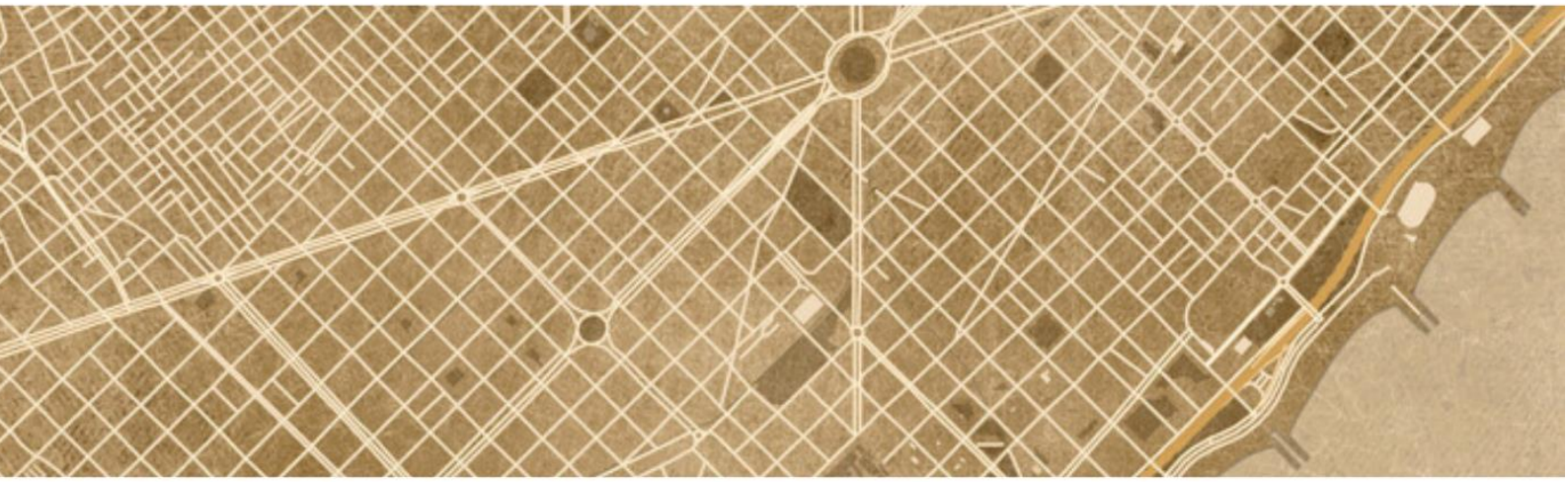
DEPARTMENT OF
TOWN & COUNTRY PLANNING
UNIVERSITY OF MORATUWA



2023 | 2027

Bachelor of Science Honours in Town & Country Planning

# STUDENT HANDBOOK

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## Bachelor of Science Honours in Town & Country Planning
## (2023 / 2027)

DEPARTMENT OF TOWN & COUNTRY PLANNING

**Faculty of Architecture University of Moratuwa Sri Lanka**

## Contents

# SECTION I

# INTRODUCTION

## Department of Town & Country Planning

## MESSAGE FROM THE HEAD OF THE DEPARTMENT

A warm welcome to the Department of Town & Country Planning to all of you who have chosen to pursue studies in the field of Planning and the related. By enrolling in the Honours Degree of Bachelor of Science in Town & Country Planning program, you have been privileged to become a member of the only academic institution in Sri Lanka that opens avenues to those who wish to make a career in a wide range of disciplines such as strategic planning, urban development, information systems, environmental management, urban design, real estate, etc.

Being a candidate of a carefully designed, accredited, and internationally acclaimed degree program, you have also an opportunity to develop knowledge and skills through a great variety of subject modules that have been designed to promote scientific thinking, critical understanding, liberal mindset, aesthetic appreciation, social justice, environmental sensitivity and innovation in students. All theory modules, fieldwork, and studio projects are geared to develop total personalities, providing students with necessary knowledge inputs, needy inspirations, and positive attitudes for lifelong learning and continuous professional development. Such personalities are expected to handle the multitude of issues that our living environments have been experiencing in this era and are projected to be even more challenging in the future. Therefore, we believe, that by selecting a career in this field you have pledged to contribute towards building a vivid, livable, and sustainable future for Sri Lanka and for all living beings on earth.

The Department will do its best to provide you with a pleasant learning environment, where you will thrive as an outstanding performer, a promising candidate, and an exemplary citizen. It also encourages you to make the optimum use of the resources made available for your own personal development, share your talents for the benefit of fellow students both in the Department and the University, and enjoy the freedom inherent to the university environs in a responsible manner. I wish you a pleasant and cheerful time throughout your stay in the University.

**Prof.** Jagath Munasinghe
Head/Department Town & Country Planning

## DEPARTMENT OF TOWN & COUNTRY PLANNING UNIVERSITY OF MORATUWA, SRI LANKA

The Department of Town & Country Planning was established in October, 1973 as a fully-fledged Department of the Faculty of Engineering of the Katubedda Campus. With the establishment of University of Moratuwa in 1978, the Department was placed within the Faculty of Architecture. Since then, it has been one of the four Departments in the Faculty of Architecture in University of Moratuwa, Sri Lanka.

The Department of Town & Country Planning hails the privilege of being the only such Department in an academic institution in Sri Lanka that offers academic programs in Physical Planning and conduct research in planning related areas.

From the date of its commencement until 2003, the Department was conducting Post Graduate level studies in Town & Country Planning. The first course leading to Master of Science in Town & Country Planning was commenced in July 1975. So far, more than 250 persons have obtained the qualification in Master of Science in Town & Country Planning. In addition, the Department also offered Post Graduate Diploma in Urban Development since 1979, in collaboration with the Urban Development Authority of Sri Lanka, qualifying more than 150 persons. Two more courses leading to Master of Science Degree in Land use Planning & Resource Management and, Post Graduate Diploma in Housing Development were also offered once each. In 2012, the Department introduced a Master of Science Degree course in Spatial Planning, Management and Design in collaboration with La Trobe University Australia.

However, having felt the present need of Sri Lanka to have more numbers of fully- fledged planners, the Department had extended its scope to conduct Undergraduate level Degree program in the field of Town and Country Planning. As a result the pioneering four years, Honours Degree course in Bachelor of Science in Town & Country Planning was commenced in 2003. Based on the performance of GCE (Advanced Level) results, this degree course enrolls 50 candidates for each intake.

All the courses and other academic matters within the Department are conducted in English medium. Motivating 'Integrated Spatial Planning', the Department always encourages the multidisciplinary approach in Planning and therefore, all of its courses comprise of subject modules from a wide range of fields, whilst the members of the academic staff come from different disciplinary background. In order to encourage and facilitate research interests among both academic members and the students, and also to provide opportunities for external researchers, the Department has established a Research Unit, where a number of research activities are being carried out. There are proposals for commencing new post graduate programs such as environmental planning.

## ACADEMIC STAFF OF THE DEPARTMENT

The full-time multi-disciplinary academic staff members of the department conduct both undergraduate and post graduate courses. The specialist visiting staff members from other universities, research institutions and state organizations are invited time to time for the lectures of specialization.

### Head of the Department

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**Instructor**

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## ACADEMIC SUPPORTIVE STAFF OF THE DEPARTMENT

| Resource Person | Position | Contact | |
|---|---|---|---|
| Mr. Chaminda Perera | Technical Officer | cperera@uom.com |  |
| Mr. Nuwan Priyashantha | Technical Officer | nuwantcpacc@gmail.com |  |
| Mr. A D D S Gunawardena<br><br>BSc (J'pura) | Management Assistant (GIII) | sandakel85@gmail.com |  |
| Ms. D M U P Gunasekara | Management Assistant (GIII) | udenigunasekara@gmai l.com |  |
| Mr. Shirantha Fernando | Lab. Assistant | shirantha71@gmail.com |  |

| | | | |
|---|---|---|---|
| Mr. K D H Ishara | Lab Assistant | hasithtcp@gmail.com |  |
| Mr. Eranda Thisara Kumanayake | Lab Assistant | erandathisara@gmail.com |  |
| Mr. U Madusanka Sandaruwan Dharmawardana | Work Aid (GIII)<br><br>(On Leave) | madu94sada@gmail.com |  |
| Mr. A.K. Yasanka Sandeepa | Trainee | akyasankasandeepa1@gmail.com |  |

## RESOURCES

In order to facilitate its teaching, learning, and research activities, the Department is accomplished with state-of-the-art teaching technology and learning infrastructure.

The Spatial Information and Remote Sensing Laboratories of the Department are equipped with the latest updates in spatial information technology. Students have access to networked computers with Satellite Communication facilities at the laboratory. Considering the current global trends of converging towards Open-Source Geographical Information Systems (GIS), an Open-Source Geospatial Laboratory has been established in the Department. This is the 56th OSGeo Laboratory in the world, recognized by the Open-Source Geospatial Foundation.

The OSGeo Laboratory focuses on the applications of Open-Source software in Urban Planning, research on developing software and hardware applications in urban analysis, and promoting open-source GIS among Urban Planners. The students at both Undergraduate and postgraduate levels are provided with training in this technology to develop their knowledge and skills in handling spatial information systems and in related areas that are essential for modern planning activities.

*OSGeo Laboratory*

Many of the subject modules in the course programs are highly 'Design' oriented, to sharpen sensitivity and the creativity of the students and to promote innovation. The Design orientation is facilitated within the Studio space of the Department, where the students undertake hands-on exercises and actively participate in studio events as well as fieldwork that deal with the ground reality. In studio events, the students go beyond conventional classroom settings and engage in interactive sessions that enable self-learning and learning-by-doing.

*Design Studios*

The Town & Country Planning Research Unit facilitates the Research and Development within the Department. The Department is equipped with the capacity to undertake both research and development consultancies for outside agencies in the areas relevant to Spatial Planning, Information Systems, Socio-economic development, Capacity Building, Computer Program development, etc. All undertakings are subject to university policies and guidelines.

## CONTACT DETAILS

The address of the Department is as follows:

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Web : https://uom.lk/tcp

Telephone Nos.: Direct: 011 2650921,
General: 011 2650301, 2650534,

Fax No. : 011 – 2650921 (attention Dept. of Town & Country Planning)

The Department presently occupies a building that consists of; four studios (Level III and IV), one common hall (Level V), a fully facilitated auditorium (Ground floor), one mini auditorium (Ground floor), staff rooms (Level II), and two SIS/RS Laboratories (Level I of the TCP building and at Level I of Architecture extension building).

# SECTION II

# PERFORMANCE CRITERIA

**for the Award of Bachelor of Science Honours in Town & Country Planning**

## PERFORMANCE CRITERIA

A student admitted to the course leading to the Bachelor of Science Honours in Town & Country Planning will be eligible to receive the Bachelor of Science Honours in Town & Country Planning provided that the student has successfully fulfilled the following conditions as determined by the Senate of the University of Moratuwa:

### 1.0 Admission

1.1 The admission requirements to the Bachelor of Science Honours in Town & Country Planning shall be determined by the University Grants Commission (UGC) in accordance with the government policy.

### 2.0 Program

2.1 The academic calendar of the course consists of eight academic semesters, each 15 weeks in duration.

### 3.0 Registration

3.1 At the commencement of each semester, students shall complete the prescribed Registration Process and pay the prescribed fees and other dues as determined by the University Senate.

