

| Course Name | Course Code | Semester | T + P | Credit | ECTS |
|---------------------------|-------------|----------|-------|--------|------|
| Digital Signal Processing | | 5 | 3 + 0 | 3 | 4 |

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| Prerequisite Courses | None |
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| If the language of Code | Turkish |
| Course class | Technical Elective |
| If the Coordinator of Code | |
| Instructor | |
| Assistant Course | No |
| If the objective of Code | Students to create a solid foundation for digital signal processing theory and applications. provide the ability to write programs that run digital signal processing applications. To teach and to test all the design process of digital filters |
| Course Learning Output | <p>The students completed the course:</p> <ul style="list-style-type: none"> • Frequency domain concepts and relationships function functions, you can use the discrete domains of the z-transform applications career. • Digital FIR, IRR and adaptive filter design and make applications. • Different digital signal processing applications (ie. Voice-recognition etc.). You can win abilities. • Digital signals in time and frequency domains that can gain the ability to interpret and process. |
| Contents Course | Discrete-time signals, sampling, reconstructing the signals, discrete-time systems, doubling, difference equations, Discrete Time Fourier Transform, Discrete Time Fourier Series, Fast Fourier Transform, the frequency domain system transfer function, Z-transform, Z domain of the system transfer function, F, and I. filter structures |

| Weeks | Topics |
|-------|---|
| 1 | Discrete Time Signals |
| 2 | Sampling |
| 3 | Signaling be reconstructed |
| 4 | Systems in Discrete Time |
| 5 | Folding |
| 6 | Difference Equation |
| 7 | Discrete Fourier Transform |
| 8 | MIDTERM |
| 9 | Discrete Fourier Series |
| 10 | Fast Fourier Transform |
| 11 | Frequency domain Transfer Function System |
| 12 | Z transform |
| 13 | Z Dome field of System Transfer Function |
| 14 | IIR filter structures allowed opportunities |
| 15 | FINAL EXAM |

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| General sufficiency |
| Evaluation in, use the students understand the basic concepts of digital signal processing and related engineering applications is an important criterion. |
| References |
| <ul style="list-style-type: none"> • Tana L. 2008; Digital Signal Processing: Fundamentals and Applications, Academic Press, Burlington, USA |
| Assessment |
| Midterm: 40% Final exam: 60% of the project or assignment can be made and announced at the beginning of the semester evaluations. |

