

## Content

| Course Code | Course Name         | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|---------------------|----------|--------|----------|-----|--------|------|
| INF316      | Signals and Systems | 5        | 3      | 0        | 0   | 3      | 4    |

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|------------------------|--|
| Prerequisites          |  |
| Admission Requirements |  |

|                         |  |
|-------------------------|--|
| Language of Instruction | French   |
| Course Type             | Compulsory   |
| Course Level            | Bachelor Degree  |
| Objective               | In this class we aim at introduce the study of linear digital and continuous systems.<br>Most of the examples used in the part "continuous system" will be electrical circuits   |
| Content                 | Linear invariant digital and continuous systems  |
| References              | Classes' summary, former examinations'subjects and exercises<br><a href="http://kikencere.gsu.edu.tr/course/view.php?id=134">http://kikencere.gsu.edu.tr/course/view.php?id=134</a><br>Hwei Hsu :Signal and Systems, Second Edition<br>Edward W. Kamen, Bonnie S. Heck: Fundamentals Of Signals And Systems Using the Web and Matlab, Second Edition<br>Walter Appel :Mathématiques pour la physique et les physiciens<br>Taan S. ElAli, Mohammad A. Karim :Continuous Signals And Systems With Matlab<br>Paul A. Lynn, Wolfgang Fuerst :Introductory Digital Signal Processing With Computer Applications |

## Theory Topics

| Week | Weekly Contents                             |
|------|---|
| 1    | Introduction                                |
| 2    | Linear, invariant continuous systems.       |
| 3    | Linear, invariant digital systems.          |
| 4    | Impulsional response of a digital system    |
| 5    | convolution of sequences                    |
| 6    | Impulsional response of a continuous system |
| 7    | convolution of continuous signals.          |
| 8    | Midterm examination                         |
| 9    | Fourier's Analysis                          |
| 10   | Fourier's Analysis                          |
| 11   | Fourier's Analysis                          |
| 12   | FFT   |
| 13   | FFT   |
| 14   | FFT   |