3.2 Each student shall be responsible for the selection of course modules as required by the course structure approved by the University Senate, subject to the availability of the modules.

3.3 A student who wishes to de-register from a module shall do so in writing within two (02) weeks of the commencement of the semester. De-registering a module after this deadline shall not be allowed and shall be regarded as a missed attempt, even if the student does not appear for any assessment and/or examination in that module.

3.4 A student who wishes to take an additional module or a replacement for a de-registered module may do so within two (02) weeks of the commencement of the semester with the approval of the Academic Advisor.

### 4.0 Course Structure

4.1 The program of study leading to the award of the Bachelor of Science Honours in Town & Country Planning consist of four levels which includes: Compulsory modules extending over the four levels that are organized under the developmental stages such as Conceptualization, Synthesis, Analysis and Product.

4.2 Level Two, Level three and Level four of the Degree program offer Elective modules under various areas. In the Level 2 semester 4, Level 3 semester 5 and Level 3 semester 6, the students are expected to select one ‘studio module’ out of three electives ‘studio modules’ offered.

4.3 Credits

Each module is assigned a credit value representing the student's workload. For a lecture module extending over one semester, one credit shall be assigned for each lecture hour of fifteen weeks. For a Studio Work, Field Work and Lab Work extending over one semester, one credit shall be assigned for three hours of studio, field, and lab work per week respectively. For Internship module offered in Level 4 semester 7, one credit shall be assigned for one month of full-time training period.

4.4 Leave of Absence

A student may be allowed to submit an application for leave of absence from the course of study for a maximum duration of twelve calendar months, for a determination by the University Senate on the recommendation of the Faculty Board.

## 5.0 Evaluation of Performance

The performance of students in each module shall be separately assessed by continuous assessments and/or end-of-semester examinations.

5.1 Academic Rating

Letter grades based on the Grade Point System (GPS) and the corresponding percentage marks as illustrated below will be used to express the performance in each module.

| Guideline Grade Boundaries (%) | Grade | Grade Point | Interpretation |
|---|---|---|---|
| 85 and above | A+ | 4.20 | Outstanding |
| 75 – 84 | A | 4.00 | Excellent |
| 70 – 74 | A- | 3.70 | Highly recommended |
| 65 – 69 | B+ | 3.30 | Very good |
| 60 – 64 | B | 3.00 | Good |
| 55 – 59 | B- | 2.70 | Average |
| 50 – 54 | C+ | 2.30 | Satisfactory pass[(a)] |
| 45 – 49 | C | 2.00 | Pass and possess a basic understanding of the Module |
| 40 – 44 | C- | 1.50 | Weak pass[(c)] |
| 35 – 39 | D | 1.00 | Conditional pass[(b)] |
| 34 and below | I | 0.00 | Incomplete[(f)] |
| 34 and below | F | 0.00 | Fail[(g)] |
| | N | – | Academic concession[(h)] |
| | P | - | Pass in Non-GPA Module |

Notes:

a) Grade (C+) or above, is required to earn a credit for the 'studio modules' offered in Level 2 semester 4, Level 3 semester 5 and Level 3 semester 6, Individually Supervised Research Project (ISRP) offered in Level 4 semester 7 and Individually Supervised Site Planning and Design Studio Project offered in Level 4 semester 8.

b) Grade (D) or above, is required to earn a credit for all the other modules (except the modules listed in (a) above).

c) A student who has obtained a Grade below (C) for any module may repeat the module and improve the grade to a maximum of Grade (C) to be considered for the Semester Grade Point Average. In the case of the modules identified under (a) above, a student who has obtained a Grade below (C+) shall repeat the module and improve the grade to a maximum of Grade (C+) to be considered for the Semester Grade Point Average.

d) A student obtaining a grade below (C+) but a grade (D) or above for "Individually Supervised Research Project (ISRP)" and "Individually Supervised Site Planning and Design Studio Project" shall be given a maximum of six weeks duration to improve and resubmit her/his project work. Such submissions shall be reassessed (through a viva-voce examination, if deemed necessary by the examiner) and the initial grade obtained shall be upgraded to a maximum of (C+), if the improvements are satisfactory. if the improvements are not satisfactory, student shall receive grade (F).

e) A student fails to upgrade to (C+) under circumstance given in (d) above or a student receiving a grade below (D) for the "Individually Supervised Research Project (ISRP)" and "Individually Supervised Site Planning and Design Studio Project" shall repeat the module/s in a subsequent academic year.

f) A student receiving less than 35% in either the continuous assessment or written examination (for modules assessed through continuous assessment and end-of semester examination) shall receive an incomplete (I) grade. The student shall repeat only the failed component as a repeat candidate to complete the module. The maximum grade obtainable by such a repeat candidate is (C).

g) A student receiving less than 35% in both the continuous assessment and the end-of-semester examination (for modules assessed through continuous assessment and end-of-semester examination) shall receive a Fail Grade (F). The student shall repeat both the continuous assessment as well as the end-of-semester examination until a pass grade is obtained. The maximum Grade obtainable by such a repeat candidate is (C).

h) Grade N signifies Academic Concession granted with the approval of the Senate, on the recommendation of the Faculty Board, in the event a student is unable to sit for the end-of-semester examination due to illness or other compelling reasons. In such instances, the student must appeal for an Academic Concession as specified in Section 5.6. The continuous assessment component of the student's work may be carried forward to the next examination as the first attempt. The grade will not be counted for the calculation of the Semester GPA.

i) The Senate shall appoint subject Moderators as recommended by the Faculty to moderate the grades.

5.2 The Board of Examiners

A Board of Examiners appointed by the Senate on the recommendation of the Faculty Board comprising of Examiners and Moderators of all modules will meet at the end of each semester to decide on the performance and academic rating of each student registered for that semester.

5.3 Semester Grade Point Average (SGPA)

The calculation of the Semester Grade Point Average (SGPA) shall be based on the summation of Grade Points earned for all modules registered for credit [except those awarded with Academic Concession] in a semester weighted according to number of credits as given in the formula below:

$$SGPA = \frac{\sum n_i \times g_i}{n}$$

Where $n_i$ is the number of credits for the $i^{th}$ module in a given semester and $g_i$ is the Grade Point earned for that module; $n$ is the total number of credits for that semester.

5.4 Unsatisfactory Standing & Academic Probation

If the student's Grade Point Average falls between 1.50 and 2.00 the student will be placed Academic Warning. Any student with a SGPA less than 1.50 will be placed on Academic Probation. Academic probation and/or Academic Warning may be withdrawn when the relevant SGPA is upgraded to 2.00 or more. A student on academic Warning or academic Probation will not be allowed to carry any additional academic load. A student who falls into one of the following categories due to failure to upgrade the SGPA will be temporarily discontinued from the course:

i. SGPA < 1.50 in any two semesters;
ii. SGPA < 1.50 in any semester and 1.50 ≤ SGPA < 2.00 in any two-semester;
iii. 1.50 ≤ SGPA < 2.00 in any four semesters.

5.5 Award of Classes

The award of Class is determined at the completion of all the graduation requirements based on the Overall Grade Point Average (OGPA) cut-off as indicated below. A class may be awarded only to a student who has completed all graduation requirements within five (05) academic years.

| OGPA | Academic Standing |
|---|---|
| 3.70 or above | First Class |
| 3.30 – 3.69 | Second Class – Upper Division |
| 2.70 – 3.29 | Second Class – Lower Division |
| 2.00 – 2.69 | Pass |

5.6 Academic Concession

A. A student who has missed end-of-semester examination/s or continuous assessment/s due to illness or other compelling reasons, shall strictly follow the procedures laid out in the regulation 15.1 (Procedure for academic concessions) under the By-Law 15 for "conduct at examinations". (uom.lk/policies/law-15)

i. For consideration of academic concession on medical or compassionate grounds, the student/ parent/ guardian should inform the SAR Examinations within 7 days that he/she is unable to sit the examination by telegram, email, registered letter or a fax and submit supportive document/s, as specified in the regulation 15.1, covering the period of the examination within 01 (one) calendar month after the last date of the examination.

ii. For consideration of academic concession on Representation grounds (when selected to represent University at Inter-University, National or International events), the student should inform the SAR Examinations that he/she is unable to sit the examination, and submit authenticated documents covering the period of examination 01 (One) calendar month before the first date of the examination for consideration.

iii. In the case of students missing continuous assessment component/s, on medical or compassionate grounds, the student should inform the relevant Lecturer that he/she is unable to face the continuous assessment and submit supportive documents, as specified in the regulation 15.1, covering the period of continuous assessment within two weeks of the event for consideration by the examiner of the module. When it is on representation grounds, the student should inform the relevant Lecturer in advance that he/she is unable to face the continuous assessment and submit authenticated documents covering the period of continuous assessment for consideration by the examiner of the module.

B. All applications for concessions for absence shall be on prescribed form (obtainable at the Examinations Division) and are subject to approval by the University Senate.

5.7 Dean's List

A full-time undergraduate student who obtains an SGPA of 3.80 or greater in any one semester may be recommended by the Board of Examiners to be included in the Dean's List provided all of the following conditions are met:

i. The student has completed the minimum number of credits during the semester;
ii. The student has no "Incomplete" or "Failure" grades
iii. The student was not subject to disciplinary action.

Such a placement will also be noted on the student's transcript.

## 6.0 Graduation Requirements

6.1 A student enrolled for the Bachelor of Science Honours in Town & Country Planning shall follow a course of study as a full-time student for a minimum period of four academic years.

6.2 A student shall satisfy the following requirements in order to be awarded to the Bachelor of Science Honours in Town & Country Planning:
A minimum total of 150 credits from the modules specified for the course of study;
Completion of courses and any other mandatory requirements prescribed by the Senate;
A minimum OGPA of 2.00

6.3 A student will not qualify for the award of Bachelor of Science Honours in Town & Country Planning if the graduation requirements given in Section 6.2 are not satisfied within eight academic years from the date of first registration. However, approved leave on medical grounds shall be added to the eight academic years when determining the maximum duration to complete the degree.

6.4 Normally students are expected to complete their program through modules taken at the University of Moratuwa. Students who wish to take a module elsewhere should obtain approval from the senate on the recommendation of the Dean, Faculty of Architecture, before registering for the course, to ensure that it is acceptable for credit.
In such instance, it is the responsibility of the student to ensure that an official transcript of grades is forwarded to the Senior Assistant Registrar (Examinations) of the University of Moratuwa through Head of the Department to be recorded. To recognize Credit, a minimum grade of 'C' must be obtained for a module.

## 7.0 Effective Date of Award

The effective date of the degree shall be the last day of the month following the satisfactory completion of the graduation requirements as confirmed by the Senate.

7.1 Date of conferment of the degree

The date of conferment of the degree shall be the date of the convocation in which the degree is conferred on the candidate.

