

COURSE CURRICULUM

PROGRAMME **NTU-GEORGIA TECH INTEGRATED BACHELOR AND MASTER PROGRAMME (FULL TIME)**
STUDENT TYPE **ENGINEERING YEAR 1**
ADMISSION YEAR **2008-2009 ; 2007-2008**

COURSE CODE AND TITLE	TYPE	NO. OF HOURS PER WEEK				AU	PRE-REQUISITE / CO-REQUISITE [^]
		LEC	TUT	LAB	TOTAL		
YEAR 1							
BS1004 LIFE SCIENCES	C	2	1	-	3	3	
FE1001 PHYSICS I	C	3	1	-	4	4	A LEVEL PHYSICS/FE0001
FE1002 PHYSICS II	C	3	1	-	4	4	A LEVEL PHYSICS/FE0001
FE1003 CHEMISTRY	C	2	1	-	3	3	
FE1005 MATERIALS SCIENCE	C	2	1	-	3	3	
FE1006 MATHEMATICS 1	C	2	1	-	3	3	
FE1007 MATHEMATICS 2	C	2	1	-	3	3	
FE1008 COMPUTING	C	2	1	1	4	3	
FE1071 LABORATORY 1A	C	-	-	3	3	1	
FE1072 LABORATORY 1B	C	-	-	3	1	1	
HW110 EFFECTIVE COMMUNICATION	C	-	2	-	2	2	
EE2001 CIRCUIT ANALYSIS	C	2	1	-	3	3	
EE2004 DIGITAL ELECTRONICS	C	2	1	-	3	3	
EE2008 DATA STRUCTURES & ALGORITHMS	C	2	1	-	3	3	
GER-PREScribed ELECTIVE 1	P	2	1	-	3	3	
GER-PREScribed ELECTIVE 2	P	2	1	-	3	3	
GER-UNRESTRICTED ELECTIVE 1	G	2	1	-	3	3	
GER-UNRESTRICTED ELECTIVE 2	G	2	1	-	3	3	
TOTAL						51	
YEAR 2							
EE2002 ANALOG ELECTRONICS	C	2	1	-	3	3	
EE2003 SEMICONDUCTOR FUNDAMENTALS	C	2	1	-	3	3	FE1002
EE2005 AC CIRCUITS & MACHINES	C	2	1	-	3	3	EE2001
EE2006 ENGINEERING MATHEMATICS I	C	3	1	-	4	4	FE1007
EE2007 ENGINEERING MATHEMATICS II	C	3	1	-	4	4	FE1007
EE2010 SIGNALS & SYSTEMS	C	2	1	-	3	3	FE1006 & FE1007
EE2071 LABORATORY 2A	C	-	-	3	3	1	
EE2072 LABORATORY 2B	C	-	-	3	3	1	
EE2079 DESIGN & INNOVATION PROJECT (5 WEEKS, FT)	C	-	-	40	40	3	
EE3001 ENGINEERING ELECTROMAGNETICS	C	2	1	-	3	3	EE2007 [^]
EE3002 MICROPROCESSORS	C	2	1	-	3	3	
EE3003 INTEGRATED ELECTRONICS	C	2	1	-	3	3	EE2002
EE3071 LABORATORY 3	C	-	-	3	3	1	
EE3072 PROJECT	C	-	-	3	3	1	
HW210 TECHNICAL COMMUNICATION	C	-	2	-	2	2	
HW310 PROFESSIONAL COMMUNICATION	C	1	1	-	2	2	HW110
GER-PREScribed ELECTIVE 3	P	2	1	-	3	3	
GER-PREScribed ELECTIVE 4	P	2	1	-	3	3	
GER-UNRESTRICTED ELECTIVE 3	G	2	1	-	3	3	
GER-UNRESTRICTED ELECTIVE 4	G	2	1	-	3	3	
TOTAL						52	

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COURSE CODE AND TITLE			TYPE	NO. OF HOURS PER WEEK				AU	PRE-REQUISITE / CO-REQUISITE^
				LEC	TUT	LAB	TOTAL		
YEAR 3									
EE3076	INDUSTRIAL ORIENTATION	(5 WEEKS, FT)	C	-	-	40	40	4	
EE3xxx	ELECTIVE 1		P	2	1	-	3	3	REFER TO YEAR 3 CURRICULUM LIST
EE3xxx	ELECTIVE 2		P	2	1	-	3	3	
EE4001	SOFTWARE ENGINEERING		C	2	1	-	3	3	
EE4040	ENGINEERS & SOCIETY		C	2	1	-	3	3	
EE4041	HUMAN RESOURCE MANAGEMENT		C	2	1	-	3	3	
EE4079	FINAL YEAR PROJECT		C	-	-	8	8	10	
EE4xxx	DESIGN ELECTIVE 1		P	1	-	2	3	2	REFER TO FINAL YEAR OPTION
EE4xxx	DESIGN ELECTIVE 2		P	1	-	2	3	2	
EE4xxx	TECHNICAL ELECTIVE 1		P	2	1	-	3	3	
EE4xxx	TECHNICAL ELECTIVE 2		P	2	1	-	3	3	
EE4xxx	TECHNICAL ELECTIVE 3		P	2	1	-	3	3	
EE4xxx	TECHNICAL ELECTIVE 4		P	2	1	-	3	3	
	GER-PRESCRIBED ELECTIVE 5		P	2	1	-	3	3	
	GER-UNRESTRICTED ELECTIVE 5		P	2	1	-	3	3	
TOTAL								51	
YEAR 4 [GEORGIA INSTITUTE OF TECHNOLOGY, USA]									
Fulfill Georgia Tech's M.S. (ECE) requirements:									
<ul style="list-style-type: none"> • Three ECE 6000 level (or above) courses from a combination of two technical areas: Computer Engineering and Telecommunications. • Three ECE 6000 level (or above) courses, two of which must be outside the above two technical areas. • Two minor subjects in an area outside ECE, such as Mathematics, Computer Science, etc. • Two electives, which may be met by credit transfer, subject to Georgia Tech's approval, from two NTU's senior-level or graduate-level courses in relevant areas. 									

