

Year

Department of Electricity and Energy / Department of Electricity and Energy /						
Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
AEK112	ALGORITHMS AND PROGRAMMING	3.00	1.00	0.00	4.00	4.00
Course Detail						
<b>Course Language</b>	: Turkish					
<b>Qualification Degree</b>	: PreBachelor					
<b>Course Type</b>	: Optional					
<b>Preconditions</b>	: Not					
<b>Objectives of the Course</b>	: To understand the logic of the algorithm. The C programming language, user-defined types, files, pointer, recursion, sorting, searching, libraries, clipping, and understand the issues of the use of the port.					
<b>Course Contents</b>	: Algorithm design, Starting C language and the general structure of the C programming language, Basic data types and input and output commands. Decision-making structures and loops. Arrays, pointers, string operations, file operations, libraries, interrupts, port usage.					
<b>Recommended or Required Reading</b>	: Bilgisayar, Projeksiyon Cihazı, Selami ERYILMAZ, (2003). Algoritma Tasarlama ve Programlamaya Giriş, Detay Yayıncılık. G. Murat TAŞBAŞI, (2005). Temel C Programlama, Altaş Yayıncılık. Vatansever, F. (2020). Algoritma Geliştirme ve Programlamaya Giriş. Seçkin Yayıncılık. Haftalık Ders Notlarına Linkten Ulaşabilirsiniz: <a href="https://drive.google.com/drive/folders/1IR1aWNYtUZQOsXaYImqxjHnFm3oneyJm?usp=sharing">https://drive.google.com/drive/folders/1IR1aWNYtUZQOsXaYImqxjHnFm3oneyJm?usp=sharing</a>					
<b>Planned Learning Activities and Teaching Methods</b>	: Narration, Question-Answer,					
<b>Recommended Optional Programme Components</b>	: Haftalık Ders Notlarına Linkten Ulaşabilirsiniz: <a href="https://drive.google.com/drive/folders/1IR1aWNYtUZQOsXaYImqxjHnFm3oneyJm?usp=sharing">https://drive.google.com/drive/folders/1IR1aWNYtUZQOsXaYImqxjHnFm3oneyJm?usp=sharing</a>					
<b>Course Instructors</b>	: Öğr. Gör. Dr. Ayberk Calpbini					
<b>Instructor's Assistants</b>	: .....					
<b>Presentation Of Course</b>	: The course is taught in the Computer Laboratory using a program compiler.					
<b>Update Date</b>	:					
<b>Dosya İndirilme Tarihi</b>	: 2/6/2026					

Course Outcomes	
<b>Upon the completion of this course a student :</b>	
1	Can know algorithm and programming logic.
2	Can create a flowchart of a problem.
3	Can write a program based on a flowchart of a problem.
4	Knows how to run a program that suits the needs, can organize and design it.
5	Can create a program using a programming development environment.