## 8.0 Graduate Profile / Programme Outcome

The table below illustrates the curriculum mapping of the seven program outcomes concerning the learning outcomes of SLQF Level 6.

| Graduate Profile / Programme Outcome | Level Descriptors for SLQF Level 6 | |
|---|---|---|
| | **Categories of Learning Outcomes** | **Descriptors** |
| **8.1. Comprehensive in the subject**<br>Thorough in and around the subject with a good understanding of the theories, concepts and their ground applications, and the current state of affairs in the field | 1. Subject / Theoretical Knowledge | • Demonstrate an advanced knowledge and understanding of the core aspects of the area of study.<br>• Critically Analyze data, make judgments, and propose solutions to problems. |
| **8.2. Competent in performance**<br>Trained and acquired the needy knowledge and skills with a progressive attitude and global citizen mindset, prepared for life-long continuous learning. | 11. Vision for Life | • Clearly identify where one wants to be and develop long-term goals accordingly Exercise and further develop the new competencies and assume major responsibilities with confidence. |
| | 12. Updating Self / Lifelong Learning | • Undertake further training and develop additional skills that will enable them to make sound decisions. Engage in independent learning using scholarly reviews and secondary sources of information. |
| | 7. Information Usage and Management | • Thorough in transferable skills related to ICT and information literacy. |
| **8.3. Creative in approach**<br>Thoughtful and breaking boundaries and innovating things for the equal benefit of the self, field the society, and all living beings. | 5. Creativity and Problem Solving | • Construct and sustain arguments and use these arguments, ideas, and techniques in problem-solving for a given situation |
| **8.4. Critical in thinking**<br>Critical and analytical of available facts, evidence, observations, and arguments to form a judgment. | 2. Practical Knowledge and Application | • Construct and sustain arguments and use these arguments, ideas, and techniques in problem-solving.<br>• Use practical skills and enquiry efficiently and effectively within the area of study |
| | 5. Creativity and Problem Solving | • Construct and sustain arguments and use these arguments, ideas, and techniques in problem-solving for a given situation |
| **8.5. Constructive in practice**<br>Strategic, Adaptive, and Positive contribution in all situations | 9. Adaptability and Flexibility | • Analyze and devise appropriate strategies for adapting to changing environments |
| **8.6. Collaborative in work**<br>Able to work in a team, shoulder | 3. Communication | • Communicate/present information, ideas, issues, and solutions efficiently and effectively. |

| | | |
|---|---|---|
| responsibilities and ready to share with others. | | • Demonstrate awareness of the current developments in the area of study. |
| | 4. Teamwork and Leadership | • Exercise personal/team responsibility, and leadership in the professional environment/workplace. |
| | 6. Managerial and Entrepreneurship | • Take initiative, assume personal responsibility, and demonstrate accountability and ability to instill entrepreneurship. |
| | 8. Networking and Social Skills | • Ability to work in teams, give leadership, and promote social engagement. |
| **8.7. Courteous in conduct**<br>Socially responsible and sensitive to the environment, people, and situations. | 10. Attitudes, Values and Professionalism | • Exercise initiative, personal responsibility, and accountability in tasks performed. Demonstrate positive attitudes and social responsibility |

Source: Sri Lanka Qualification Framework, 2015 (Page 26,27)

## 9.0 Exit point

This degree program does not offer any intermediate exit points. Students are required to meet all program requirements in order to graduate.

## 10.0 Program Accreditation

The Honours Degree of BSc in Town and Country Planning offered by the Department of Town & Country Planning is accredited by the Institute of Town Planners Sri Lanka (ITPSL), the professional accreditation body in the field. The degree program received its initial accreditation in 2003 and has been reaccredited since then. The students enrolled in this degree program are eligible for student membership of the ITPSL, and upon fulfilling the membership requirements, they may apply for and receive the Chartered Membership in the ITPSL. This accreditation ensures that the program meets the requirements set by the ITPSL, and that graduates are equipped with the knowledge, skills, and competencies required for successful careers in the field of planning.

## 11.0 Definitions

“Department” means the Department of Town & Country Planning, Faculty of Architecture, University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.
“Faculty” means the Faculty of Architecture, University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.
“Faculty Board” means the Faculty Board of the Faculty of Architecture, University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.
“Senate” means the Senate of the University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.
“Registrar” is the Registrar of the University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.
“Head of the Department” means the Head, Department of Town & Country Planning, and University of Moratuwa as constituted by the Universities Act No. 16 of 1978, subsequently amended.

## SECTION III

# CURRICULUM

### Bachelor of Science Honours in Town & Country Planning

## Level One – Conceptualization Stage

| Module code | Module Title | Credits | | | Lecture hrs. Per week | Project work/ Assignment hrs. per week | Minimum Norm | | Evaluation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Compulsory | Elective | NGPA | | | GPA | NGPA | CA% | WE% |
| Semester 01 | | | | | | | | | | |
| PL1101 | Introduction to Planning | 3 | | | 3 | | X | | 20-40 | 60-80 |
| PL1102 | Planning and Design Studio I | 3 | | | | 9 | X | | 100 | |
| PL1103 | Economics for Spatial Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1104 | Ecology for Spatial Planning | 2 | | | 2 | | X | | 100 | |
| PL1105 | Society, Culture and Space | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1106 | Communication Technologies | 3 | | | 1 | 6 | X | | 100 | |
| PL1107 | Statistical and Quantitative in Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1108 | Effective Communication and Writing 1 | | | 1 | | 3 | | X | 100 | |
| Total credits for Level 1/ Semester 1: **18 credits** | | | | | | | | | | |
| Semester 02 | | | | | | | | | | |
| PL1201 | Planning Methods and Policies | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1202 | Planning and Design and Studio II | 3 | | | | 9 | X | | 100 | |
| PL1203 | Introduction to Real Estate | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1204 | Quantitative Ecology | 2 | | | 1 | 3 | X | | 100 | |
| PL1205 | Housing and Resettlement Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL1206 | Geo-informatics for Planning | 2 | | | | 6 | X | | 100 | |
| PL1207 | Qualitative Methods in Planning | 2 | | | 2 | | X | | 100 | |
| PL1208 | Building Material and Construction Technology | 1 | | | | 3 | X | | 50 | 50 |
| PL1209 | Effective Communication and Writing II | | | 1 | | 3 | | X | 20-40 | 60-80 |
| Total credits for Level 1 / Semester 2: **17 credits** | | | | | | | | | | |

## Level Two – Analysis Stage

| Module code | Module Title | Credits | | | Lecture hrs. Per week | Project work/ Assignment hrs. per week | Minimum Norm | | Evaluation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Compulsory | Elective | NGPA | | | GPA | NGPA | CA% | WE% |
| Semester 03 | | | | | | | | | | |
| PL2301 | Planning Theory | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2302 | Planning and Design Studio III | 3 | | | | 9 | X | | 100 | |
| PL2303 | Land Management | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2304 | Applied Hydrology | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2305 | Population Studies in Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2306 | Spatial Data Analytics and Visualization | 2 | | | | 6 | X | | 100 | |
| PL2307 | Planning Techniques | 2 | | | 2 | | X | | 100 | |
| PL2308 | Traffic and Transportation | 2 | | | 2 | | X | | 50 | 50 |
| PL2309 | Drama | | | 1 | | 3 | | X | 100 | |
| Total credits for Level 2 / Semester 3: **18 credits** | | | | | | | | | | |

| Semester 04 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PL2401 | Planning Law, Governance, and Practice | 3 | | | 3 | | X | | 20-40 | 60-80 |
| PL2402 | Urban Housing Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL2403 | Land Use Planning Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL2404 | Ecology, Landscape Planning and Design Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL2405 | Development Economics | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2406 | Environmental Modeling and Assessment | 2 | | | 2 | | X | | 100 | |
| PL2407 | Social Justice in Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL2408 | Remote Sensing for Planning | 2 | | | 1 | 3 | X | | 100 | |
| PL2409 | Advanced Quantitative and Qualitative Research Methods | 2 | | | 2 | | X | | 100 | |
| PL2410 | Introduction to Infrastructure Planning and Design | 2 | | | 2 | | X | | 50 | 50 |
| PL2411 | Social Work | | | 1 | | 3 | | X | 100 | |
| Note: * Students shall choose one of these electives | | | | | | | | | | |
| Total for Level 2 / Semester 4: **22 credits** | | | | | | | | | | |

## Level Three – Synthesis Stage

| Module code | Module Title | Credits | | | Lecture hrs. Per week | Project work/ Assignment hrs. per week | Minimum Norm | | Evaluation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Compulsory | Elective | NGPA | | | GPA | NGPA | CA% | WE% |
| Semester 05 | | | | | | | | | | |
| PL3501 | Regional Planning | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3502 | Coastal Regional Planning and Design Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL3503 | Eco-sensitive Regional Planning and Design Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL3504 | Agro Regional Planning and Design Studio* | | 6 | | 2 | 12 | X | | 100 | |
| PL3505 | Urban Economics | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3506 | Eco-Sensitive Planning Concepts | 2 | | | 2 | | X | | 100 | |
| PL3507 | Political Economy of Space | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3508 | Advanced GIS and Remote Sensing for Planning | 1 | | | | 3 | X | | 100 | |
| PL3509 | Spatial Modeling and Simulation | 2 | | | 1 | 3 | X | | 100 | |
| PL3510 | Regional Infrastructure Planning and Designing | 3 | | | 3 | | X | | 100 | |
| PL3511 | Planning Ethics | 2 | | | 2 | | X | | 100 | |
| Total credits for Level 3 / Semester 5: **22 credits** | | | | | | | | | | |
| Semester 06 | | | | | | | | | | |
| PL3601 | Cities and Urban Forms | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3602 | Coastal City Planning and Design Studio* | | 7 | | 2 | 15 | X | | 100 | |
| PL3603 | Heritage area Planning and Design Studio* | | 7 | | 2 | 15 | X | | 100 | |
| PL3604 | Transit city Planning and Design Studio* | | 7 | | 2 | 15 | X | | 100 | |
| PL3605 | Real Estate Development | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3606 | Planning for Climate Resilience** | | 1 | | | 3 | X | | 100 | |
| PL3607 | Participatory Planning | 2 | | | 1 | 3 | X | | 100 | |
| PL3608 | Urban Informatics** | | 1 | | | 3 | X | | 100 | |
| PL3609 | Project Formulation and Appraisal | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL3610 | Urban Infrastructure Planning and Designing | 3 | | | 3 | | X | | 100 | |
| Note: * Students shall choose one of these electives | | | | | | | | | | |
| Total for Level 2 / Semester 6: **19 credits** | | | | | | | | | | |

## Level 04 – Product Stage

| Module code | Module Title | Credits | | | Lecture hrs. Per week | Project work/ Assignment hrs. per week | Minimum Norm | | Evaluation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Compulsory | Elective | NGPA | | | GPA | NGPA | CA% | WE% |
| Semester 07 | | | | | | | | | | |
| PL4701 | Research Methods | 2 | | | 2 | | X | | 100 | |
| PL4702 | Individually Supervised Research Project | 11 | | | 3 | 24 | X | | 100 | |
| PL4703 | Academic Writing | 2 | | | 2 | | X | | 100 | |
| PL4704 | Internship | | | 4 | 25 | | | X | 100 | |
| Total credits for Level 4 / Semester 7: **19 credits** | | | | | | | | | | |
| Semester 08 | | | | | | | | | | |
| PL4801 | Urban Design | 2 | | | 2 | | X | | 100 | |
| PL4802 | Individually Supervised Site Planning and Design Studio Project | 8 | | | 3 | 15 | X | | 100 | |
| PL4803 | Project Management | 2 | | | 2 | | X | | 20-40 | 60-80 |
| PL4804 | Environment Management Systems* | | 1 | | | 3 | X | | 100 | |
| PL4805 | Urban Regeneration and Conservation* | | 1 | | | 3 | X | | 100 | |
| PL4806 | Computer Programming and Artificial Intelligence* | | 1 | | | 3 | X | | 100 | |
| PL4807 | Public Project Financing | 2 | | | 2 | | X | | 20-40 | 60-80 |
| Note: * Students shall choose one of these electives | | | | | | | | | | |
| Total for Level 2 / Semester 8: **15 credits** | | | | | | | | | | |

| | |
|---|---|
| Total credits for the Programme | **150** |
| C- Compulsory | NGPA- Non-Grade Point Average |
| E- Elective | CA- Continuous Assessment |
| GPA- Grade Point Average | WE- Written Examination |

