INTRODUCTION
If you have a Bachelor’s degree in Electrical/Electronic/Computer Engineering, majoring in Signal Processing, Communications, Control or other related disciplines, why not consider obtaining a Master’s degree in Signal Processing (MSc in Signal Processing) at Nanyang Technological University (NTU) in Singapore? NTU is one of the most dynamic universities in Asia and recent international surveys have ranked it among the best universities in the world (26th in the top technology universities and 48th in the comprehensive universities ranking; see website at www.ntu.edu.sg/publicportal/about+ntu/about+us/intro.htm). You will be exposed to contemporary signal processing courses taught by reputable academics. This would enhance your career skills and goals. In addition, the program provides the option of taking an industry related research project to further enhance your marketability in employment.

Motivation for doing MSc in Signal Processing: The Information and Communications (Infocomm in short) sector plays a critical role in world economy, and in Singapore. The 2005 manpower survey reported that infocomm manpower grew by 3.1% to reach 111,400 in 2005, and is predicted to rise by 3.4% between 2006 and 2007. The projected growth areas mostly include higher-end jobs such as research & development and system design. In 2005, the number of infocomm job vacancies was 5,700 and the percentage of infocomm workers with tertiary education was 83%. This shows that there is a clear demand, locally as well as globally, for infocomm graduates with tertiary qualifications. Most employers in Singapore offer a competitive salary in the range of S$2500-3500 per month for fresh tertiary-qualified engineers. Many previous graduates from this programme managed to secure a job locally, and continued to work in Singapore for many years.

Future Prospects for Signal Processing Engineers: A large number of infocomm or signal processing related applications in many industrial enterprises are operating in the areas of communications, circuits & systems and, more recently, in digital media. Digital media has been identified as an area of strategic importance to Singapore and the recent Media 21 blueprint aims to double the GDP contribution by the media cluster from 1.56% in 2002 to 3% in 10 years, and would create over 10,000 new jobs. The significance of digital media has also been reflected by the current initiative of the National Research Foundation to invest up to SGD 5 billion (to be shared with two other major thrusts) in interactive and digital media. Singapore’s Economic Development Board (EDB) has also earmarked SGD 500 million in 2005 for the next 5 years to the digital media industry, providing excellent prospects for future tertiary-qualified signal processing engineers.

PROGRAM AIMS
This program is designed for hardware and software designers, R&D managers, practicing engineers, and industry planners who seek an understanding of current approaches and evolving directions for DSP technologies. It is also intended for engineers who anticipate future involvement in this area.

ADMISSION REQUIREMENTS
For those with a good bachelor’s degree in electrical/electronic/computer engineering or equivalent degree in other relevant disciplines as the Board of Graduate Studies may approve.

PROGRAM DURATION
The program is run during evenings. The examinations will require attendance during office-hours. Part-Time candidates are expected to obtain their employer’s permission for this before admission to the program. The coursework and project may normally be completed in one year for full-time students or two years for part-time students, respectively.

| Semester 1 (Aug–Dec); Semester 2 (Jan–May) |
|------------------|------------------|------------------|
| Weeks 1-14       | Weeks 16-17      | Others           |
| Lectures         | Examinations     | Vacations        |
| One week recess  |                  |                  |

Note: Curriculum is subject to changes.

PROGRAM STRUCTURE

FIRST YEAR- CORE SUBJECTS
(Compulsory)

Semester 1
- Advanced Digital Signal Processing
- Real-time DSP Design and Applications

Semester 2
- Distributed Multimedia Systems
- VLSI Digital Signal Processors

SECOND YEAR - ELECTIVES
(Choose 4 only)

Semester 1
- Statistical Signal Processing
- Digital Audio Signal Processing
The requirements for the postgraduate degree include satisfactory completion of four cores and four electives as well as a project. The project is examined by dissertation. The project may be undertaken either in NTU or in industry. There is an alternative to replace a dissertation project by taking one additional elective subject plus one smaller-scale project, called Independent Study Module (ISM), which is to be completed in one semester.

SUBJECT CONTENTS


**EE6403 Distributed Multimedia Systems:** Media and media systems. Multimedia storage. Media processing and applications. Media transmission and delivery. Quality of service on distributed multimedia systems. Multimedia applications.


**EE6427 Video Signal Processing:** Video basics. Video signal sampling and rate conversion. Video signal filtering and enhancement. Video coding principles and standards. Emerging video communication systems.


**EE6101 Digital Communication Systems**

**EE6108 Computer Networks**

**EE6127 Wireless Networking**

**EE6222 Machine Vision**

**EE6224 Neural & Fuzzy Systems**

ELECTIVE SUBJECTS FROM OTHER PROGRAMMES

To provide more flexibility to students in planning their studies, this programme allows you to take as elective subjects a maximum of two subjects from other MSc programmes in the School of EEE. These additional electives are:

**EE6101 Digital Communication Systems**

**EE6108 Computer Networks**

**EE6127 Wireless Networking**

**EE6222 Machine Vision**

**EE6224 Neural & Fuzzy Systems**

FEES

Every year, tuition fees are reviewed and subject to revision. As and when fees are revised, the new fees will be applicable to all existing and new students. The tuition fees for the academic year 2006/2007 are as follows:

<table>
<thead>
<tr>
<th>TUITION FEES (per acad. yr)</th>
<th>PART-TIME</th>
<th>FULL-TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singaporean / Singapore PR</td>
<td>S$2,730</td>
<td>S$5,450</td>
</tr>
<tr>
<td>Others</td>
<td>S$3,000</td>
<td>S$6,000</td>
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</tbody>
</table>

<table>
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<tr>
<th>OTHER FEES</th>
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</thead>
<tbody>
<tr>
<td>Application Fee *</td>
</tr>
<tr>
<td>Registration Fee * (payable on admission)</td>
</tr>
<tr>
<td>Examination Fee * (payable once only)</td>
</tr>
<tr>
<td>Computer Fee * (payable per academic year)</td>
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<tr>
<td>Smart Card Fee * (payable on admission)</td>
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<tr>
<td>Copyright Fee * (payable per academic year)</td>
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</tbody>
</table>

* Non-refundable. All fees stated are inclusive of GST.

APPLICATIONS FOR ADMISSION

Applications for admission are normally announced through the local press and NTU webpage, twice per year — in January for the coming Semester 1 and in September for the coming Semester 2, respectively. Applications forms are to be submitted electronically only via our web page at:

http://www.ntu.edu.sg/GradStudies/Coursework+Programmes/

Any other form of submission will not be considered.

ADDITIONAL INFORMATION

You can contact Program Director:

Associate Professor Ng Boon Poh
Tel  (65) 6790-6855
Fax  (65) 6792-0415
Email  ebpng@ntu.edu.sg