Advanced Optical Information Systems

2 units (selection)

Shiro Suyama · Professor / Optical Materials and Devices, Optical Systems Engineering, Systems Innovation Engineering, Hirotsugu Yamamoto · Associate Professor / Optical Materials and Devices, Optical Systems Engineering, Systems Innovation Engineering

Target〉 To understand an architecture, design, and device in optical information systems.

Outline〉 Information processing systems using optoelectronics devices and technologies which include lasers, light emitting diodes, spatial light modulators, nonlinear recording devices and holographic technology: holographic systems, optical computing systems, three-dimensional display systems, optical recording systems, and optical measurmeut systems. This course is performed with lecture in combination with portfolio.

Keyword〉 ***infomation photonics, optical computer, optical information processing, information optics***

Goal〉

1. To understand the availability of light in optical information system
2. To understand the relation between information photonics and other technology
3. To develop a new architectur of optical information system

Schedule〉

1. Intoroduction to optical information system
2. Optics in optical information system (1)
3. Optics in optical information system (2)
4. Light source and detector in optical information system
5. Optical modulator in optical information system (1)
6. Optical modulator in optical information system (2)
7. Analog optical information system (1)
8. Analog optical information system (2)
9. Digital optical information system (1)
10. Digital optical information system (2)
11. Optelectronic information system (1)
12. Optelectronic information system (2)
13. Information comunication technology and optical information technology
14. Biomedical optical measurement technology and optical information technology
15. Biotechnology and optical information technology
16. Examination

Evaluation Criteria〉 Report 100%

Contents〉 http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216836

Note〉 授業を受ける際には，2 時間の授業時間毎に 2 時間の予習と 2 時間の復習をしたうえで授業を受けることが，授業の理解と単位取得のために必要である．