# SECTION IV

# COURSE MODULES

## Bachelor of Science Honours in Town & Country Planning

# Level One - Semester One

## Course Modules

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## Conceptualization Stage

| | | | | | |
|---|---|---|---|---|---|
| **Level I** | **Semester 1** | | | | |
| **Module Code:** | PL1101 | **Module Name:** | Introduction to Planning | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | | | 105 |

**Learning Objectives**

1. To acquire knowledge on the fundamentals of planning and design
2. To understand the use of planning and design concepts in real-life events
3. To demonstrate the thought process in planning and design skills in practical situations.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a comprehensive understanding of the core concepts associated with planning and designing

LO 2: conceptualize and describe the form and the content of a human settlement for a planning purpose

LO 3: understand the sequential and reiterative processes involved in decision-making in development activities

LO 4: actively participate in discussion forums of contemporary plans, programs, and policies that guide development

**Course Content: (Main topics, Subtopics)**

- The concepts, terminology, and definitions used in planning and design processes.
- Introduction to methods and processes of planning and designs
- Evolution of the civilizations and spatial organization of human settlements
- History of Modern Planning in Europe and Sri Lanka
- Human settlements and planning interventions (understanding of the models)
- The institutionalized planning process in Sri Lanka and different scales of Development Plans
- The role of the Town Planner in the development
- Development Plans in Sri Lanka (visit to UDA, NPPD, and review of Plans)
- Challenges for Spatial Planning in Sri Lanka

**Teaching /Learning Methods**:

Tutorials, Discussions, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment 40% | Theory (%) 60% | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Banerjee, T., & Loukaitou-Sideris, A. (2011). Urban design downtown: Poetics and politics of form. University of California Press.
- Batty, M., & Marshall, S. (2009). The evolution of cities: Geddes, Abercrombie and the new physicalism. Environment and Planning B: Planning and Design, 36(1), 3-11.
- Hall, P. (2002). Cities of tomorrow: An intellectual history of urban planning and design in the twentieth century (4th ed.). Wiley-Blackwell.
- Kostof, S. (1992). The city shaped: Urban patterns and meanings through history. Bulfinch Press.
- Madanipour, A. (2014). Urban design, space and society. Palgrave Macmillan.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile/Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | | ☑ | | |
| LO-3 | | ☑ | | ☑ | ☑ | | |
| LO-4 | | | | ☑ | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| **Level I** | **Semester 1** | | | | |
| **Module Code:** | PL1102 | **Module Name:** | Planning and Design Studio I | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 90 | | 60 |

**Learning Objectives**

1. To develop skills in observing, recording, and presenting the characteristics, patterns, and spatial information of an environment.
2. To be trained to analyze and interpret a micro-scale environment as a configuration of masses, volumes, movements, and patterns.
3. To develop an awareness of methods of sourcing information from various apparent, rhetoric, published and unpublished sources.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: record and present an environment through drawings, graphics, and other modes of presentation

LO 2: conceptualize the spatial and non-spatial attributes of an environment and communicate them with graphical and other modes of presentation

LO 3: conduct reconnaissance surveys and prepare situation reports

**Course Content: (Main topics, Subtopics)**

- Field reconnaissance methods
- Data collection and processing methods and techniques
- Methods of interpreting field observations and recordings
- Drawing as a communication tool
- Use of drawing to express environmental characteristics
- Working sessions on freehand drawing
- Methods and techniques in graphic communication
- Introduction to 2D/3D drawings
- Limitations of data sourcing

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Studio work-based group assignments – 100% | Theory (%) | Practical (%) | Other (%) (specify) 100 |

**Recommended Reading:**


- McCullough, M. (1996). Abstracting Craft: The Practiced Digital Hand. MIT Press.
- Ching, F. D. (2015). Architectural Graphics. John Wiley & Sons.
- Bertin, J. (2010). Semiology of Graphics: Diagrams, Networks, Maps. Esri Press.
- Penn, A., & Hillier, B. (2007). Handbook of Evolutionary Thinking in the Sciences. Springer.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| LO-3 | | ☑ | ☑ | | | | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1103 | **Module Name:** | Economics for Spatial Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To recognize the economic dimensions of spatial planning.
2. To interpret basic principles in Microeconomics and Macroeconomics and their use for an analysis of economic issues.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: relate economic dimensions to spatial planning

LO 2: illustrate the forces of supply and demand in the determination of prices within different economies

LO 3: Interpret micro- and macro-economic changes related to the markets.

**Course Content: (Main topics, Subtopics)**

- Nature and scope of economics
- Introduction to the economy of a human settlement
- The concepts of Demand and Supply
- The Concepts of elasticity
- Theory of consumer behavior
- Types of economic systems
- Types of markets and their characteristics
- Introduction to macroeconomics
- Major issues related to the economy

**Teaching /Learning Methods**:

Lectures; Class-room Discussions and Student Presentations; Field Visits; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Field Visits and student Presentations 20%; Essay/Report writing 20% | Theory (%) End-semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Hall, R., & Lieberman, M. (2010). Microeconomics: Principles and applications (5th ed.). Mason, Ohio: South-Western Cengage Learning.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | | | ☑ | ☑ | |
| LO-3 | | | ☑ | ☑ | | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1104 | **Module Name:** | Ecology for Spatial Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To acquire knowledge on the components and processes of ecosystems
2. To relate diverse ecosystems and their functions
3. To identify human interventions on the processes of natural ecosystems

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: identify the interactions between natural systems and the built environment

LO 2: describe the environmental issues at local and global context

**Course Content: (Main topics, Subtopics)**

- Basic principles of ecology
- Components and processes of natural ecosystems
- Functions and interactions of natural ecosystems
- Ecological Diversity
- Eco-centric and Anthropocentric approaches and environmental paradigms
- Environmental sustainability
- Human effects on biogeochemical pathways
- Landscape ecology and fragmentation
- The impact of the urbanization on climate (Urban heat island effect, Greenhouse gases)
- Current issues related to the environment

**Teaching /Learning Methods**:

Lecture, Student Presentations and discussion, Feild Visis

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Details: quizzes %, mid-term %, other % (specify) Assignment – 40% | Theory (%) Written Exam – 60% | Practical (%) | Other (%) (specify) 100 |

**Recommended Reading:**


- Turner, M. G. (2020). Landscape ecology: The effect of pattern on process. Springer.
- Molles, M. C., Jr. (2020). Ecology: Concepts and applications. McGraw-Hill Education.
- Smith, R. L., & Smith, T. M. (2019). Elements of ecology. Pearson.
- Naess, A. (2018). Ecology, community, and lifestyle: Outline of an ecosophy. Cambridge University Press.
- Gaston, K. J., & Spicer, J. I. (2018). Biodiversity: An introduction. John Wiley & Sons.
- Clark, W. C., & Dickson, N. M. (2019). Sustainability science: The emerging field of sustainability in higher education. Annual Review of Environment and Resources, 44, 303-322.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | | | ☑ | ☑ | | ☑ | |
| LO-2 | ☑ | ☑ | | | | | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL1105 | Module Name: | Society, Culture, and Space | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand theories and concepts related to society and culture.
2. To understand the urban and rural societies and the urbanization process and its impacts in South Asia and Sri Lanka
3. To illustrate a city as a symbolic environment and the relationship between culture and the built environment
4. To demonstrate urban and regional socio-cultural issues
5. To develop skills in carrying out socio-economic surveys

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: understand the importance of the socio-cultural dimensions in spatial planning

LO 2: Demonstrate the characteristics of a society in an urban context through its spatial attributes and the process of urbanization

LO 3: Discuss urban and regional socio-cultural issues in the light of theories and concepts

LO 4: carry out a socio-economic survey and analyze the survey findings for a planning purpose

**Course Content: (Main topics, Subtopics)**

- Basic concepts in Sociology
- The urbanization process and the urbanization in Asia
- Social groups, social interactions, culture, and the built environment
- The idea of "planning for people"
- The city as a symbolic environment
- Functionalism, Modernism, Postmodernism, Social Constructionism, New Urbanism and reading the city from these viewpoints
- The role does the city in an information age and the function does of the city in the era of globalization
- Socio-Spatial approach towards spatial planning
- Social issues, Problems and Gentrification of the city
- Social surveys and analytical methods

**Teaching /Learning Methods**:

Field visit, Student Posters

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%) Written Exam– 60% | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Giddens, A., Duneier, M., Appelbaum, R. P., & Carr, D. (2018). Introduction to sociology. WW Norton & Company.
- Knox, P. L., & Pinch, S. (2019). Urban social geography: An introduction (8th ed.). Routledge.
- Zukin, S. (2017). Naked city: The death and life of authentic urban places. Oxford University Press.
- Jacobs, J. (2018). The death and life of great American cities. Vintage.
- Harvey, D. (2018). The condition of postmodernity: An enquiry into the origins of cultural change. Wiley.
- Sassen, S. (2018). Expulsions: Brutality and complexity in the global economy. Harvard University Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | ☑ | ☑ | | ☑ | | | |
| LO-3 | | | | ☑ | ☑ | ☑ | |
| LO-4 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1106 | **Module Name:** | Communication Technologies | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 15 | | 90 | | 45 |

**Learning Objectives**

1. To recognize the latest technologies available to visualize spatial information.
2. To engage students with different technologies in a series of hands-on exercises.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: identify the latest technologies available to visualize spatial information

LO 2: visualize spatial information through computer-based applications (objective 2)

**Course Content: (Main topics, Sub topics)**

- Introduction to Spatial Information Systems(SIS) and Aerial Photography
- Coordinate systems and map projections
- Data exploration, querying and geo-processing
- GPS technology
- Introduction to graphical and modeling software - AutoCAD, Sketch Up and Photoshop
- Iconography

**Teaching /Learning Methods**:

Collaborative learnings, Hands-on sessions, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Practical work - 20%, Assignments - 80% | Theory (%) | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Laurini, R., & Thompson, D. (1992). Fundamentals of spatial information systems (Vol. 37). Academic press.
- Kucera, G. (2020). Time in geographic information systems. CRC Press.
- Rout, A., Nitoslawski, S., Ladle, A., & Galpern, P. (2021). Using smartphone-GPS data to understand pedestrian-scale behavior in urban settings: A review of themes and approaches. Computers, Environment and Urban Systems, 90, 101705.
- Laranjeiro, P. F., Merchán, D., Godoy, L. A., Giannotti, M., Yoshizaki, H. T., Winkenbach, M., & Cunha, C. B. (2019). Using GPS data to explore speed patterns and temporal fluctuations in urban logistics: The case of São Paulo, Brazil. Journal of Transport Geography, 76, 114-129


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1107 | **Module Name:** | Statistical and Quantitative Methods in Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To apply appropriate statistical and quantitative methods to comprehend a given situation and logical reasoning in planning
2. To be equipped with a variety of technical and analytical skills useful in studies at the subsequent levels

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: identify quantitative reasoning for collecting, presenting, analyzing and interpreting data including the use of spreadsheets and statistics software

