Why Optics & Photonics - Why KSOP

Optics & Photonics are key technologies for the 21st century. As enabling technologies for high-end industrial applications they drive research in physics, chemistry, biology and engineering.

The Karlsruhe School of Optics & Photonics (KSOP) is the excellence Graduate School of the Karlsruhe Institute of Technology (KIT). KSOP provides a multidisciplinary environment for first-class research and education as well as for the generation of innovative technologies in Optics & Photonics. Comprising both Master and Doctorate Programs, the educational concept is designed to qualify graduates for accelerated careers at world leading academic institutions and in high-technology industries.

In 2006, KSOP was founded as one of the first Graduate Schools of the Karlsruhe Institute of Technology (KIT) within the scope of the German „Excellence Initiative“. The excellence status of KSOP was renewed for another five years after a successful evaluation in 2012. By now, almost 600 Master and PhD students and alumni from 40 different countries are part of KSOP.

An Interdisciplinary Master Program

The 2-year Master Program is taught in English. Applicants need a Bachelor degree in natural or engineering sciences to become part of the interdisciplinary Master program. After a foundation of a solid background, each student chooses a research specialization.

Research Focus & Specialization

The research and educational concept of KSOP has been established to optimally reflect the multidisciplinary research among natural scientists and engineers. KSOP research activities cover the most important topics in Optics & Photonics and excel in particular in the five Research Areas:

KSOP unites 16 institutes of the Karlsruhe Institute of Technology in one interdisciplinary Graduate School and therefore benefits from a huge knowledge base. Especially the merger with the former national research centre Karlsruhe has created a direct link to the research taking place in the laboratories every day. All research areas are strongly interlinked and most institutes feature research projects in more than one of the research areas.

During their studies Master students get into direct contact with the KSOP research groups. Graduates of the Master program often decide to join the KSOP PhD Program to deepen their knowledge in Optics & Photonics. More information on the PhD Program can be found on the KSOP website.
**Key Data and Benefits**

- **2-years Master Program in Optics & Photonics**
- Specializations: Photonic Materials & Devices, Advanced Spectroscopy, Biomedical Photonics, Optical Systems, Solar Energy
- Scholarships available for outstanding applicants
- Industry internship program & networking
- Language courses & Business etiquette training, as well as intensive lab trainings

Program language: English • Start: October • Application deadline: April 30

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**Industry Partners & Sponsors**

- Agilent Technologies
- WITec Analysentechnik GmbH
- OSRAM Opto Semiconductors
- Polytec GmbH
- SICK SensorTechnik Würzburg
- TRUMPF Laser GmbH & Co. KG
- Technologiezentrum Baden-Württemberg

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**Contact & Application**

**Karlsruhe School of Optics & Photonics (KSOP)**
Karlsruhe Institute of Technology (KIT)

Schlossplatz 19
76131 Karlsruhe (Germany)

Telephone: +49 721 608 47880
Fax: +49 721 608 47882
E-Mail: info@ksop.de
Web: www.ksop.de

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**Voices of Students & Alumni**

**Javier Mauricio Bruges Martelo**
Did his master’s thesis at Carl Zeiss AG

*"I really like the internationality of the program. The fact of having colleagues from so many different science and/or engineering backgrounds and having the opportunity to work with them and learn how they approach finding solutions enhances my expertise all the time."*

**Lisa Kadner**
Did her master’s thesis at Polytec GmbH

*"What I like about the program is the combination of theory and practice. Practical experience is highly important as all the theory is worth nothing if you cannot apply it to something real."*

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**Why KSOP - Mixed YouTube Statements**

Taught in English • Level of Research at the Karlsruhe Institute of Technology • International environment • Interdisciplinary • Excellent Professors • Awesome Labs • Study Structure • Internship Program • Optics & Photonics Study Program • See more statements on our KSOP YouTube channel

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Miriam Sonnenbichler, KSOP M.Sc. Program Manager
Dr.-Ing. Judith Elsner, KSOP Managing Director
Prof. Dr. Ulrich Lemmer, KSOP Coordinator