The Department of Town and Country planning was established in October 1973 at the University of Moratuwa, then known as the Katubedde Campus of the University of Sri Lanka. It was established as a fully-fledged Department of the then Faculty of Engineering and Architecture. It is presently, one of the Departments in the Faculty of Architecture of the University of Moratuwa, Sri Lanka.

The Department was entrusted with the task of organising and commencing postgraduate courses in Town and Country Planning, both by full-time instruction and by research. It commenced its first Course leading to the M.Sc. (Town and Country Planning) Degree in July 1975. It has now completed TWELVE M.Sc. Degree Courses by full-time instruction. A total of 88 persons have successfully completed their M.Sc. (Town and Country Planning) Degree to date.

The Department also provides for the award of the Post-Graduate Diploma in Town and Country Planning. Three persons have successfully completed this Diploma Course to date.

The Department commenced its first Post-Graduate Diploma Course in Urban Development in October 1979. This Course was conducted by the Department in collaboration with the Urban Development Authority. THIRTEEN Diploma Courses have now been completed and the FOURTEEN Courses will commence shortly. A total of 121 persons have successfully completed their Diploma Courses to date.

A new Course of Study leading to the M.Sc. Degree/Post Graduate Diploma in Land Use Planning and Resources Management was commenced in 1993, and 4 persons have completed this Course.

Another new Course of Study leading to the Post-Graduate Diploma in Housing Development commenced in 1996 and was completed in 1997 and 3 persons have completed the Course.

The Department established first undergraduate programme on Honours Degree of Bachelors of Science in Town and Country Planning in 2003. This is the first undergraduate course conducted in Sri Lanka.

**Course Modules for the Remote Sensing, Spatial Information System and Disaster Mitigation**

Three course Modules are included in the B.Sc. (Hons) degree in Town and Country Planning and Post graduate courses conducted by this department. These Modules are as follows.

1. **TP 202**: Introduction to Spatial Information Systems
2. **TP 212**: Remote Sensing
3. **TP 304**: Advance Spatial Information Systems
4. **TP 406**: Natural and Built Environment II (Entire Module is designed to teach Disaster Mitigation and Management)

The module details of the above are attached for information. In addition, a short course on Geographic Information System was also established to cater the industry demand.
Resources Available in the Department

The department has a Computer Lab with basic facilities to conduct above mentioned modules. This include Computer Hardware, GIS software, Remote sensing software and facilities for manual interpretation of remote sensing images.

University of Moratuwa, Sri Lanka

Module Title : Introduction to Spatial Information Systems

INTEGRATED CREDIT SCHEME
Version No : 1
Approval Date : 09/2002
Date when version starts : 04/2003

Module Code : TP 202
Department : Town & Country Planning

Module Lecturer : Plnr. P.K.S. Mahanama
Room : 403
Building : Sumanadasa Building
Tel : 01-650921
Fax : 650622
e-mail : pksm@mail.ac.lk

Credit Rating : 2
Level : 1
Total Hours of Learning Activity : 90

Indicative Time Allowances (hrs)
Total Student Contact : 90
Delivery of Teaching : 30 L : 50 Lab : 10 T
(Hours per category)

Delivery Information: Semester 2

Pre-requisites : None
Recommended Prior Study : None
Co-requisites : None
Barred Combinations : None

Aims :

1. To develop the concepts and theories in relation to spatial information systems.
2. To illustrate computing in information processing.
3. To develop skills in computer use.
Learning Outcomes:

After completing the module students should be able to:

1. Design a basic database. (Aim 1)
2. Prepare a simple computer programme. (Aim 2)
3. Use an application software in relation to spatial information systems analysis. (Aim 3)

Outline Syllabus:

Concepts of spatial information systems (GIS and GPS), methods of data acquisition, Global positioning systems, digitizing (tablet and heads up), hand on experiences in GIS software applications;

Indicative References:


Assessment:

Examination – 1 x 2 hr. Set Paper
Assignments: 1. Continuous Assessment of Lab Work
2. Annotated Bibliography

Weighting between E : Assignments : 60 : 30 : 10

Relationship between Learning Outcomes and the Assessment Tasks:

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Assessment Examination</th>
<th>Assessment 1 Continuous Assessment</th>
<th>Assessment 2 Annotated Bibliography</th>
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Module Summary:
The data and information to be translated into spatial terms of different land uses. Visual based information, GIS, GPS, Remote sensing, Aerial Photography.

University of Moratuwa, Sri Lanka

Module Title: REMOTE SENSING

Module Code: TP 212

Module Lecturer

Building: Sumanadasa Building
Tel: 650921
Fax: 650622
E-mail: pksm@mail.ac.lk

Room: 403

Credit Rating: 1
Level: 1
Total Hours of Learning Activity: 90

Indicative Time Allowances (hrs)
Total Student Contact: 90

Delivery Information: Semester 2

Pre-requisites: None
Recommended Prior Study: None
Co-requisites: None
Barred Combinations: None

Aims:

1. To illustrate aerial photographs and satellite imagery as sources of data gathering.
2. To demonstrate the use of equipment for reading aerial photo.

