

Title Digital Signal Processors Programming	Code 1018021810108310105
Field Electronics and Telecommunications	Year / Semester 4 / 8
Specialty -	Course core
Hours Lectures: 1 Classes: - Laboratory: 2 Projects / seminars: -	Number of credits 3
Language polish	

Lecturer:

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Status of the course in the study program:

Compulsory course on Electronics and Telecommunications studies.

Assumptions and objectives of the course:

Hands-on digital signal processor application and programming basics.

Contents of the course (course description):

History, trends, and comparison of different digital signal processors. Digital signal processor architectures: hardware multiplier, Harvard architecture, multi-bus architecture, multi-unit arithmetic-logic operations, long accumulator, pipeline data processing, delayed branches, parallel processing, specialized addressing modes: modulo addressing, bit-reverse addressing. Review of current fixed-point and floating-point digital signal processors. Development software and kits for SHARC digital signal processors. Instruction list of SHARC processors. Assembler languages. Memory organization. I/O system. Software and hardware for digital signal processor system design.

Introductory courses and the required pre-knowledge:

Analog and digital signal processing.

Courses form and teaching methods:

Lecture - 15 hours per semester, laboratory based on SHARC development kits - 30 hours.

Form and terms of complete the course - requirements and assessment methods:

Lecture - final colloquium, individual laboratory projects.

Basic Bibliography:

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Additional Bibliography:

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