

Medical Information Systems

2 units (selection)

Noboru Niki · PROFESSOR / OPTICAL MATERIALS AND DEVICES, OPTICAL SYSTEMS ENGINEERING, SYSTEMS INNOVATION ENGINEERING, Yoshiaki Kawata · ASSOCIATE PROFESSOR / OPTICAL MATERIALS AND DEVICES, OPTICAL SYSTEMS ENGINEERING, SYSTEMS INNOVATION ENGINEERING

Target To understand the fundamental concepts of digital environment for medical diagnosis. To learn the design methods of medical information systems.

Outline This course introduces the design and the implementation of digital environment for medical diagnosis based on the various technologies including medical image data acquisition and retrieval, computer aided diagnosis using multimodal medical data sets.

Style Portfolio

Keyword *imaging technology, computed-aided diagnosis systems, digital environment for medical diagnosis*

Relational Lecture “**Medical and Biological Engineering**”(0.5)

Goal

1. To understand medical imaging techniques.
2. To understand various techniques of computer-aided diagnosis.
3. To understand the fundamentals of digital environment for medical diagnosis.

Schedule

1. Introduction
2. Imaging techniques
3. Image processing techniques
4. Pattern recognition techniques
5. Visualization techniques
6. Virtual reality/Mixed reality techniques
7. Design of computer-aided diagnosis systems
8. Implementation of computer-aided diagnosis systems
9. Design and implementation of fundamentals of digital environment for medical diagnosis and therapy
10. Design of medical information systems (1)
11. Design of medical information systems (2)
12. Design of medical information systems (3)
13. Design of medical information systems (4)
14. Design of medical information systems (5)
15. Advanced medical information systems

Evaluation Criteria Report 100%

Textbook Reference books are introduced to each topics.

Contents <http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216555>

Contact

⇒ Niki (Opt.507, +81-88-656-9430, niki@opt.tokushima-u.ac.jp) [MAIL](#)

⇒ Kawata (Opt.508, +81-88-656-9431, kawata@opt.tokushima-u.ac.jp) [MAIL](#)

Note Preparation (2hrs) and Review (2hrs) are required to take this lecture (2hrs).