Learning Outcomes: After completing the module students should be able to:

1. Read an aerial photograph and satellite imagery maps. (Aim 1)
2. Hands on use of equipment for interpreting an aerial map. (Aim 2)
3. Hand on experience in Remote Sensing software applications. (Aim 3)
Outline Syllabus: Aerial photographs and satellite image interpretation and data gathering; electronic equipment in remote sensing; element of photographic systems, Photogrametry, Multispectral, thermal and hypersectral scanning, earth resource satellites operation, microwave sensing, differential correction, digital image processing, limitations of remote sensing methods, Supervised and unsupervised classification, Hands on experience in Remote Sensing software application, RS/GIS applications, DEM analysis.

Indicative References:


Assessment: Assignment: Demonstrate satellite image interpretation Aerial photo interpretation for data base creation. Digital Image processing Carry out supervised classification

Relationship between Learning Outcomes and the Assessment Task:

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<th>Learning Outcomes</th>
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<td>3</td>
<td>Assignment</td>
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</table>

Module Summary:

Introduction to remote sensing and hands-on use of equipment.
University of Moratuwa, Sri Lanka

INTEGRATED CREDIT SCHEME

Module Title: Advance Spatial Information Systems

Module Code: TP 304

Module Lecturer: Plnr. P.K.S. Mahanama

Department: Town & Country Planning

Building: Sumanadasa Building
Tel: 011-2650921
Fax: 2650622
E-mail: pksm@mail.ac.lk

Room: 403

Approval Date: 10/2002
Date when version starts: 04/2004

Credit Rating: 2
Level: 2
Total Hours of Learning Activity: 90

Indicative Time Allowances (hrs)
Total Student Contact: 90

Delivery Information: Semester 3

Pre-requisites: Complete TP 105

Recommended Prior Study: None

Co-requisites: None

Barred Combinations: None

Aims:

1. To develop application of GIS with special reference to socio-economic, physical and environmental aspects.
2. To illustrate GIS applications for decision making in human settlement development.
3. To develop analytical skills in GIS applications as a tool for planning.

Learning Outcomes:

After completing the module, the students should be able to:

1. Apply the concepts and theories related to GIS (Aim 1)
2. Utilize the computer based GIS to analyze and make decisions related to socio-economic, environment and physical aspects in development. (Aim 1)
3. Use GIS application as a tool for develop in planning (Aim 2)
4. Work with GIS software application environment. (Aim 3)
Outline Syllabus:
Spatial data analysis and data interpretation, 3D analysis, application of spatial information systems for physical, socio-economic and environmental analysis. Prepared of Thematic Map, Geoprocessing, Geocoding Analysis, Geo Statistical analysis, SIS Project formulation.

Indicative References:


Assessment:
Assignment: 1 Lab Practical
2 Tutorials

Weighting between Lab and Tut: 80 : 20

Relationship between Learning Outcomes and the Assessment Tasks:

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<tr>
<th>Learning Outcomes</th>
<th>Assessment 1</th>
<th>Assessment 2</th>
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Module Summary:
Use of Spatial Information System as a tool for humans settlement development.

University of Moratuwa, Sri Lanka
INTEGRATED CREDIT SCHEME

Module Title: **NATURAL AND BUILT ENVIRONMENT II**
1. To illustrate the types of Natural Disasters and how they affect human settlements.
2. To illustrate the vulnerability of disaster situations and its management in the built environment.
3. To develop measures for the mitigation of major and recurrent types of natural disasters in Sri Lanka with regard to involuntary settlements of the affected people.
4. To use GIS\RS application in Disaster assessment and Disaster Mitigation Management.

Learning Outcomes: After completing the module, the students should be able to:

1. Estimate the extent to which natural disasters affect urban and rural human settlements. (Aims 1)
2. Conduct vulnerability assessment studies in probable areas of natural disasters. (Aim 2)
3. Prepare re-settlement plans on safe lands for a disaster-hit settlement. (Aim 3)
4. Use GIS and RS tool for Risk and vulnerability assessment of any disaster. (Aim 4)
Outline Syllabus: Concepts of natural disaster, vulnerability, disaster management, flooding, landslides, cyclones, earthquakes, drought, lightening, wildlife threats, various man-made disasters, vulnerability assessment, GIS and RS application in vulnerability assessment, disaster damage assessment, preparation of disaster management plans, disaster mitigation and how to combine disaster mitigation management aspects in planning.
Indicative References:

5. SLUDMP, (1999), Guidelines for Construction in Disaster Prone Areas.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Examination: 1x2 hour set paper</th>
<th>Assignment: Tutorial on Vulnerability Assessment in a disaster prone locality</th>
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</thead>
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Weighting between E & Tut: 60:40

Relationship between Learning Outcomes and the Assessment Tasks:

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<thead>
<tr>
<th>Learning Outcome</th>
<th>Assessment I</th>
<th>Assessment II</th>
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<tbody>
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Module Summary:

Various natural & man-made disasters that affect both urban & rural settlements in a cyclical manner, rehabilitation & reconstruction costs of disasters demanding substantial resources and time imposing a heavy opportunity cost, mitigation and management of natural disasters, Integration of disaster mitigation & management component in planning & development, GIS\RS application in Disaster risk and vulnerability assessment.