Pre / Side Conditions							
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Weekly Contents						
	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes
1.Week	*Principles and stages of problem solving	*This week, theoretical information is given. There is no practice.	*The course is taught verbally in the Computer Laboratory.	*Sisteme yüklü 1. Hafta Ders Notu, Algoritma Tasarlama ve Programlamaya Giriş Kitabı: Sayfa: 3-29	*Narration, Question-Answer,	
2.Week	*Algorithm design.	*Textual Algorithm Designs are made.	*In the Computer Laboratory, the FlowChart algorithm development program is used.	*Sisteme yüklü 2. Hafta Ders Notu, Algoritma Tasarlama ve Programlamaya Giriş Kitabı: Sayfa: 17-68	*Narration, Question-Answer.	
3.Week	*Algorithm design.	*Algorithm design is done using flow charts.	*In the Computer Laboratory, the FlowChart algorithm development program is used.	*Sisteme yüklü 3. Hafta Ders Notu, Algoritma Tasarlama ve Programlamaya Giriş Kitabı: Sayfa: 71-92	*Narration, Question-Answer.	
4.Week	*The structure of the C programming language. Data types. Variables. Introduction to Dev C++ program.	*Compiling the program written in Dev C++ program	*In the Computer Laboratory, the FlowChart algorithm development program is used. *In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 4. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 11-53	*Narration, Question-Answer,	
5.Week	*The basic input-output commands.	*Using printf() and scanf() commands in the program	*In the Computer Laboratory, the FlowChart algorithm development program is used. *In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 5. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 55-67	*Narration, Question-Answer.	
6.Week	*Flow Control Mechanisms	*Creating programs with if, switch, while, for, do-while loop structures	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 6. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 69-92	*Narration, Question-Answer.	
7.Week	*Flow Control Mechanisms	*Creating programs with if, switch, while, for, do-while loop structures	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 7. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 69-92	*Narration, Question-Answer.	
8.Week	*Ara Sınav					
9.Week	*Flow Control Mechanisms	*Creating programs with if, switch, while, for, do-while loop structures	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 9. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 69-92	*Narration, Question-Answer.	
10.Week	*Using the array structure	*Writing programs using arrays	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 10. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 93-114	*Narration, Question-Answer.	
11.Week	*Function (Subprogram) usage and creation	*Writing programs using functions and designing our own functions	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 11. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 115-134	*Narration, Question-Answer. *Narration, Question-Answer.	
12.Week	*Using Library Functions	*Writing programs using library functions	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 12. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 115-134	*Narration, Question-Answer.	
13.Week	*Using Library Functions	*Writing programs using library functions	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 13. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 163-179	*Narration, Question-Answer	
14.Week	*Using Library Functions	*Writing programs using library functions	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 14. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 163-179	*Narration, Question-Answer,	
15.Week	*Use of Pointers	*Writing programs using pointers	*In the Computer Laboratory, Dev C++ compiler program is used.	*Sisteme yüklü 15. Hafta Ders Notu, Temel C Programlama Kitabı: Sayfa: 135-162	*Narration, Question-Answer.	

Assesment Methods %
1 Ara Sınav : 40.000
3 Final : 60.000

ECTS Workload			
Activities	Count	Time(Hour)	Sum of Workload
Teorik Ders Anlatım	14	3.00	42.00
Uygulama / Pratik	14	1.00	14.00
Ev Ödevi	10	3.00	30.00
Problem Çözme	8	2.00	16.00
Ara Sınav Hazırlık	4	2.00	8.00
Vize	1	1.00	1.00
Final Sınavı Hazırlık	4	2.00	8.00
Final	1	1.00	1.00
Total :			120.00
Sum of Workload / 30 ( Hour ) :			4
ECTS :			4.00

Program And OutcomeRelation														
	P.O.1	P.O.2	P.O.3	P.O.4	P.O.5	P.O.6	P.O.7	P.O.8	P.O.9	P.O.10	P.O.11	P.O.12	P.O.13	P.O.14
	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14
L.O. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L.O. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L.O. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L.O. 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L.O. 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Avarage	0	0	0	3.00	1.00	0	1.00	0	0	0	0	0	0	0

Ders/Program Çıktıları İlişkisi														
P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	
0	0	0	15	5	0	5	0	0	0	0	0	0	0	

BEWARE OF PLAGIARISM! Please pay attention to proper academic citation rules and avoid plagiarism, an unethical and academically fraudulent behavior, when completing reports, assignments, or other academic works, and it is treated with the same disciplinary action as cheating in a classroom setting. It is imperative to refrain from presenting another person's ideas, language, expressions, or any other form of intellectual property as your own. Regardless of quality, your assignments/projects/research should reflect your original work. Perfection is not a requirement, and in case of any uncertainties regarding academic writing guidelines, you may seek clarification from your course instructor.

Engel Durumu/Uyarlama Talebi : Engel durumuna ilişkin herhangi bir uyarlama talebinde bulunmak isteyen öğrenciler, dersin öğretim elemanı ya da Nevşehir Engelli Öğrenci Birimi ile en kısa sürede iletişime geçmelidir.