Module: Specialization: Advanced Experimental Physics

Module No.: physics62a

Course: Photonic Devices

Course No.: physics640

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<tr>
<th>Category</th>
<th>Type</th>
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<td>Elective</td>
<td>Lecture with exercises</td>
<td>English</td>
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Requirements for Participation:
Preparation:

Form of Testing and Examination:
Requirements for the examination (written or oral): successful work within the exercises

Length of Course:
1 semester

Aims of the Course:
To make the students understand physical and technological foundations of photonics and enable them to practically apply their knowledge in research and development.

Contents of the Course:
Optics: Rays, Beams, Waves; Fourieroptics;
Light sources; Detectors; Imaging devices
Waveguides, Fibers; Photonic Crystals; Metamaterials;
Optical amplification; Acoustooptics, electrooptics;
Photonic circuits, optical communication
Applications

Recommended Literature:
A. Yariv; Photonics: Optical Electronics in Modern Communications (Oxford Univ. Press 6th edition 2006)
C. Yeh; Applied Photonics (Academic Press, 1994)
R. Menzel; Photonics (Springer, Berlin 2001)