EE0001 EFFECTS OF ELECTROMAGNETIC RADIATION ON HUMANS

Academic Units: 3
Contact Hours (per week) | 39
Pre-requisite | -

Contents

References

Textbooks

References

IM1001 DATA STRUCTURES AND ALGORITHMS

Academic Unit | 3
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory - 6
Pre-requisite | -

Contents

Textbook

References

Textbooks

References

IM1002 ANALOG ELECTRONICS

Academic Unit | 3
Contact Hours | Lecture – 26 ; Tutorial – 12
Pre-requisite | -

Contents

Textbook
References


IM2001 SOFTWARE ENGINEERING

Academic Unit | 3
Contact Hours | Lecture – 26 ; Tutorial – 12
Pre-requisite | -

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

References

IM2002 MICROPROCESSORS

Academic Unit | 4
Contact Hours | Lecture – 39 ; Tutorial – 12 ; Laboratory - 6
Pre-requisite | -

Contents

Textbook

IM2003 COMPUTER COMMUNICATIONS

Academic Unit | 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

IM2004 SIGNALS AND SYSTEMS

Academic Unit | 4
Contact Hours | Lecture – 39 ; Tutorial – 12 ; Laboratory - 6
Pre-requisite | FE1006/MH1810 & FE1007/MH1811 or IM2092/MH2810

Contents

Textbook

References

**IM2006 ENGINEERING MATHEMATICS I**

Academic Unit | 4  
Contact Hours | Lecture – 39 ; Tutorial – 13  
Pre-requisite | FE1007/MH1811 or IM2092/MH2810

**Contents**


**Textbooks**


**References**


**MH2810 MATHEMATICS A**

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

**Contents**


**Textbook**


**Reference**


**IM3001 DIGITAL SIGNAL PROCESSING**

Academic Unit | 3  
Contact Hours | Lecture – 26 ; Tutorial – 12 ; Laboratory - 3  
Pre-requisite | IM2004

**Contents**

Introduction. Discrete fourier transform (DFT) and fast fourier transform (FFT). Z-transform. Digital filter design.

**Textbooks**


**Reference**

**IM3002 COMMUNICATION PRINCIPLES**

**Academic Unit |** 3

**Contact Hours |** Lecture – 26 ; Tutorial – 12 ; Laboratory - 3

**Pre-requisite |** IM2004

**Contents**


**Textbook**


**References**


**IM3003 INFORMATION SECURITY**

**Academic Unit |** 3

**Contact Hours |** Lecture – 26 ; Tutorial – 12

**Pre-requisite |** -

**Contents**


**Textbook**


**References**


**IM3179 INDUSTRIAL ATTACHMENT**

**Academic Unit |** 8

**Contact Hours |** 20 Weeks (Full-Time)

**Pre-requisite |** Year 3 Classification; and Completed 4/2 Semesters

**Contents**

Industrial Attachment is a learning process which by exposing the students in real life engineering environment as part of an academic curriculum helps the students to develop and enhance academic, personal and professional competencies. 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 student.

**IM4001 MULTIMEDIA SYSTEMS**

**Academic Unit |** 3

**Contact Hours (per week) |** Lecture – 26 ; Tutorial – 13

**Pre-requisite |** -

**Contents**


**Textbook**


**Reference**


**IM4040 ENGINEER AND SOCIETY**

**Academic Unit |** 3

**Contact Hours (per week) |** Lecture – 26 ; Tutorial – 13

**Pre-requisite |** -

**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**


IM4041 HUMAN RESOURCE MANAGEMENT

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

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


IM4079 FINAL YEAR PROJECT

Academic Unit | 10
Contact Hours (per week) | -
Pre-requisite | Refer to FYP Website

Contents
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.

IM4152 DIGITAL COMMUNICATIONS

Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | IM3002

Contents

Textbook

References
IM4153  TELECOMMUNICATION SYSTEMS
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | IM3002

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

Textbooks

References

IM4188  WIRELESS COMMUNICATIONS
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | IM3002

Contents

Textbooks

IM4455  EMBEDDED SYSTEMS
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | IM2002

Contents

Textbooks & References
TBC (July 2013)

IM4475  AUDIO SIGNAL PROCESSING
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbooks

References

IM4476  IMAGE PROCESSING
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbook
References

IM4478 DIGITAL VIDEO PROCESSING
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbooks

References

IM4483 ARTIFICIAL INTELLIGENCE AND DATA MINING
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

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

Textbooks

References

IM4756 COMPUTER ARCHITECTURE
Academic Unit | 3
Contact Hours (per week) | Lecture – 26 ; Tutorial – 13
Pre-requisite | -

Contents

Textbook

References
**IM4761 COMPUTER NETWORKING**

**Academic Unit | 3**

**Contact Hours (per week) | Lecture – 26 ; Tutorial – 13**

**Pre-requisite | IM2003**

**Contents**


**Textbook**


**References**


**IM4791 DATABASE SYSTEMS**

**Academic Unit | 3**

**Contact Hours (per week) | Lecture – 26 ; Tutorial – 13**

**Pre-requisite | -**

**Contents**


**Textbook**


**References**


