

Title <b>(Analiza numeryczna)</b>	Code <b>1010102121010110442</b>
Field <b>Civil Engineering Second-cycle Studies</b>	Year / Semester <b>1 / 2</b>
Specialty <b>Structural Engineering</b>	Course <b>core</b>
Hours Lectures: <b>2</b> Classes: <b>1</b> Laboratory: <b>1</b> Projects / seminars: <b>-</b>	Number of credits <b>2</b>
	Language <b>polish</b>

**Lecturer:**

prof. zw. dr hab. inż. Tomasz Łodygowski  
Instytut Konstrukcji Budowlanych  
tel. +48 (61) 665 2450, fax. +48 (61) 876 6116  
e-mail: tomasz.lodygowski@put.poznan.pl

**Faculty:**

Faculty of Civil and Environmental Engineering  
ul. Piotrowo 5  
60-965 Poznań  
tel. (061) 665-2413, fax. (061) 665-2444  
e-mail: office\_dceef@put.poznan.pl

**Status of the course in the study program:**

Numerical analysis

**Assumptions and objectives of the course:**

The bases of advanced numerical methods (nonlinear mechanics, nonstationary heat transfer, optimization, fracture analysis);  
Using very advanced computational environment and responsible structural analysis with using different numerical models;  
The responsibility of an engineer for the quality of computational models

**Contents of the course (course description):**

Presentation of selected theoretical bases of mechanics used in advanced computational environment; presenting of the organization of computer program (eg. ABAQUS);  
The students will be trained in building the responsible models and will present the results of own computations for different models; preparation for the advanced master theses

**Introductory courses and the required pre-knowledge:**

basics of numerical methods, structural mechanics and strength of materials as well as finite element method FEM

**Courses form and teaching methods:**

Lectures and computer laboratories with some theoretical comments

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

The final notes depend on preparation of computations of selected engineering problems and final exam (written and oral form)

**Basic Bibliography:**

**Additional Bibliography:**