EE0001  EFFECTS OF ELECTROMAGNETIC RADIATION ON HUMANS
Academic Units: 3
Contact Hours (per week) | 39
Pre-requisite | -

Contents

References

EE1002  PHYSICS FOUNDATION FOR ELECTRICAL & ELECTRONIC ENGINEERING
Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | FE1011/FE1012/PH1011/PH1012

Content
Introduction to electromagnetic fields and applications. Electromagnetic in electronics, circuits and communications. Introduction to light, lasers and optical spectroscopy. Principles of geometric and wave optical components. Introduction to quantum physics and applications. Applications of quantum physics in electronics and lasers.

Textbooks

References

EE1003  INTRODUCTION TO MATERIALS FOR ELECTRONICS
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12
Pre-requisite | -

Contents

Textbooks

References

EE2001  CIRCUIT ANALYSIS
Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | -

Contents

Textbook

References
EE2002  ANALOG ELECTRONICS

Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | EE2001

Contents

Textbook

References

EE2003  SEMICONDUCTOR FUNDAMENTALS

Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | EE1002

Contents

Textbook

References

EE2004  DIGITAL ELECTRONICS

Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | -

Contents

Textbook

References

EE2006  ENGINEERING MATHEMATICS I

Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | FE1007/MH1811 or EE2092/MH2810

Contents

Textbooks

References

**EE2007 ENGINEERING MATHEMATICS II**

**Academic Units:** 4  
**Contact Hours:** Lecture – 39; Tutorial – 12  
**Pre-requisite:** FE1007/MH1811 or EE2092/MH2810

**Contents**  

**Textbook**  

**References**  

**EE2008 DATA STRUCTURES AND ALGORITHMS**

**Academic Units:** 3  
**Contact Hours:** Lecture – 26; Tutorial – 12  
**Pre-requisite:** -

**Contents**  

**Textbook**  

**References**  

**EE2010 SIGNALS AND SYSTEMS**

**Academic Units:** 4  
**Contact Hours:** Lecture – 39; Tutorial – 12  
**Pre-requisite:** FE1006 & FE1007 or MH1810 & MH1811 or EE2092/MH2810

**Contents**  

**Textbook**  

**References**  

**EE2071 LABORATORY 2A**

**Academic Unit:** 1  
**Contact Hours:** Laboratory – 39  
**Pre-requisite:** -

**Contents**  
The experiments of this laboratory course provide students with extensive practical training in the various areas of electrical and electronic engineering.

**Experiments**  
L211 - Series Resonance And Time/Frequency Response of Passive Networks  
L212 - Two-Port Network Parameters And Transient Response  
L213 – Logic Circuit Simulation  
L214 - Abstract Data Types & Their Implementations  
L215 - Algorithmic Approach to Problem Solving  
L216 - PCB Layout Design (No Report)  
L217 - Arithmetic and Sequential Circuits  
L218 - Counter and Shift Register

**EE2072 LABORATORY 2B**

**Academic Unit:** 1  
**Contact Hours:** Laboratory – 24  
**Pre-requisite:** -

**Contents**  
A series of eight Laboratory experiments designed to provide understanding of fundamental theories and practical applications relating to some of the Year 2 courses in electrical and electronic engineering.
Experiments
L221 - Analog Circuit Design
L222 - Diode Rectifier Circuits
L223 - BJT Amplifier
L224 - Linear Time Invariant (LTI) Systems, Convolution and Impulse Response
L225 - Fourier Representation of Signals and Filtering
L226 - Semiconductor Parameter Measurements
L227 - PN Junction Devices
L228 - Operational Amplifier - Parameters and Applications

EE2073 INTRODUCTION TO ENGINEERING DESIGN AND PROJECT
Academic Units: 2
Contact Hours | Lecture – 6 ; Laboratory – 33
Pre-requisite | -

Contents

Textbooks

MH2810 MATHEMATICS A
Academic Unit | 4
Contact Hours | Lecture – 39 ; Tutorial – 12
Pre-requisite | -