LO 2: apply statistical and quantitative methods in the decision-making processes for problem solving, including sample surveys, designing the surveys, analysis of information, measuring central tendency and dispersion of a data set, deriving equations for relationships and structural analysis

**Course Content: (Main topics, Subtopics)**

● Data Collection: Probabilistic and Non-Probabilistic Sampling

● Basic Data Presentation: Methods of Graphic presentation

● Univariate Statistical Methods: frequency distribution, class limits, curves, cumulative frequency distribution, ogives, measures of central tendency, measures of absolute dispersion, skewness

● Probability Theory and Probability Distribution: addition rule, conditional probability, multiplication rule, random variables and probability distribution, mathematical expectation; Binomial distribution, poison distribution and normal distribution

● Introduction to computer-based quantitative data analysis software (SPSS etc)

● Mathematical Techniques: Principles of Geometry, Trigonometry and applications in Land subdivisions, Dimension analysis and formulating equations for relationships, Principles of Scalars and Vectors in structural analysis

● Mathematical Techniques: Linear programming problems, Principles of Calculus and optimization problems in decision making

● Decision Theory: Decision making under conditions of certainty, uncertainty, and conditions of risk, decision trees, pay off matrix, applications in planning

**Teaching /Learning Methods**:

Lectures; Class-room Discussions and Student Presentations; Exercises on Computer based applications, Students Presentations

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| 40%- Computer based application | Theory (%)<br><br>Written Exam-60% | Practical (%) | Other (%) (specify) |

**Recommended Reading:**

- Introductory Business Statistics, Professor KRMT Karunaratna
- Quantitative Techniques in Business, Management and Finance A Case-Study Approach, Umeshkumar Dubey, D P Kothari

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 1 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1108 | **Module Name:** | Effective Communication and Writing I | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | NGPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To improve the competence in oral and written communication skills in the English language
2. To develop listening and comprehension skills to suit planning discipline
3. To make use of appropriate learning resources to help improve independent learning strategies
4. To produce written texts of various types, develop an argument, describe or recount events and observe the conventions of the genre

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Work satisfactorily with enhanced capacity in English by using a range of resources and modes of communication

LO 2: Present, discuss and summarize planning issues and information in the academic setting

LO 3: Carry out interpersonal dialogues and undertake tasks with team spirit

LO 4: Communicate effectively and independently in an academic context through well structured and coherent arguments

**Course Content: (Main topics, Subtopics)**

- Effective use of grammar and vocabulary
- Listening sessions with the use of local and international materials
- Reading and comprehension lessons with the use of local and international reading materials
- Writing skill improvement lessons
- Speaking sessions
- Evaluation of planning reports and interpret the content to an audience
- Participation at interaction sessions on planning related topics and express views in English
- Understand the real ground scenarios and interpret in English language
- Use of academic resources (and understand the content to elaborate as a team
- Listen/ watch multimedia documentary and conduct interactive discussions

**Teaching /Learning Methods**:

Interactive sessions, Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Journal activity-40%, Speech-20%, Group presentation-40% (30%individual & 10%group) | Theory (%) | Practical (%) | Other (%) (specify) |

**Recommended Reading:**

- The Art of effective communication : communicate more effectively on and off the job! [2004], JIST publishing – electronic resource available at UOM library
- Effective communication in teams [1998], Littlejohn, Stephen – electronic resource available at UOM library
- Effective communication skills : for scientific and technical professionals [2001], Chambers, H.E. – electronic resource available at UOM library
- Professional communication : how to deliver effective written and spoken messages [2002, Clarke, Ethane

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | | ☑ | | |
| LO-3 | | ☑ | | ☑ | | | |
| LO-4 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level One - Semester Two

## Course Modules

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## Conceptualization Stage

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1201 | **Module Name:** | Planning Methods and Policies | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand different levels of formulating policies and their implementation mechanisms in Spatial Planning.
2. To illustrate the different approaches in the policymaking process.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Interpret policies considering different aspects of spatial planning

LO 2: review existing policies applicable at different levels

**Course Content: (Main topics, Sub topics)**

- Planning methods
- What is a policy
- The procedure of Policy formulation and implementation
- Alternative approaches to planning (Synoptic, incremental, transitive, advocacy, rational and strategic)
- Policy analysis, formulation and evaluation
- Policy framework for the convergence of local authority functions & the plan
- National physical planning policy & its compliance to regional & local plans

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Student presentations; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Policy Review and Student Debates/Presentations (40%) | Theory (%)<br><br>End-semester Examination (60%) | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Birkland, T. A. (2020). An introduction to the policy process: theories, concepts, and models of public policy making (Fifth edititon.). Routledge
- Albrechts, L. (2001). In Pursuit of New Approaches to Strategic Spatial Planning. A European Perspective. International Planning Studies, 6(3), 293–310
- Steinberg, F. (2005). Strategic urban planning in Latin America: experiences of building and managing the future. Habitat International, 29(1), 69–93. https://doi.org/10.1016/S0197- 3975(03)00063-8


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1202 | **Module Name:** | Planning and Design Studio II | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 135 | | 15 |

**Learning Objectives**

1. To be trained to study the built environment from multi-dimensions related to space, activities, time, meanings and socio-cultural norms.
2. To understand space, objects and functions as systems and processes.
3. To be sensitive to spatial and non-spatial aspects and micro level details of the built environment.
4. To orient towards design-thinking.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: conceptualize the built environment as a complex process of organizing space, objects, activities and non-spatial aspects

LO 2: demonstrate sensitivity towards intricate elements of a built environment

LO 3: interpret a built environment and its qualities for a design purpose

**Course Content: (Main topics, Sub topics)**

● Theories and principle involved in planning and urban design

● Scale, two-dimensional, three-dimensional and multidimensional appreciations

● Practical frameworks of urban design, people and place, and spatial analysis

● Inter-relations between the society and space, built elements and natural settings of an environment, and the static elements and dynamic processes of a built environment.

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Interactive sessions, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Studio work-based group assignments – 100% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Alexander, C., Ishikawa, S., & Silverstein, M. (1977). A pattern language: Towns, buildings, construction. Oxford University Press.
- Lynch, K. (1960). The image of the city. MIT Press.
- Gehl, J. (2010). Cities for people. Island Press.
- Hillier, B. (1996). Space is the machine: A configurational theory of architecture. Cambridge University Press.
- Jacobs, J. (1961). The death and life of great American cities. Vintage.
- Cullen, G. (1961). The concise townscape. Architectural Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | ☑ |
| LO-2 | | | | ☑ | | | ☑ |
| LO-3 | ☑ | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1203 | **Module Name:** | Introduction to Real Estate | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To describe the dynamics of land as a main resource of planning.
2. To explain the principle determinants of the demand for, the supply of, and the location of different types of properties and land uses
3. To examine market functions and the different actors in the property development process.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: recognize the dynamic character of land as a scarce resource, a commodity and a factor of production

LO 2: Demonstrate the functions of the real property market.

LO 3: Compute land values in a given area.

**Course Content: (Main topics, Sub topics)**

● Real estate economics and settlement planning
● Definitions and perspectives of land and real estate
● Economics of price, value, rent and use of land
● Demand and supply of land
● Characteristics of the Real property market (real property market, real property rights, market efficiency, market failures and planning intervention in real property market)
● Functions of the real property market
● Actors of the real property market

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Field Visits, Student presentations; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Field Vists and Sttudent Presentations (20%); Report writing (20%) | Theory (%)<br><br>End-Semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Brueggeman, W., & Fisher, J. D. (2017). Real estate finance and investments. McGraw-Hill Education.
- DiPasquale, D., & Wheaton, W. C. (2018). Urban economics and real estate markets. Pearson.
- Eppli, M. J., & Benjamin, J. D. (2017). Real estate finance and investments: Risks and opportunities. Springer.
- Geltner, D., Miller, N. G., Clayton, J., & Eichholtz, P. (2018). Commercial real estate analysis and investments. Cengage Learning.
- Glaeser, E. L., & Gyourko, J. (2018). The economics of housing supply. Journal of Economic Perspectives, 32(1), 3-30.
- Goodman, A. C. (2018). Housing markets and the economy: Risk, regulation, and policy. Routledge.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | ☑ |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| **Level I** | **Semester 2** | | | | |
| **Module Code:** | PL1204 | **Module Name:** | Quantitative Ecology | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 15 | | 45 | | 40 |

**Learning Objectives**

1. To acquire basic knowledge and skills required to describe the quality of an ecosystem.
2. To interpret the baseline condition and quality of the ecosystem of a context

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: apply analytical techniques to describe the quality of an ecosystem

LO 2: conduct an ecological survey in a given environment and interpret the ecological parameters

**Course Content: (Main topics, Sub topics)**

- Ecological surveying and sampling techniques
- Species diversity, richness and evenness
- Measurement of noise, air quality, soil and geology environments
- Field survey for preparation of an ecological profile

**Teaching /Learning Methods**:

Tutorials, Discussions, Hands-on Sessions, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Field survey for preparation of an ecological profile-60%, Assignment-40% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Krebs, C.J. (2014). Ecological Methodology. Addison-Wesley.
- Magurran, A.E. (2004). Measuring Biological Diversity. Blackwell Publishing.
- Schafer, L., & Desbrosses, P. (Eds.). (2017). Environmental Monitoring: A Comprehensive Handbook. Wiley-VCH.
- Digby, P.G.N., & Kempton, R.A. (1987). Multivariate Analysis of Ecological Communities. Chapman & Hall.
- Clarke, K.R., & Gorley, R.N. (2015). Primer v7: User Manual/Tutorial. Primer-E Ltd.
- Green, R.H. (1979). Sampling Design and Statistical Methods for Environmental Biologists. John Wiley & Sons


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1205 | **Module Name:** | Housing and Resettlement Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To demonstrate the evolution of the housing policies and key features of the current housing policy in Sri Lanka
2. To understand the resettlement planning procedures
3. To express key issues in relation to the role of housing in urban and regional areas in Sri Lanka
4. To illustrate current development trends in the housing sector

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: interpret housing issues relating to housing policy
LO 2: Demonstrate evolutionary process of the housing system in Sri Lanka
LO 3: understand resettlement needs and prepare resettlement action plans

**Course Content: (Main topics, Sub topics)**

- Institutional reforms and evolution of housing policy
- Contemporary practices and challenges in the housing sector of Sri Lanka
- Key issues in relation to the role of housing in society
- Principles of resettlement and procedures of resettlement planning

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Guruge, A. (2011). Institutional Reforms and Evolution of Housing Policy in Sri Lanka: A Critical Assessment. South Asian Journal of Social Sciences, 1(2), 34-54.
- Jayawickrama, R. (2017). Contemporary Practices and Challenges in the Housing Sector of Sri Lanka. Journal of the Royal Asiatic Society Sri Lanka, 62(2), 47-68.
- Ruming, K. J., & Gurran, N. (2015). The Role of Housing in Society: A Review of Australian Housing Research 2000-2015. AHURI Final Report No. 256. Australian Housing and Urban Research Institute.
- UN-Habitat. (2010). Principles of Resettlement and the Role of UN-Habitat. United Nations Human Settlements Programme.
- Harshawardena, I. D. S. (2011). Procedures of Resettlement Planning in Sri Lanka: Lessons for Post-Conflict Resettlement Programs. The International Journal of Humanities & Social Studies, 1(1), 36-42.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | | ☑ | ☑ | ☑ | | | |
| LO-2 | ☑ | ☑ | | | | ☑ | ☑ |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1206 | **Module Name:** | Geo-informatics for Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 90 | | 10 |

**Learning Objectives**

1. To discuss the fundamental concepts, functions and techniques of Geographical Information System
2. To utilize GIS software for developing spatial databases and models

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: identify the concepts, functions and limitations of Geographical Information System .

