Junior or 3rd Year
CoE students—Orientation

CoE Faculty
# 3. SINIF

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| **İşletim Sistemleri**
Operating Systems | 3 | 2 | 3 | 8 | Z | Birlikte yüz yüze
Computer Organization
Rev. Uslular
Data Structures | Prof. Dr. Selim AYDOĞAN | Prof. Dr. Selim AYDOĞAN | Mikroişlemciler
Microprocessors | 3 | 2 | 4 | 8 | Z | Programlama Çağrısı
Introduction to Programming | Dr. Öğr. Üyesi M.
KOCATÜRK | Dr. Öğr. Üyesi M.
KOCATÜRK |
| **Programlama Dillerinin Temelleri**
Principles of Programming Languages | 3 | 0 | 3 | 6 | Z | Nene Tabanlı
Programlama
Aeect Oriented Programming | Prof. Dr. Selim AYDOĞAN | Prof. Dr. Selim AYDOĞAN | Algoritma Analizi
Algorithm Analysis | 3 | 0 | 3 | 6 | Z | Veri Yapıları
Data Structures
Odaalı ve Reasal
Değişkenler
Pratikte ve standart
Konsollar | Prof. Dr. Reda ALMAUJ | Doç. Dr. Kemal ĞİZEMER |
| **Mühendisler için Programlama**
Programming for Engineers | 3 | 3 | 6 | Z | Programlama Çağrısı
Introduction to Programming | Prof. Dr. Reda ALMAUJ | Doç. Dr. Kemal ĞİZEMER | Veri Tabanları
Databases | 3 | 2 | 4 | 8 | Z | Veri Yapıları
Data Structures | Prof. Dr. Selim AYDOĞAN | Prof. Dr. Selim AYDOĞAN |
| **Innovasyon ve Girişimcilik**
Innovation and Entrepreneurship | 2 | 0 | 2 | 2 | Z | **Bursu: KARARKAYA**
Prof. Dr. Bahadır K. GÜNTÜRK | Prof. Dr. Bahadır K. GÜNTÜRK | Programba bağlı seçmeli | 6 | G |
| **Yaz Staji I**
Summer Internship I | 0 | 0 | 0 | 1 | Z | Dr. Öğr. Üyesi Öğre ŞENSOY | Dr. Öğr. Üyesi Öğre ŞENSOY | İsteğe bağlı seçmeli | 2 | G |
| **BAHAR DÖNEMİ** | | | | | | | | | | |
Technical Elective Courses

- 5 technical elective course needs to be taken for graduation
- 4 of them have to be from your department
- If you fail, you need to repeat exact same course
- You need to take extra courses like
  - Advanced Programming
  - Programming for Engineers
  - These will be counted towards your ECTS and hence you don’t need to take many electives.

- Which concentration are you going to select
  - Decide based on your interest and future plans
  - Select courses that can supports your graduation project studies
  - Have back up plan
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Some Options for Computer Eng.

Software Engineering
- Programming for Engineers
- Web Programming
- Software Engineering
- Python Programming for Engineers
- Application Development for Mobile Devices
- Human Machine Interaction

AI
- Python Programming for Engineers
- Introduction to Machine Learning
- Introduction Deep Learning
- Data Science
- Multimedia Processing and Communications
- Introduction to Image Processing
- Bioinformatics
- Artificial Neural Networks

Embedded Systems
- Programming for Engineers
- Electronics I
- Electronics II
- Signals and Systems
- Embedded Systems
- Digital Signal Processing

Wireless Networks
- Signals and Systems
- Communication Systems
- Data Communication and Computer Networks
- Wireless Networks
- Digital Signal Processing
TÜBİTAK 2209 Program

2209-A Üniversite Öğrencileri Araştırma Projeleri Desteği
2209-B Sanayiye Yönelik Lisans Araştırma Projeleri Desteği Programı

Calls open : 01.10.2019
Deadline: 
For 2209-B 18.10.2019
For 2209-A 31.10.2019

Support Amount :
For 2209-B 4000
For 2209-A 2500
Engineering Project for Graduation

- Start as early as a junior student (3rd year)
  - You might spend your summer for your project
- Pick a topic with publication or patent potential.
- Need to show your hard work.
- Typically not a repetition of an existing work.
- Done in two parts:
  - First semester: the feasibility of the idea
  - Second semester: Realization of the idea
- Presentations are done for the whole engineering faculty
- Typically harsh criticism from the audience
- Project courses are offered for all three semesters.
Sample Projects

- **Assistive Cane**: Raspberry Pi with cameras and sensor to help visually impaired people with walking.
  - The project barely passed. Questioned for incremental novelty and work.

- **Drone Cells for Edge Cell Communication**
  - Failed in the first phase. The advisor didn’t find the approach novel.
  - Passed during summer after students came up with an idea that also was put into a conference publication. The paper is to be published.

- **Glucose Meter for blood sugar Level measurement**
  - Failed since EE department found the contribution little.
  - Passed during summer. The team added artificial intelligence to the project so that less insulin is used.

- **Object Detection and Tracking via Cameras**
  - Failed since tracking was not done. Also object detection was only for few samples.
  - Passed during summer. The team added tracking and multiple objects.