Contents

Textbook

Reference

EE3001 ENGINEERING ELECTROMAGNETICS
Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12 ; Laboratory – 6
Pre-requisite | EE2007

Contents

Textbooks

Reference

EE3002 MICROPROCESSORS
Academic Units: 4
Contact Hours | Lecture – 39 ; Tutorial – 12 ; Laboratory – 6
Pre-requisite | -

Contents

Textbook

References
EE3010  ELECTRICAL DEVICES AND MACHINES
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 6
Pre-requisite | EE2001

Contents
Electromagnetic Principles and Actuators. Transformers. DC Machines. AC Machines.

Textbook

References

EE3011  MODELLING AND CONTROL
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2006

Contents

Textbook

References

EE3012  COMMUNICATION PRINCIPLES
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2010

Contents

Textbook

References

EE3013  SEMICONDUCTOR DEVICES AND PROCESSING
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2003

Contents

Textbook

References

EE3014  DIGITAL SIGNAL PROCESSING
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2010

Contents

Textbooks
Download here http://www.sp4comm.org/webversion.html
EE3015  POWER SYSTEMS AND PROTECTION
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2001

Contents

Textbooks

References

EE3017  COMPUTER COMMUNICATIONS
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | -

Contents
Introduction to computer communications. Data Communications Fundamentals. Data Link Control. Local Area Networks. Internetworking.

Textbook

References

EE3018  INTRODUCTION TO PHOTONICS
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | -

Contents

Textbook

References

EE3019  INTEGRATED ELECTRONICS
Academic Units: 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory – 3
Pre-requisite | EE2002

Contents

Textbook

References

EE3179 INDUSTRIAL ATTACHMENT
Academic Units: 8
Contact Hours | 20 weeks (full-time)
Pre-requisite | Third year standing and completed at least 4 (First year engineering) / 2 (Poly-direct intake) semesters of studies.

Contents
Every participating organisation is required to provide an initial proposal of an attachment programme for each of the students. The attachment programme should have emphasis on applications, management and hands-on experience for the students. Prior to the start of the Industrial Attachment, academic staff from the School visit new organizations which have offered placements for IA. The purpose is to review, discuss and develop (if required) further details on the proposed attachment programmes. Every IA student, during the first three weeks of the attachment, has to develop the initial attachment programme proposed by the participating organisation into a work plan/schedule with specific self-directed learning objectives to meet NTU’s attachment objectives.

EE3080 DESIGN AND INNOVATIVE PROJECT
Academic Units: 2
Contact Hours | Lecture – 6 ; Laboratory – 78
Pre-requisite | -

Objective
The main objectives of the Design and Innovative Project are to introduce students to electrical and electronic engineering projects, provide with students an opportunity to exercise their creative and innovative qualities in a group project environment and excite the imagination of aspiring engineers, innovators and technopreneurs.

Contents

EE4001 SOFTWARE ENGINEERING
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents
Introduction to software engineering. Software project management. Software requirements and specifications. Software design. Software testing and maintenance.

References

EE4040 ENGINEER AND SOCIETY
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | Year 4 classification

Contents
The course comprises 4 main topics: Evolution of Modern Singapore; Technology & Society; Ethics and Professionalism and The Environment. The students are made aware of “Current Issues” at the time of their study.

References
1. Kwa Chong Guan, Derek Heng & Tan Tai Yong, Singapore: A Seven-Hundred Year History, (Singapore: National Heritage Board, National Archives of Singapore, 2009).
EE4041  HUMAN RESOURCE MANAGEMENT

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | Year 4 classification

Contents
Using case studies and current events to: understanding individual and group behavior in organizations: the impact of globalization, continuous learning, work values and corporate culture; visionary and transformational leadership strategies: motivation, teambuilding and talent development, ethical behavior and integrity; Managing work groups: organizational communications and conflict resolution strategies, leveraging on diversity; Quality and excellence concepts: stakeholders awareness, customer-centred mindset, people-centred management approaches, innovative adaptation to continuous change, learning organization, global talent search; Trade unions, collective bargaining and labour-management relations challenges and prospects.

