



Course title	Theory and Application of Fourier Series
Institute/Division	Faculty of Computer Science and Telecommunication/ Department of Mathematics
Course code	F-2.FS
Erasmus subject code	11.1
Number of contact hours**	45 lecture hours (45h)
Course duration	1 semester (Fall)
ECTS credits	6
Course description (max 100 words)	The course covers topics related to the Fourier series. The following subjects will be studied: 1. Introduction to Fourier series – basic formulas and connections: Bessel's inequality, Dirichlet's formula, convergence theorems, sine and cosine series, and complex series. 2. (C,1) summability, uniform continuity, Parseval's equality and convolution.
Literature	<ol style="list-style-type: none">1. I. I. Hirschman, Infinite Series, Dover Publications Inc., New York 20142. K. Knopp, Theory and Applications of Infinite Series, Dover Publications Inc., New York 2016
Course type/organization	<ul style="list-style-type: none">• Lectures (15h),• Computer labs (10h),• Projects (5h)• Exercises (15h)
Assessment method	Attendance, two tests during the semester, final exam
Prerequisites	Calculus, General Algebra
Primary target group	Computer Science, Mathematics, I level.
Contact person	Monika Herzog, mherzog@pk.edu.pl
Remarks	

*please insert one of the following codes:

- 11.0 Mathematics, Informatics
- 11.1 Mathematics
- 11.2 Statistics
- 11.3 Informatics, Computer Science
- 11.4 Artificial Intelligence
- 11.5 Actuarial Science
- 11.9 Others Mathematics, Informatics

**1 lecture hour=45 minutes