LO 2: design basic spatial databases and models using GIS technology

**Course Content: (Main topics, Sub topics)**

- Concepts of Geographical Information System (commercial and open source GIS)
- Preparing spatial databases and attribute data management
- Coordinate transformation
- Geo referencing & digitizing
- Location Based Services
- Real-time urban monitoring
- Geo-IoT and its applications

**Teaching /Learning Methods**:

Hands-on sessions, Discussions, Group works, Presentation, Self-studies

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Practical work - 20%, Assignments - 80% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Geoinformatics for Decentralized Planning and Governance by M.S. Nathawat and A.C. Pandey (Eds.)
- GIS for Planning and the Built Environment: An Introduction to Spatial Analysis (Planning, Environment, Cities, 23) 1st ed. 2019 Edition by Ed Ferrari (Author) Alasdair Rae (Author)
- Geospatial Techniques in Urban Planning by Zhenjiang Shen
- Berry, J. K. (1993). Beyond mapping: concepts, algorithms, and issues in GIS (No. 526.9820285 B534). Fort Collins, Colorado, USA: GIS World Books.
- Rigaux, P., Scholl, M., & Voisard, A. (2002). Spatial databases: with application to GIS. Morgan Kaufmann.
- Church, R. L., & Murray, A. T. (2009). Business site selection, location analysis, and GIS (pp. 209-233). Hoboken, NJ: John Wiley & Sons.
- Pullar, D., & Springer, D. (2000). Towards integrating GIS and catchment models. Environmental Modelling & Software, 15(5), 451-459.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1207 | **Module Name:** | Qualitative Methods in Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To apply appropriate qualitative data collection methods and qualitative data analysis techniques to comprehend a given situation and the logical reasoning for planning.
2. To appraise skills in qualitative reasoning, making and criticizing arguments, stating and investigating hypotheses in planning exercises.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Identify qualitative data collecting, presenting, analyzing and interpreting methods

LO 2: Plan for basic qualitative studies, including planning for data collection through interviews, observations and/or surveys, prepare and carry out basic analysis of such data

LO 3: Apply a range of core qualitative methods and data analysis software in different problem solving exercises in planning

**Course Content: (Main topics, Subtopics)**

● Sampling & methods of qualitative data collection and recording (observation, interview, questionnaire, focus group, case study, ethnography etc)
● Methods of Qualitative data analysis and visualization: Content analysis, cluster analysis, sentiment analysis
● Various styles of interpretation of qualitative data
● Introduction to computer based qualitative data analysis software (NVIVO etc )
● Ensure validity and reliability of findings of qualitative studies

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Case study analysis – 30%, Qualitative data analysis report – 50%, Computer-based qualitative data analysis- 20% | Theory (%) | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Marshall, M. N. (1996). Sampling for qualitative research. Family Practice, 13(6), 522-525.
- Patton, M. Q. (2015). Qualitative research and evaluation methods. Sage Publications.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). Qualitative data analysis: A methods sourcebook. Sage Publications.
- Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbook of research methods in psychology, Vol 2: Research designs (pp. 57-71). American Psychological Association.
- Bazeley, P., & Jackson, K. (2013). Qualitative data analysis with NVivo. Sage Publications.
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. International Journal of Qualitative Methods, 1(2), 13-22.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | | | ☑ | ☑ | |
| LO-3 | | | ☑ | ☑ | | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1208 | **Module Name:** | Building Material and Construction Technology | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To recognize different building types and associated building materials
2. To illustrate the construction process of each part of the building and steps in overall construction processes of different types of building projects
3. To apply innovative building materials and construction processes for sustainable growth
4. To appraise the roles of the professionals involved in building projects
5. To judge all council, technical and working drawings related to building development projects

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Illustrate a building project relating to its structure, building materials, services, etc.

LO 2: Appraise construction steps and processes, and professional involvement

LO 3: Have skills for leading building development projects .

LO 4: Apply practical and innovative planning and building regulations to development guide plans for a sustainable growth

**Course Content: (Main topics, Sub topics)**

- Different parts of a building, materials and construction process of each part
- Overall steps of building development project
- Roles and works of professionals involved
- Technical details of different drawings
- Cost estimation and BOQ preparation
- Materials and construction processes of green buildings
- Building regulations in development guide plans
- Typology of buildings and building materials, their qualities, production, storage and transportation
- Types of construction technology used in buildings
- Production of Drawings and specifications for construction

**Teaching /Learning Methods**:

Discussions, Field visits, Brain storming and group works, Presentation, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 50% | Final Assessment 50% | | |
|---|---|---|---|
| Assignment - 50% | Theory (%) Written Exam 50% | Practical (%) | Other (%) (specify) |

**Recommended Reading:**


- Ching, F. D. K. (2014). Building Construction Illustrated. John Wiley & Sons.
- Smith, G. C., & Love, P. E. (Eds.). (2017). Construction Project Management: A Complete Introduction. Routledge.
- Allen, E., Iano, J., & Zubeck, H. (2014). Fundamentals of Building Construction: Materials and Methods. John Wiley & Sons.
- Arumugam, A., & Yassin, N. (2015). Green Building Materials: A Guide to Product Selection and Specification. John Wiley & Sons.
- Chartered Institute of Building. (2019). Code of Practice for Project Management for Construction and Development. John Wiley & Sons.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | | | | |
| LO-3 | | ☑ | | | ☑ | ☑ | |
| LO-4 | | | | ☑ | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level I | Semester 2 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL1209 | **Module Name:** | Effective Communication and Writing II | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | NGPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To improve skills in verbal and graphical communication, writing and reporting
2. To develop inbuilt qualities to be a good presenter
3. To improve teamwork and self-confidence
4. To have exposure towards communication technology

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Organize and make effective verbal and visual presentations
LO 2: Prepare technical reports on a given topic .
LO 3: Document a situation or an event adopting basic principles of effective communication.
LO 4: Use digital media as a source of communication

**Course Content: (Main topics, Sub topics)**

- Idea generation methods and preparation methods for presentation/report writing.
- Script writing techniques and communication etiquettes.
- Methods of eradicating stage fear and effective public addressing.
- Communication skills for town planners and effective use of them.
- Use of visual aids in presentations and teamwork skills
- Bi-lateral communication methods.
- Technical report writing.
- Method of documentation of a topic or an event.
- Use of social media as a platform for communication.
- Digital Media and Videography for communication.

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Technical report – 50%, Presentation – 50% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Buzan, T., & Buzan, B. (2010). The Mind Map Book: Unlock Your Creativity, Boost Your Memory, Change Your Life. Pearson Education Limited.
- Field, S. (2016). The Screenwriter's Workbook. Routledge.
- Lucas, S. E. (2012). The Art of Public Speaking. McGraw-Hill Education.
- Stitt-Gohdes, W. L., & Crews, T. B. (2016). Professional Communication in Speech-Language Pathology: How to Write, Talk, and Act Like a Clinician. Plural Publishing


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | | | | | | |
| LO-2 | | ☑ | | | ☑ | | |
| LO-3 | | | ☑ | ☑ | | | |
| LO-4 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Two - Semester Three

## Course Modules

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## Analysis Stage

| Level II | Semester 3 | | | | | |
|---|---|---|---|---|---|---|
| Module Code: | PL2301 | Module Name: | Planning Theory | | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA | |
| Hourly Breakdown | Theory | | Practical | | Independent Learning | |
| | 30 | | | | 70 | |

**Learning Objectives**

1. To develop an understanding on different theories used in planning and design
2. To conceptualize and explain a human settlement in the light of different theories in spatial planning.
3. To develop skills in analyzing situations and issues prevalent in a human settlement from a theoretical perspective.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a comprehensive knowledge in definitional, normative and substantive theories in planning

LO 2: conceptualize and discuss the organization of a human settlement relating to different planning theories

LO 3: interpret a given situation of a human settlement in the light of the theories learned

**Course Content: (Main topics, Sub topics)**

● Definitional theories, and historic and modern Normative theories of planning human settlements

● Explaining a human settlement under different theoretical perspectives: a "Historic Process", a "Central Place", an "Agglomeration of Economic activities", a "Decision of location economics", a "Social-spatial Process", a "Place", a "Social Construction", a "Field of Forces", and an "Arena for Conflicts".

● Application of substantive theories to interpret built environments.

● A discussion on the forms of Sri Lankan towns

**Teaching /Learning Methods**:

Tutorials, Interactive sessions, Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Dear, M. (2006). Theories and Methods in Urban Planning: Social Exclusion and the Urban Environment. Routledge.
- Healey, P. (2006). Collaborative Planning: Shaping Places in Fragmented Societies. Palgrave Macmillan.
- Alexander, E. R. (2017). A Pattern Language: Towns, Buildings, Construction. Oxford University Press.
- van Assche, K., Beunen, R., & Duineveld, M. (2013). Evolutionary Governance Theory: An Introduction. Springer.
- Jayawardena, C. (2010). Development of Urban Systems in Sri Lanka. University of Moratuwa.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | ☑ | ☑ | | | | |
| LO-3 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2302 | Module Name: | Planning and Design Studio III | | |
| Credit Value: | 3 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | | | 135 | | 15 |

**Learning Objectives**

1. To advance the knowledge on the process of planning and design
2. To review local and international case studies to learn urban design products and processes.
3. To learn and explore methods of spatial planning and design to address issues related to micro scale-built environments.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Conceptualize an urban environment relating to space, processes, meanings and identities

LO 2: Interpret how urban environmental features and patterns symbolize social identities and senses

LO 3: Produce an urban design scheme for a given location to strengthen the identity and sense of place

**Course Content: (Main topics, Sub topics)**

● Study of the physical space in terms of masses, functions, place making processes and appropriations.

● Relationships between exterior and interior spaces as modulating interactions between public, semi-public, and private realms

● Study of the evolving nature of the urban environment

● Review of Urban Design papers and Case studies

● Projection of the future patterns of developments in an urban form and propose desired scenarios.

● The process of conceptualization of an urban area and the preparation of an urban design.

