### Description of an Individual Course Unit

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>OT4ME</th>
<th>Level of Course:</th>
<th>Undergraduate</th>
<th>ECTS</th>
<th>6</th>
<th>Semester:</th>
<th>7</th>
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<tbody>
<tr>
<td>Course Title:</td>
<td>Microwave electronics</td>
<td>Year of Study:</td>
<td>4</td>
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<td>Prerequisites:</td>
<td>Type of course:</td>
<td>Mandatory</td>
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<td>Lecturer(s):</td>
<td>Milan Ilić</td>
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<td>Course Staff:</td>
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#### Objective of the course:
- Provide students with hands-on experience in analysis and design of typical real-world microwave electronic circuits, with emphasis on training in efficient, perceptive and competent utilization of modern CAD tools.
- Define basic concepts of active microwave components and explain the major characteristics of operation of devices at microwave frequencies.
- Present a unified treatment of the analysis and design of microwave amplifiers, oscillators and mixers using scattering parameters techniques.
- Train students to critically evaluate trade-offs between the design goals, to obtain solutions that yield optimal performance, to manufacture physical prototypes, and to measure relevant parameters to verify design validity.

#### Course Contents:
- Microwave integrated circuits.

#### Teaching Methods:
- 45 hours of lectures + 15 hours of supervised problem classes and midterm tests, and 15 hours of lab work. 75 hours of personal study (homework) and exercise (3 hours per week during semester, and approximately 30 hours of preparation during exam term).

#### Literature:

#### Assessment methods:
- **Class participation** – 10 points.
- **Midterm test** – Solve a problem using open book and CAD tool (30 points).
- **Project** – Design and optimization of microwave device with prototype manufacturing and measurement (30 points).
- **Exam** – Solve a problem using open book and CAD tool (30 points).

To pass the course, a mark of at least 51 point must be achieved.

#### Language of instruction:
- Serbian 
- Date: 10.10.2006. 
- Signature:
Department of Electrical Engineering, founded in 1908, includes five sub-disciplines, power system and its automation, high voltage and insulation technology, electric machines and electric apparatus, power electronics and power drives, and theory and new technology of electrical engineering. There are more than 98 faculties, which includes 1 academician of Chinese Academy of Engineering, 1 chair professor of 1000 Talent Plan, 3 professors of New Century University Excellent Talents Program, 2 professionals of 1000 Talents Plan Program for Youth, 7 Shanghai Pujiang Scholars, 2 Shanghai Dongfan...Â The School of Software is the earliest schools of software engineering in China, and it has been exploring and innovating software talent cultivation mode. The development of the School of Electrical Engineering is closely connected with the history of university education in Serbia. The first university level lecture in the area of electrical engineering was held in 1894. Professor Stevan Markovic was the first lecturer and founder of Electrical Engineering Chair with Engineering department of High school in Belgrade.Â The education of electrical engineers has been considerably expanded after reorganization of Engineering department in 1935. Mechanical department became Mechanical Electrical Engineering department, with which, in 1937, four new departments were formed- mechanical, aeronautical, power systems engineering and telecommunications.