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ADDITIONAL INFORMATION

The technical electives for B.Eng (EEE) in the Infocommunication Engineering Group are:

THIRD YEAR ELECTIVES (SELECT 2 COURSES)

- EE3012 - COMMUNICATION PRINCIPLES
- EE3014 - DIGITAL SIGNAL PROCESSING
- EE3017 - COMPUTER COMMUNICATIONS

FINAL YEAR DESIGN ELECTIVES (SELECT 2 COURSES)

- EE4105 - CELLULAR COMMUNICATION SYSTEM DESIGN
- EE4109 - MICROWAVE CIRCUIT AND SYSTEM DESIGN
- EE4110 - OPTICAL COMMUNICATION SYSTEM DESIGN
- EE4413 - DSP SYSTEM DESIGN
- EE4706 - OBJECT-ORIENTED SOFTWARE ENGINEERING DESIGN
- EE4717 - WEB APPLICATION DESIGN
- EE4718 - ENTERPRISE NETWORK DESIGN

FINAL YEAR TECHNICAL ELECTIVES (SELECT 4 COURSES)

- EE4151 - RF & MICROWAVE ENGINEERING
- EE4152 - DIGITAL COMMUNICATIONS
- EE4153 - TELECOMMUNICATION SYSTEMS
- EE4187 - ANTENNAS & RADIO WAVE PROPAGATION
- EE4188 - WIRELESS COMMUNICATIONS
- EE4189 - SPREAD SPECTRUM COMMUNICATIONS
- EE4455 - EMBEDDED SYSTEMS
- EE4475 - AUDIO SIGNAL PROCESSING
- EE4476 - IMAGE PROCESSING
- EE4478 - DIGITAL VIDEO PROCESSING
- EE4483 - ARTIFICIAL INTELLIGENCE AND DATA MINING
- EE4490 - MULTIMEDIA SYSTEMS
- EE4705 - OBJECT-ORIENTED PROGRAMMING
- EE4706 - OBJECT-ORIENTED SOFTWARE ENGINEERING DESIGN
- EE4756 - COMPUTER ARCHITECTURE
- EE4757 - COMPUTER SYSTEM SOFTWARE
- EE4758 - COMPUTER SECURITY
- EE4761 - COMPUTER NETWORKING
- EE4762 - WEB SERVICES
- EE4791 - DATABASE SYSTEMS

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The Georgia Tech's M.S. (ECE) courses in the Computer Engineering and Telecommunications technical areas are:

COMPUTER ENGINEERING

- ECE 6100 - ADVANCED COMPUTER ARCHITECTURE
- ECE 6101 - PARALLEL & DISTRIBUTED COMPUTER ARCHITECTURE
- ECE 6102 - DEPENDABLE DISTRIBUTED SYSTEMS
- ECE 6110 - CAD FOR COMPUTER COMMUNICATION NETWORK
- ECE 6120 - AUTOMATA THEORY
- ECE 6121 - COMBINATORIAL STRATEGIES FOR ENGINEERS
- ECE 6130 - ADVANCED VLSI SYSTEMS
- ECE 6132 - COMPUTER-AIDED SYSTEM DESIGN
- ECE 6133 - PHYSICAL DESIGN AUTOMATION VLSI SYSTEM
- ECE 6140 - DIGITAL SYSTEMS TEST
- ECE 7102 - RISC ARCHITECTURES
- ECE 7131 - ASYNCHRONOUS AND SELF TIMED SYSTEMS
- ECE 7141 - ADVANCED DIGITAL SYSTEMS TEST
- ECE 7142 - FAULT TOLERANT COMPUTING

TELECOMMUNICATIONS

- ECE 6390 - SATELLITE COMMUNICATIONS AND NAVIGATION SYSTEMS
- ECE 6601 - RANDOM PROCESSES
- ECE 6602 - DIGITAL COMMUNICATIONS
- ECE 6603 - ADVANCED DIGITAL COMMUNICATIONS
- ECE 6604 - PERSONAL AND MOBILE COMMUNICATIONS
- ECE 6605 - INFORMATION THEORY
- ECE 6606 - CODING THEORY AND APPLICATIONS
- ECE 6607 - COMPUTER COMMUNICATION NETWORKS
- ECE 6608 - PERFORMANCE ANALYSIS OF COMMUNICATION NETWORKS
- ECE 6610 - WIRELESS NETWORKS
- ECE 6611 - BROADBAND NETWORKING
- ECE 6612 - COMPUTER NETWORK SECURITY
- ECE 6613 - BROADBAND ACCESS NETWORKS
- ECE 6614 - MULTIMEDIA COMMS: SIGNAL PROC., NETWORKING, APPLICATIONS & STANDARDS
- ECE 7611 - ADVANCED COMMUNICATION THEORY

The list of courses offered are subjected to changes. Please refer to the NTU's School of EEE website and Georgia Tech's School of ECE website for the latest information.

UPDATED: NOVEMBER 10, 2008