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Interactive sessions, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Studio work-based group assignments – 100% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Lynch, K. (1984). Good City Form. MIT Press.
- Gehl, J. (2010). Cities for People. Island Press.
- Hall, P., & Tewdwr-Jones, M. (2010). Urban and Regional Planning (4th ed.). Routledge.
- Carmona, M., et al. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design. Routledge.
- Cuthbert, A. R. (2006). The Form of Cities: Political Economy and Urban Design. Blackwell Publishing.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2303 | Module Name: | Land Management | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To explain global trends in land management
2. To demonstrate different tools and techniques in effective management of land.
3. To examine the role of government intervention and land policy in creating conditions for sustainable land management

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: appraise land management techniques in a real-life context

LO 2: discuss on the supportive infrastructure of land management for an enabling environment, to overcome barriers and encourage land administration

LO 3: compose land policy actions and reforms in Sri Lanka

**Course Content: (Main topics, Sub topics)**

- Land management concepts and key components
- Key objectives and tasks of land management
- Areas of land management applications
- Land management techniques and process in national and international contexts
- Land acquisition, risk associated with land acquisition and land conflict
- Elements of land policy
- Land tenure systems, land administration (registration and cadastral systems)

**Teaching /Learning Methods**:

Lectures; Class-room discussions and student presentations; Field observations; Guided-readings; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Group and Individual Assignments (40%) | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Enemark, S. (2006). Need for Establishing Sustainable National Concepts .Understanding the Land Management Paradigm. https://www.semanticscholar.org/paper/Understanding-the-land- management-paradigm-Enemark/515ae563b7dfad3dd144b4753599eca6b7b69898

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | ☑ | | ☑ | ☑ | | ☑ | |
| LO-3 | | | | | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2304 | Module Name: | Applied Hydrology | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To acquire knowledge on the functions and processes of hydrological systems
2. To analyze storms and flows to optimize hydrological pathways

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: diagnose the issues in the hydrological system

LO 2: estimate storms and flows to optimize hydrological pathways

**Course Content: (Main topics, Sub topics)**

● Hydrologic Processes - Hydrologic system model - Water balance - Pathways and reserves of water (atmospheric water, subsurface water and surface water)

● Hydrologic Analysis - Hydrologic measurement - Hydrologic statistics - Storms and flows - Unit hydrograph - Frequency analysis - Hydro-meteorological risk and uncertainty

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study, Hands-on Sessions

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment - 40% | Theory (%)<br><br>Written Examination - 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Subramanya, K. (2017). Engineering hydrology. McGraw-Hill, New Delhi.
- Fetter, C. W. (2013). Applied hydrogeology: New International Edition.
- Singh, V. P., & Eng, D. (2017). Handbook of applied hydrology. McGraw-Hill Education.
- Brooks, K. N., Ffolliott, P. F., & Magner, J. A. (2012). Hydrology and the Management of Watersheds. John Wiley & Sons.
- Robinson, M., & Ward, R. C. (2017). Hydrology: principles and processes. Iwa Publishing.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2305 | **Module Name:** | Population Studies in Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To define the concepts, theories and measurements of demography which essential to understand the history of population growth, changes in human population size and composition and future trends.
2. To apply the demographic measures in policy formulation and human settlement planning
3. To appraise the application of models of population projection and forecasting

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: define and interpret the applicability of concepts, theories and measures of demography in different contexts

LO 2: formulate a Demographic Profile for a given area

LO 3: forecast populations for a given area under different scenarios of development

**Course Content: (Main topics, Sub topics)**

- Demographic Analysis in the Planning Process
- Sources of demographic data
- Demographic measures of population composition
- Concepts, measures, trends and issues on Fertility, Mortality, Migration, Nuptiality and Social Mobility
- History of population growth, Global variations in population measurements and growth
- Demographic transition theory and different population pyramids
- Population forecasting models
- Sub population estimates
- Population projection models
- Planning Implications and policy formulation in human settlement planning

**Teaching /Learning Methods**:

Lectures; Class-room Discussions and Student Presentations; Exercises on Computer based applications, Students Presentations

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| 40%- Computer based application | Theory (%)<br><br>60% for Written Examination | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- The scope of population studies and demography David Lucas and Michael E. Roettger September 2021
- Population estimation and projection: Methods for marketing, demographic, and planning personnel JC Raymondo – 1992

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| LO-3 | | | ☑ | ☑ | | | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2306 | **Module Name:** | Spatial Data Analytics and Visualization | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 90 | | 10 |

**Learning Objectives**

1. To acquire a comprehensive understanding of the theories, concepts and assumptions of spatial analysis and visualization methods.
2. To apply appropriate analytical and visualization tools for problem solving.
3. To interpret and demonstrate the results of spatial analysis of a context

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: describe principles and methods to analyze a set of spatial data apply spatial models to analyze a given phenomenon

LO 2: Interpret and demonstrate the results of spatial analysis of a context

**Course Content: (Main topics, Sub topics)**

- Introduction to spatial data science and visualization
- Spatial interpolation and spatial continuity analysis
- Spatial statistics, Temporal analysis and Spatial data mining
- 3D & 4D GIS data analysis and Multidimensional data visualization tools
- Web analytics & Web technologies for data visualization
- Citizen science data analysis and Social media analytics
- Spatial analysis based on Location Based Services (LBS)
- Augmented reality and virtual reality, Data animation and dashboard

**Teaching /Learning Methods**:

Colloborative learnings, Hands-on sessions, Presentation, Live coding

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Classroom hackathon- 60%<br>Individual Assignments - 40% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Goodchild, M. F. (2007). Citizens as sensors: the world of volunteered geography. GeoJournal, 69, 211-221.
- Kankanamge, N., Yigitcanlar, T., Goonetilleke, A., & Kamruzzaman, M. (2019). Can volunteer crowdsourcing reduce disaster risk? A systematic review of the literature. International journal of disaster risk reduction, 35, 101097.
- Yigitcanlar, T., Kankanamge, N., Regona, M., Ruiz Maldonado, A., Rowan, B., Ryu, A., ... & Li, R. Y. M. (2020). Artificial intelligence technologies and related urban planning and development concepts: How are they perceived and utilized in Australia?. Journal of Open Innovation: Technology, Market, and Complexity, 6(4), 187.
- Yigitcanlar, T., Desouza, K. C., Butler, L., & Roozkhosh, F. (2020). Contributions and risks of artificial intelligence (AI) in building smarter cities: Insights from a systematic review of the literature. Energies, 13(6), 1473.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2307 | Module Name: | Planning Techniques | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To acquire knowledge on planning techniques as tools for rational decision-making at different stages of the planning process
2. To apply suitable planning techniques for validating and the analysis of information for resolving problem situations in settlements.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: select appropriate planning techniques for rational decision-making at different stages of the planning process

LO 2: analyze a given problem situation applying appropriate planning techniques

**Course Content: (Main topics, Sub topics)**

● Introduction to planning techniques

● Methodology and application of planning techniques (Sieve Map, Potential Surface Techniques, Sensitive Area Analysis Techniques, Space Syntax, Network Centrality Assessment, Settlement Ranking, SWOT analysis, Delphi Method, Analytic Hierarchy Process, Cost Benefits Analysis, Multi Criteria Analysis, Critical Path Analysis, Cause and Effect Analysis, Role Playing, Brainstorming)

● Evaluation of alternatives, goals and strategies using planning techniques

**Teaching /Learning Methods**:

Case study approach with Lectures, Tutorials, Interactive sessions, Discussions, Practical studio, Brain storming and group works, Presentation, Guided Reading, Self-studies

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Details: quizzes %, mid-term %, other % (specify) Studio work-based group assignments – 100% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- van Nes, Akkelies, and Claudia Yamu. Introduction to space syntax in urban studies. Springer Nature, 2021.
- Dovey, K., & Pafka, E. (2017). What is functional mix? An assemblage approach. Planning Theory & Practice, 18(2), 249-267.
- Saaty, T. L., & Vargas, L. G. (2012). Models, methods, concepts & applications of the analytic hierarchy process (Vol. 175). Springer Science & Business Media.
- Armstrong-Wright, A. T. (1971). Critical path method: introduction and practice. Longman group.
- Vasse, W. W., Wilson, R. D., & Stephenson, R. J. (1983). Critical Path Modeling: University Planning in an Urban Context. Planning for Higher Education, 11(4), 13-21.
- Barker, A. (1997). 30 Minutes to Brainstorm Great Ideas.
- Turoff, M., & Linstone, H. A. (2002). The Delphi method-techniques and applications.
- Priemus, H., Flyvbjerg, B., & van Wee, B. (Eds.). (2008). Decision-making on mega-projects: cost-benefit analysis, planning and innovation. Edward Elgar Publishing.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | ☑ | | |
| LO-2 | ☑ | | ☑ | ☑ | | ☑ | ☑ |
| LO-3 | ☑ | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | | | ☑ | ☑ | | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2308 | **Module Name:** | Traffic and Transportation | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand different planning processes on transportation planning
2. To identify different types of traffic and transport related surveys, surveying methods and their uses for decision making in transportation
3. To apply different transportation planning techniques for better integration of transport and land use
4. To illustrate travel demand forecasting and integrating the results in the formulation of different types of plans
5. To appraise how transportation is planned, implemented, operated and managed in Sri Lanka and recognize related prospects and constraints under each

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: prepare transport plans for identified study areas
LO 2: carry out different types of transportation surveys and use the results for better planning
LO 3: integrate transportation and land use in urban planning
LO 4: Apply transport models for quick and efficient transport demand forecasting

**Course Content: (Main topics, Sub topics)**

- Transportation statistics in Sri Lanka
- Key concepts in traffic and transportation
- Transport planning processes
- Traffic and transportation surveys
- Capacity Assessments
- Traffic Impact Assessments
- Key components of transportation infrastructure
- Traffic forecasting and transport modeling approaches
- Transport policies

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 50% | Final Assessment 50% | | |
|---|---|---|---|
| Assignment – 50% | Theory (%)<br>Final Exam – 50% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Ministry of Transport and Civil Aviation. (2020). Sri Lanka Transport Statistics - 2020. Department of Census and Statistics, Sri Lanka.
- Ashworth, R., & Page, S. J. (2011). Transport and Tourism: Global Perspectives. Channel View Publications.
- Ortúzar, J. D., & Willumsen, L. G. (2011). Modelling Transport (4th ed.). John Wiley & Sons.
- Institute of Transportation Engineers. (2015). Transportation Planning Handbook (4th ed.). Wiley.
- Transportation Research Board. (2010). Highway Capacity Manual (HCM 2010). Transportation Research Board.
- Department for Transport (DfT). (2007). WebTAG: Transport Analysis Guidance. UK Department for Transport.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | ☑ | ☑ |
| LO-3 | | | ☑ | | ☑ | | |
| LO-4 | | | | | | ☑ | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 3 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2309 | Module Name: | Drama | | |
| Credit Value: | 1 | Core/Elective: | Core | GPA/NGPA: | NGPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To develop skills in debate, reflection, and critical engagement from a range of perspectives
2. To strengthen self-confidence, expressive abilities in presentation and participate positively in constructive arguments through role play
3. To develop a high standard of communication skills, and skills of critical argument

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Build teamwork and communication skills to perform group activity and improve skills of organizing and management of events

LO 2: Critically assess questions or problems, and propose interpretative or explanatory solutions, and devise practical responses or outcomes

LO 3: Develop time-management, organizational and administrative skills, including the ability to plan and work to clear goals and objectives .

