Yeterli ✓ / Sufficient ✓	100
TURK 102 - Türkçe II / TURK 102 - Turkish II													
a	M1	70	60	637	9	90.42	93.58	626	9	98.27	100	Yeterli ✓ / Sufficient ✓	100
h	M1	70	60	637	9	90.42	93.58	626	9	98.27	100	Yeterli ✓ / Sufficient ✓	100

3.3. PERFORMANS ÖLÇÜM SONUÇLARI / PERFORMANCE MEASUREMENT RESULTS

3.3.1. PROGRAM ÇIKTILARI PERFORMANS TABLOSU / PROGRAM OUTCOMES PERFORMANCE TABLE

Dersler / Courses	Program Çıktıları / Program Outcomes									
	a	b	c	d	e	f	g	h	i	j
CHEM 101	✓	✓	✓							
CHEM 201	✓		✓							
COMD 358					✓	✓			✓	
CS 115				✓						
ENG 101					✓					
ENG 102					✓					
GE 100								✓		✓
GE 251										✓
HIST 200					✓	✓				
HUM 111				✓	✓					
HUM 112				✓	✓					
MATH 101	✓	✓		✓						
MATH 102	✓	✓		✓						
MATH 241	✓			✓						
MATH 242	✓			✓						
MBG 110		✓					✓			
PHYS 101	✓	✓			✓					
PHYS 102	✓	✓			✓					
PHYS 120			✓						✓	
PHYS 211	✓		✓							
PHYS 315	✓		✓							
PHYS 325	✓		✓							
PHYS 371			✓	✓	✓					
PHYS 491		✓	✓	✓	✓					
PHYS 492		✓	✓	✓	✓					
TURK 101					✓			✓		
TURK 102	✓							✓		

Tablo.3.3.1. 2024-2025 Akademik Yılı Güz Dönemi Fizik Lisans Programı Program Çıktıları Performans Tablosu / Table.3.3.1. 2024-2025 Academic Year Fall Semester Physics Undergraduate Program - Program Outcomes Performance Table

3.3.2. PROGRAM ÇIKTILARI PERFORMANS ORANLARI / PROGRAM OUTCOMES PERFORMANCE RATES

Dersler / Courses	Program Çıktıları / Program Outcomes									
	a	b	c	d	e	f	g	h	i	j
CHEM 101	78.22	78.22	78.22							
CHEM 201	86.67		86.67							
COMD 358					100	100			100	
CS 115				100						
ENG 101					100					
ENG 102					100					
GE 100								100		100
GE 251										100
HIST 200					100	100				
HUM 111				100	100					
HUM 112				100	100					
MATH 101	93.75	93.75		93.75						
MATH 102	88.89	88.89		88.89						
MATH 241	100			100						
MATH 242	94.12			94.12						
MBG 110		100					100			
PHYS 101	93.94	93.94			93.94					
PHYS 102	90.91	90.91			90.91					
PHYS 120			93.02						93.02	
PHYS 211	100		100							
PHYS 315	81.25		81.25							
PHYS 325	85.71		85.71							
PHYS 371			100	100	100					
PHYS 491		100	100	100	100					
PHYS 492		100	100	100	100					
TURK 101					100			100		
TURK 102	100							100		

Tablo.3.3.2. 2024-2025 Akademik Yılı Güz Dönemi Fizik Lisans Programı Program Çıktıları Performans Oranları Tablosu / **Table.3.3.2.** 2024-2025 Academic Year Fall Semester Physics Undergraduate Program - Program Outcomes Performance Rates Table