Textbooks

References

EE4079  FINAL YEAR PROJECT

Academic Units: 10
Pre-requisite | Refer to FYP Website

Contents
As part of NTU’s curriculum, all final year students of the School of EEE are required to undertake a project, supervised by one or two faculty members. This project will involve an in-depth study, investigation, construction of hardware and/or development of software and testing in any of the areas of specialized courses offered in a final year option group, and spread over the entire academic year. Students are required to submit a formal report, carry out a project demonstration and make an oral presentation on completion of the project. Projects may include, but are not limited to, one or more of the following areas: design, product development, software development, laboratory investigation, computing and analysis, field-testing and instrumentation and feasibility studies. Besides project proposals generated by its own academic staff, the school also works with outside partners including the A*STAR Research Institutes and industrial companies to propose relevant projects.

EE4105  CELLULAR COMMUNICATION SYSTEM DESIGN

Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | -

Contents
The students will be involved in the planning and design of cellular and wireless personal communication systems at the system level. Issues such as the choice of modulation and channel coding schemes as well as multiple access methods will be dealt with. Fundamentals of digital signal processing will be briefly introduced. DSP techniques used in the design of baseband digital signal transmission and reception will be covered. Carrier-modulated signals, such as AM, QAM and PSK signals, used for transmission through band-pass channels will be discussed. Channel equaliser design for compensation of channel distortions and inter-symbol interference (ISI) will be dealt with.

References

EE4109 MICROWAVE CIRCUIT AND SYSTEM DESIGN
Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | -

Contents
Students will be involved in the design of advanced wireless communication systems as well as microwave planar components. It will include the analysis, design and simulation of wireless communication and radar systems as well as the analysis, design and simulation of microwave integrated circuits.

References

EE4110 OPTICAL COMMUNICATION SYSTEM DESIGN
Academic Units: 3
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | -

Contents
Students will be involved in the design of fibre optic communication systems. Issues such as light propagation, fibre characteristics and classification, fibre cables, connectors and splices, optical transmitters and receivers, optical amplifier and filter, optical coupler and wavelength converter, nonlinear effects in WDM systems, and system design methodology are covered.

Textbook

References

EE4151 RF AND MICROWAVE ENGINEERING
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3001

Contents
RF and microwave circuit analysis. Planar transmission lines and discontinuities. Planar couplers and filters.

Textbooks

References

EE4152 DIGITAL COMMUNICATIONS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3012

Contents

Textbook

References

EE4153 TELECOMMUNICATION SYSTEMS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3012

Contents
Telecommunication networks. Switching and signaling. Line transmission. Microwave communication systems. Optical fibre communication systems and applications.
Textbooks

References

EE4188 WIRELESS COMMUNICATIONS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3012

Contents

Textbooks

References

EE4189 SPREAD SPECTRUM COMMUNICATIONS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3012

Contents

Textbook

References

EE4190 INTRODUCTION TO MODERN RADAR
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2010

Contents

Textbook

References

**EE4207 CONTROL ENGINEERING DESIGN**

Academic Units: 2  
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26  
Pre-requisite -

**Contents**

**References**

**EE4208 INTELLIGENT SYSTEM DESIGN**

Academic Units: 2  
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26  
Pre-requisite -

**Contents**
This module covers the design of intelligent systems such as intelligent automation systems, neurofuzzy systems and intelligent vision systems. Currently, the focus is on the design of computer vision systems.

**Reference**

**EE4205 PROCESS CONTROL SYSTEMS**

Academic Units: 3  
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13  
Pre-requisite | EE3011

**Contents**

**Textbook**

**References**

**EE4206 COMPUTER VISION**

Academic Units: 3  
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13  
Pre-requisite -

**Contents**

**Textbook**

**References**

**EE4207 ROBOTICS AND AUTOMATION**

Academic Units: 3  
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13  
Pre-requisite -

**Contents**

**Textbook**

**References**
EE4273  DIGITAL CONTROL SYSTEMS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3011

Contents
Signal conversion and reconstruction. Analysis and design of digital control systems. State variable techniques and implementation issues.

