WIRELESS COMMUNICATION FOR BODY IMPLANTED DEVICE
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Description:
This course provides an inclusive coverage on the subject of implanted medical wireless communication systems. It is expected that ever sophisticated medical devices will be implanted inside the human body for medical telemetry and telemedicine. To set up effective and efficient wireless links for implanted devices, it is essential to give special attention to the antenna design and channel modeling. Therefore, deep knowledge of the RF field and biological tissues will be required.

Course Contents:
1. Background and Overview of Body Implanted Device
2. Implant Device Communication Methods
3. Medical Implant Communication Standards
4. Medical Implant communication Design Requirements
5. Wave Propagation in the Biological Materials
6. RF Radiation Safety and Thermal Effects
7. Antenna
8. Channel Modeling for Body Implanted Devices

Conduction:
Mandatory Lectures (20%), Class work (20%), and Written Exam (60%)
Students need to attend the course, to be eligible for the exam.

Lectures:
Mon: 8:30-10:00, 10:30-12:00
Tue: 8:30-10:00, 10:30-12:00, 13:00-13:45 (Questions and Problems)

Final Exam:
Wed: 9:00-12:00.

The amount of credits is yet to be confirmed.
Literature:

Books:

Articles:
[10] IEEE standard for safety levels with respect to human exposure to radio frequency electromagnetic field, 3 KHz to 300 GHz, IEEE Std C95.1, 1999.