

Communications Group



Our group is one of the **8 research groups** in the Electrical and Computer Engineering Department

<http://www.comm.utoronto.ca>

Communications Group

The research interests of the communications group fall into four broad categories:

- ✖ **Communications Networks**
- ✖ **Digital Communications**
- ✖ **Wireless Communications**
- ✖ **Signal Processing and Multimedia**

What is Communications? The transmission of information from one point to another through a succession of processes

Sources of information: Speech (audio), TV (video /audio), Facsimile (data), Personal Computers and Workstations

Communication Networks

- ✖ Wireless/Mobile Networks
- ✖ Large Scale High Speed Communications
- ✖ Integrated Services Broadband Networks
- ✖ Optical Networks
- ✖ Network Management and Control
- ✖ Multimedia Networking
- ✖ Video Applications

And many many more



Digital Communications

- ✖ Coded Modulation
- ✖ Information Theory
- ✖ Quantum Information Theory
- ✖ Communication Theory
- ✖ Spread Spectrum Systems
- ✖ Wireless Communications
- ✖ Packet Radio Networks
- ✖ Error Control techniques



Just to name a few.....



Signal Processing

- ✖ Adaptive Filtering
- ✖ Detection/Estimation
- ✖ Digital Signal Processing
- ✖ Image Processing
- ✖ Parallel Algorithms
- ✖ Statistical Signal Processing
- ✖ Non-Linear Filters

To give just some examples.....



Communications Group

18 Professors

- ✖ Parham Aarabi (cross - Computer Group)
- ✖ Raviraj Adve
- ✖ Ian Blake
- ✖ Brendan Frey
- ✖ Dimitris Hatzinakos
- ✖ Frank Kschischang (Chair)
- ✖ Raymond Kwong (cross – Control Group)
- ✖ Alberto Leon-Garcia
- ✖ Ben Liang
- ✖ Jorg Liebeherr
- ✖ Teng Joon Lim
- ✖ Hoi-Kwong Lo (cross - Physics)
- ✖ Pas Pasupathy
- ✖ Kostas Plataniotis
- ✖ Elvino Sousa
- ✖ Shahrokh Valaee (Grad. Coordinator)
- ✖ Tas Venetsanopoulos
- ✖ Wei Yu

Over 120 Graduate students and visitors

- ❖ Ph.D. 50%
- ❖ M.A.Sc. 30%
- ❖ M.Eng. 20%

2006-2007	
Enrolment (05-06)	29 MASc, 52 PhD
Applications:	286 MASc, 187 PhD
Admitted:	26/81 MASc, 11/40 PhD
Admission Rate:	9% MASc, 6% PhD

Funding Formula

- ✖ MASc:
 - ❖ NSERC (PGSM):
 - \$21300 = 4000 + 17300
 - ❖ NSERC (CGSM):
 - \$21300 = 4000 + 17500
 - ❖ OGS: \$20000 = 5000 + 5000 + 10000
 - ❖ No-award: \$18500 = 11500 + 7000
 - ❖ Visa-students: +\$4800
- ✖ PhD:
 - ❖ Basic: \$20500 = 11500 + 9000

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On Line Information

<http://www.comm.utoronto.ca/>

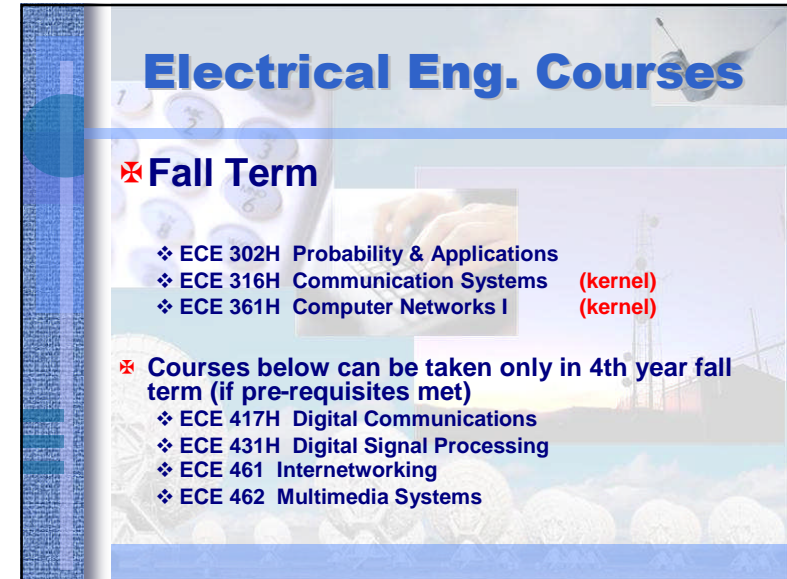


Communications Group

Courses

<http://www.comm.utoronto.ca>

The slide features a background collage of communication-related images: a satellite dish, a hand holding a mobile phone, and a person at a presentation board. The text is overlaid on a blue and white geometric design.



Electrical Eng. Courses

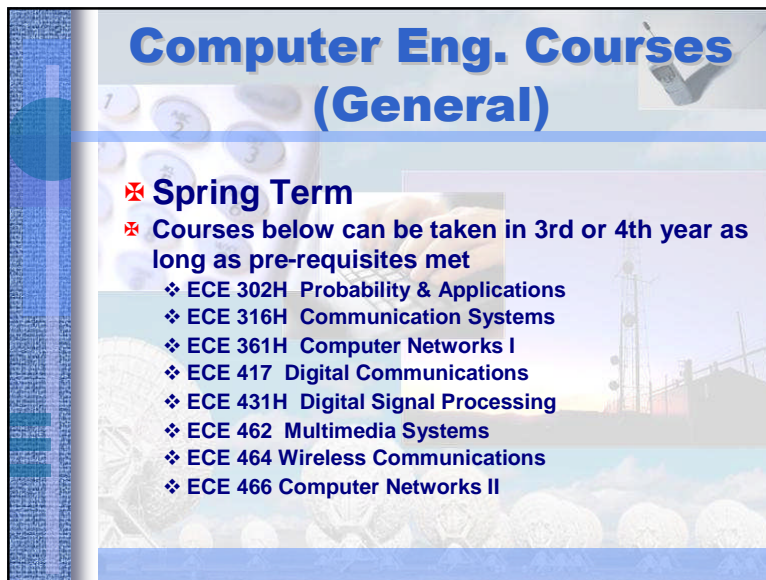
✦ **Fall Term**

- ❖ ECE 302H Probability & Applications
- ❖ ECE 316H Communication Systems (kernel)
- ❖ ECE 361H Computer Networks I (kernel)

✦ **Courses below can be taken only in 4th year fall term (if pre-requisites met)**

- ❖ ECE 417H Digital Communications
- ❖ ECE 431H Digital Signal Processing
- ❖ ECE 461 Internetworking
- ❖ ECE 462 Multimedia Systems

This slide has a similar background collage to the first slide, with a blue and white geometric design on the left side.



**Computer Eng. Courses
(General)**

✦ **Spring Term**

✦ **Courses below can be taken in 3rd or 4th year as long as pre-requisites met**

- ❖ ECE 302H Probability & Applications
- ❖ ECE 316H Communication Systems
- ❖ ECE 361H Computer Networks I
- ❖ ECE 417 Digital Communications
- ❖ ECE 431H Digital Signal Processing
- ❖ ECE 462 Multimedia Systems
- ❖ ECE 464 Wireless Communications
- ❖ ECE 466 Computer Networks II

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