Textbooks

References

EE4285  COMPUTATIONAL INTELLIGENCE
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbooks

References

EE4303  MIXED-SIGNAL IC DESIGN
Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | EE3003/EE3019

Contents
This design course is based on the use of standard fabrication technologies (e.g., CMOS and BiCMOS) to realize analog and digital functions on integrated circuits. Students learn practical circuit design techniques as well as device characteristics and the theory of circuit synthesis and analysis. A mixed-signal circuit design project of medium complexity is included to enhance student’s learning.

Textbook

References

EE4304  RADIO FREQUENCY INTEGRATED SYSTEM DESIGN
Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | EE3003/EE3019

Contents
RF integrated systems. Design and simulation of RF circuits.

Textbook

References
### EE4305  DIGITAL DESIGN WITH HDL

**Academic Units:** 2  
**Contact Hours (per week):** Lecture – 13 ; Laboratory – 26  
**Pre-requisite:** EE2004  

**Contents**  
Digital design using hardware description language. Design practice.  

**Textbook**  

**References**  

### EE4340  VLSI SYSTEMS

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 26 ; Tutorial – 13  
**Pre-requisite:** EE2004  

**Contents**  

**Textbook**  

**References**  

### EE4341  ADVANCED ANALOG CIRCUITS

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 26 ; Tutorial – 13  
**Pre-requisite:** EE3003/EE3019  

**Contents**  

**Textbook**  

**References**  

### EE4343  RADIO FREQUENCY CIRCUITS

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 26 ; Tutorial – 13  
**Pre-requisite:** EE3003/EE3019  

**Contents**  

**Textbook**  

**References**  
EE4344 ANALYSIS AND DESIGN OF INTEGRATED CIRCUITS

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3003/EE3019

Contents

Textbooks

References

EE4413 DSP SYSTEM DESIGN

Academic Units: 2
Contact Hours (per week) | 39
Pre-requisite | -

Contents
This course introduces the basic rules, procedures, techniques and components for designing a DSP system. The course also includes an assignment for the students to apply the knowledge and techniques learnt. DSP architectures, addressing mode, DSP fixed-point programming style, real-time implementation issues, DSP integrated development environment.

References

EE4455 EMBEDDED SYSTEMS

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3002

Contents

Textbooks

References

EE4475 AUDIO SIGNAL PROCESSING

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents
Textbooks

References

EE4476 IMAGE PROCESSING
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbook

References

EE4478 DIGITAL VIDEO PROCESSING
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbooks

References

EE4483 ARTIFICIAL INTELLIGENCE AND DATA MINING
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents
Problem solving techniques. Machine learning and applications to data mining.

Textbooks

References
EE4490  MULTIMEDIA SYSTEMS
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbook

Reference

EE4503  POWER ENGINEERING DESIGN
Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | EE3015 (non-BRC) or EE3010 & EE3015 (BRC)

Contents
In this design course, the students will apply the concepts of various power system analysis techniques and system performance criteria in designing a medium/low voltage transmission system and protection schemes for some typical industrial distribution networks. Students are required to carry out the detailed design with hands-on exercise and extensive use of computer simulation software. Students are also required to verify the results of the final design to meet specifications.

Textbooks

References

EE4504  DESIGN OF CLEAN ENERGY SYSTEMS
Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | EE3015 (non-BRC) or EE3010 & EE3015 (BRC)

Contents

Textbooks

Reference

EE4530  POWER SYSTEM ANALYSIS AND CONTROL
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2005 (non-BRC) or EE3010 & EE3015 (BRC)

Contents
Power flows. Active power and frequency control. Reactive power and voltage control. Power system stability.

