

## Incoming student mobility

UNIOS University Unit: DEPARTMENT OF MATHEMATICS

COURSES OFFERED IN FOREIGN LANGUAGE  
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

Department or Chair within the UNIOS Unit	Department of Mathematics
Study program	Graduate university study programme in mathematics (Master level) Branch: <ul style="list-style-type: none"> <li>Mathematics and Computer Science-elective</li> </ul>
Study level	Graduate (master)
Course title	Natural Language Processing with Deep Learning
Course code (if any)	I069
Language of instruction	English
Brief course description	<p>Syllabus.</p> <ol style="list-style-type: none"> <li>1. Introduction to natural language processing and deep learning techniques. Word vectors and methods. Language models.</li> <li>2. Simple word vector representations: word2vec, GloVe.</li> <li>3. Neural networks and backpropagation. Dependency Parsing. Named entity recognition.</li> <li>4. Recurrent and recursive neural networks for language modelling.</li> <li>5. Machine translation, Seq2seq and attention models.</li> <li>6. Convolutional Networks for sentence classification.</li> <li>7. Constituency parsing and sentiment analysis using tree recursive neural nets.</li> <li>8. Dynamic memory neural networks for question answering.</li> </ol>
Form of teaching	Consultative teaching.
Form of assessment	Lectures and exercises are obligatory. The exam consists of a written and an oral part. Upon completion of the course, students can take the exam. Successful midterm exam scores replace the written exam. Exercises are both auditory and laboratory. Laboratory exercises include the usage of computers. Students can improve their grades by writing homework assignments and seminars.

## ERASMUS+

EU programme for education, training, youth and sport

Number of ECTS	8
Class hours per week	3+2+1
Minimum number of students	
Period of realization	Summer semester
Lecturer	Domagoj Ševerdija