Textbook

References

EE4532  POWER ELECTRONICS AND DRIVES
Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2005 (non-BRC) or EE3010 & EE3015 (BRC)

Contents

References

**EE4533 POWER APPARATUS AND SYSTEM PROTECTION**

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2005 (non-BRC) or EE3015 (BRC)

Contents

Textbooks

References

EE4534 MODERN DISTRIBUTION SYSTEMS WITH RENEWABLE RESOURCES

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3015 (non-BRC) or EE3010 & EE3015 (BRC)

Contents

EE4645 MICROFABRICATION ENGINEERING

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3013

Contents

Textbook

References

EE4646 VLSI TECHNOLOGY

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE3013

Contents
Advanced MOS structures and process technology. Advanced bipolar transistors and process technology. MOS scaling rules and small geometry effects. CMOS latchup and isolation.

Textbooks

References

EE4647 MICROELECTRONIC DEVICES

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2003

Contents
Bipolar devices. MOS physics. MOSFET device characteristics and modelling. Introduction to heterojunction devices.

Textbooks

Reference

EE4648 FLAT PANEL DISPLAY TECHNOLOGIES

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | EE2003

Contents

References
## EE4694 - IC RELIABILITY AND FAILURE ANALYSIS

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 26; Tutorial – 13  
**Pre-requisite:** EE3013

### Contents
Basic reliability engineering concept. Statistical aspect of reliability and data handling. Microelectronic device failure mechanisms. Failure analysis techniques and instrumentation.

### Textbook

### References

## EE4717 - WEB APPLICATION DESIGN

**Academic Units:** 2  
**Contact Hours (per week):** Lecture – 13; Laboratory – 26  
**Pre-requisite:** -

### Contents
This design course will equip students with principles, knowledge and skills for the design and construction of web-enabled Internet applications. It deals with challenges raised in wide-area distributed computing, including persistence, concurrency and transaction, as well as technologies for creating, managing, and tracking web-interaction state in the environments where the connections are inherently unreliable and protocols are inherently stateless.

### References

## EE4718 - ENTERPRISE NETWORK DESIGN

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 13; Laboratory – 26  
**Pre-requisite:** EE3017

### Contents
This course covers network technologies and protocols, network planning and design methodologies. Besides acquiring the theoretical background in enterprise networking, students will learn to set up, configure and interconnect an IP network in the lab sessions. Network monitoring and management tools will also be introduced to the students.

### References

## EE4756 - COMPUTER ARCHITECTURE

**Academic Units:** 3  
**Contact Hours (per week):** Lecture – 26; Tutorial – 13  
**Pre-requisite:** -

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**EE4838 LASER ENGINEERING AND APPLICATIONS**

**Textbook**

**References**
EE4839  FIBRE OPTIC COMMUNICATIONS

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbook

References

EE4840  BIOPHOTONICS

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents
Fundamentals of Biophotonics, Bioimaging Principles and Techniques, Optical Biosensors, Laser-Photomedicine, Applications of Biophotonics.

Textbook

References

EE4901  BIOMEDICAL CONTROL SYSTEM DESIGN

Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | -

Contents
This design course is an introduction to biomedical system modeling and control, focusing on the synthesis of control techniques for biomedical systems. The musculoskeletal and cardiovascular systems will be used as illustrative examples.

References

EE4902  DESIGN OF MEDICAL INFORMATION PROCESSING SYSTEMS

Academic Units: 2
Contact Hours (per week) | Lecture – 13 ; Laboratory – 26
Pre-requisite | -

Contents
This module is on the design of software/hardware systems for biomedical signal and image processing and analysis.

References

EE4903  PHYSIOLOGICAL SYSTEMS ANALYSIS

Academic Units: 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents
System modelling, Control and analysis. The respiratory system. The cardiovascular system. The neuromuscular system. The renal system.
**EE4904 BIOMEDICAL INSTRUMENTATION**

Academic Units: 3  
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13  
Pre-requisite | -  

Contents  

Textbooks  

References  

**EE4905 BIOMEDICAL SIGNAL PROCESSING**

Academic Units: 3  
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13  
Pre-requisite | -  

Contents  