LO 4: Develop variety of performance skills to transfer the ideas into different audiences

**Course Content: (Main topics, Sub topics)**

- Expression of the elements of Drama
- Reading and writing of scripts
- Performing and appreciation of drama
- Acting and choreography, stage setting and discipline, costume design
- Effective communication

**Teaching /Learning Methods**:

Role-playing and improvisation, Script analysis and performance, Drama-based storytelling

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Weekly assessment – 40%<br>Drama (Group) – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Neelands, J. (2009). Drama Worlds: A Framework for Process Drama. Heinemann Drama.
- Hodge, A., & Mehmet, N. (2013). Teaching Drama: A Mind of Many Wonders. Oxford University Press.
- Bolton, G., & Heathcote, D. (2005). Drama for Learning: Dorothy Heathcote's Mantle of the Expert Approach to Education. Heinemann Drama.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | | | | | ☑ | ☑ | ☑ |
| LO-2 | ☑ | | ☑ | ☑ | | | |
| LO-3 | ☑ | ☑ | | | | | |
| LO-4 | | | | | | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Two - Semester Four

## Course Modules

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## Analysis Stage

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2401 | **Module Name:** | Planning Law, Governance & Practice | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | | | 105 |

**Learning Objectives**

1. To recognize the statutory responsibilities, powers and functions of the Planning agencies.
2. To understand statutory procedure in the preparation of plans at different levels.
3. To interpret the application of the concept of governance at different levels and the structures of governments.
4. To judge good urban governance practices and their significance for the functioning of a city and a state

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: review different planning related laws in Sri Lanka

LO 2: demonstrate a thorough understanding on the statutory institutions, planning procedures, and the enforcement of planning & building regulations, at different levels of planning

LO 3: demonstrate an understand on the citizens‟ rights, developers‟ rights and the obligations of the planner and the process of planning clearance for selected types of developments

**Course Content: (Main topics, Sub topics)**

- Evolution of planning laws in Sri Lanka
- Planning legislations, duties, powers and functions of planning authorities
- Governance structure of Sri Lanka
- Participatory governance in planning: empirical evidence and challenges.
- E-governance, Good governance and its applicability
- Rational of planning and building regulations
- Procedures in Development permits and planning clearances
- Planning office procedure in practice.

**Teaching /Learning Methods**:

Discussions, Community consultations, Perception surveys, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam– 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Rajapaksha, U. (2018). Planning and Building Law in Sri Lanka: An Overview. International Journal of Engineering Research & Technology, 7(3), 79-85.
- Department of Town and Country Planning, Ministry of Urban Development, Water Supply, and Housing Facilities. (2017). Planning Law and Regulations in Sri Lanka


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2402 | **Module Name:** | Urban Housing Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 180 | | 70 |

**Learning Objectives**

1. To introduces recurrent and emerging debates about housing.
2. To compare housing policies and practices at local and global scale.
3. To analysis the role of housing within a society and within an urban fabric.
4. To propose housing strategies.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: frame the housing problem by referring to literature and case studies

LO 2: analyse the housing complexities

LO 3: propose creative solutions to policy, finance and design in a demanding housing project

**Course Content: (Main topics, Sub topics)**

- Define the term "housing" and conceptualise "housing environment"
- Review precedent studies, housing policies and concepts
- Housing standards and finance
- Field surveys
- Data analysis and calculate housing deficit
- Formulating housing strategies
- Layout designs

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Practical studio, Field visits, Workshops, Community consultations, Perception surveys, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify)<br><br>100 |

**Recommended Reading:**


- Smith, S. J., Beazley, M. M., & Morrison, D. E. (Eds.). (2014). Housing and Home Unbound: Intersections in Economics, Environment and Politics in Australia. Routledge.
- Chatterjee, S., & Hart, T. (2018). The Right to Housing: Law, Concepts, Possibilities. Hart Publishing.
- van der Heijden, J. (2015). Affordable Housing and Urban Redevelopment in the United States: Learning from Failure and Success. Routledge.
- Elliott, B. A., & James, M. L. (2015). The Evolving Urban Form: Rio de Janeiro. Palgrave Macmillan


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2403 | **Module Name:** | Land Use Planning Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 180 | | 70 |

**Learning Objectives**

1. To learn methods of investigation of the use of land and spaces of a built environment for an in-depth understanding of the current issues
2. To have training in strategic interventions to resolve an identified problem situation in a given built environment.
3. To be inspired by innovative spatial planning and design strategies to realize the identified strategic actions to development built environments in desired directions.
4. To develop rationale thinking and effective communication of the strategies formulated.
5. To engage in teamwork and consider alternative responses.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: analyze and comprehend the cause and effect relationships between the functions of a human settlement and the use of land and space in its built environment

LO 2: frame problems relating to the use of space in a given situation, analyze them in an effective manner and envision strategic interventions

LO 3: formulate innovative planning and design responses organized into a comprehensive proposal and rationalize them effectively

LO 4: communicate the proposals through alternative media different modes of communication using different planning techniques and methods of simulation methods

**Course Content: (Main topics, Sub topics)**

● Review of planning and design literature

● Studio project on a "strategic design intervention" in a built environment affected by current issues related to the utility of space.

● The process of Problem Framing, Visioning, Strategy formulation and Rationalization.

● Methods of analysis and simulation

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Practical studio, Field visits, Workshops, Community consultations, Perception surveys, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Banerjee, T., & Loukaitou-Sideris, A. (Eds.). (2011). Companion to Urban Design. Routledge.
- Cullen, G. (1961). The Concise Townscape. Architectural Press.
- Schön, D. A. (1983). The Reflective Practitioner: How Professionals Think in Action. Basic Books.
- Batty, M., & Marshall, S. (2009). Cities and Complexity: Understanding Cities with Cellular Automata, Agent-Based Models, and Fractals. The MIT Press


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | ☑ | | ☑ | | |
| LO-4 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2404 | **Module Name:** | Ecology, Landscape Planning and Design Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | Independent Learning | |
| | 30 | | 180 | 70 | |

**Learning Objectives**

1. To learn on the methods of investigation of the use of land and spaces of a built environment for an in-depth understanding of the current issues related to leisure and recreation
2. To have training in strategic interventions to resolve an identified problem situation in a given environment.
3. To be inspired by innovative spatial planning and design strategies to realize the identified strategic actions to development-built environments in desired directions.
4. To develop rational thinking and effective communication of the strategies formulated.
5. To engage in teamwork and consider alternative responses.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: analyze and comprehend the cause and effect relationships between the functions and use in its leisure and recreation area

LO 2: frame problems relating to the use of space in a given situation, analyze them in an effective manner and envision strategic interventions

LO 3: formulate innovative planning and design responses organized into a comprehensive proposal and rationalize them

LO 4: effectively communicate the proposals through alternative media different modes of communication using different planning techniques and methods of simulation methods

**Course Content: (Main topics, Sub topics)**

● Review of literature on theories and concepts of landscape planning, landscape ecology and conservation
● Concepts and exemplary case studies related to ecology and landscape planning
● Studio project on a „strategic design intervention" in a built and natural environment affected by current issues related to the utility of space.
● The process of Problem Framing, Visioning, Strategy formulation and Rationalization.
● Methods of analysis and simulation

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Steiner, F. (2019). Human Ecology: Following Nature's Lead. Island Press.
- Fabos, J. G. (2015). Introduction to Landscape Design. Routledge.
- McHarg, I. L. (1995). Design with Nature. John Wiley & Sons.
- Forman, R. T. (2014). Urban Ecology: Science of Cities. Cambridge University Press.
- Ahern, J. (2013). Urban Landscape Sustainability and Resilience: The Promise and Challenges of Integrating Ecology with Urban Planning and Design. Landscape Ecology, 28(6), 1203-1212.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | ☑ | | ☑ | | |
| LO-4 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL2405 | Module Name: | Development Economics | | |
| Credit Value: | 2 | Core/Elective | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | Practical | Independent Learning | | |
| | 30 | | 70 | | |

**Learning Objectives**

1. To learn the main economic issues faced by developing countries.
2. To identify appropriate theoretical approaches and tools to analyse and understand Macroeconomic issues in developing countries.
3. To acquire knowledge on key economic sectorial policy issues in developing countries.
4. To learn economic development models and apply them in regional scale spatial development strategy formulation.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a good level of understanding of key economic issues in developing countries

LO 2: analyze empirical evidence from developing countries and relate them to their economic policies

LO 3: develop the ability to discuss policy issues at national and regional scales

LO 4: have a greater understanding of the use of economic analysis in addressing important issues in developing countries .

LO 5: analyze and comprehend the cause and effect relationships of a given economic issue relating to its manifestations in space

LO 6: formulate innovative planning and design responses organized into a comprehensive proposal and justify them

**Course Content: (Main topics, Sub topics)**

- Introduction to growth and development
- Major growth theories
- Calculations of development with indicators (quantitative and qualitative)
- Measurement of inequality
- Significance of structural transformation
- Economic policies and issues in Sri Lanka
- Poverty, globalization and security issues in the developing world
- International trade and the importance of foreign aid

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment-40% | Final Assessment-60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br>Written Exam–60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Todaro, M. P., & Smith, S. C. (2014). Economic Development (12th ed.). Pearson.
- Acemoglu, D., & Robinson, J. A. (2012). Why Nations Fail: The Origins of Power, Prosperity, and Poverty. Crown Publishers.
- Atkinson, A. B., & Bourguignon, F. (2015). Handbook of Income Distribution (2nd ed.). Elsevier.
- Ray, D. (1998). Development Economics. Princeton University Press


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | | | | | | |
| LO-2 | | ☑ | | | | | |
| LO-3 | | | ☑ | ☑ | | | |
| LO-4 | | ☑ | | ☑ | | | |
| LO-5 | | | | ☑ | ☑ | | |
| LO-6 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level 2 | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2406 | **Module Name:** | Environmental Modelling and Assessment | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To acquire knowledge on the environmental assessment process.
2. To model environmental impacts of projects, plans and programs

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: anticipate and predict the impacts of a proposed project or a plan as a part of an environmental assessment

**Course Content: (Main topics, Sub topics)**

- Environment Assessment Process
- Air quality modeling
- Noise and vibration modeling
- Soil modeling
- Water quality modeling
- Biodiversity modeling
- Land cover change modeling
- Environmental indexing

**Teaching /Learning Methods**:

Discussions, Presentation, Guided Reading, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment – 50%, Group Presentation – 50% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Canter, L. W. (2015). Environmental Impact Assessment (3rd ed.). Routledge.
- McKee, L., & Wolf, J. (2009). Modeling and Prediction of Environmental Noise. CRC Press.
- Yu, X., & Sui, D. (Eds.). (2017). Modeling Urbanization Processes: An Introduction to Urban Remote Sensing and Urban Geographic Information Systems. Springer.
- Wu, J., & David, J. L. (Eds.). (2002). Landscape Ecology in Theory and Practice: Pattern and Process. Springer.
- Hui, C., Li, X., & Gong, P. (2019). Land Use and Land Cover Change and Environmental Impact Analysis. Springer.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2407 | **Module Name:** | Social Justice in Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand the concepts and principles of social justice and social equity in urban planning.
2. To illustrate "social inclusion" as against "social exclusion"
3. To demonstrate how human settlements are structured under mainstream economic forces and dominant social structures such as gender, race, class, and religious conviction.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Recognize the diversity and heterogeneity of society in their professional practice.

LO 2: Understand how human settlements have been shaped by socio-economic conditions.

LO 3: Formulate strategies to address the issues of marginalized communities such as people who live in slums, informal vendors in the streets, indigenous communities, and urban migrants.

LO 4: Form planning and building regulations to ensure equal opportunities and access for all including the poor, persons with disabilities and different preferences (Objective 1 & 2)

**Course Content: (Main topics, Sub topics)**

- Social justice in urban and regional planning
- Advocacy in planning and inclusive cities
- Planning for diversity in multicultural societies
- Gender negotiation in space
- Age and ageing implications in planning
- Micro-planning techniques for the socially disadvantaged in cities

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Marcuse, P. (2009). Cities of Illusion: Justice and the Urban Agenda. Policy Press.
- Agyeman, J., & McLaren, D. (Eds.). (2015). Sharing Cities: A Case for Truly Smart and Sustainable Cities. MIT Press.
- Madanipour, A. (2014). Planning across Borders: Reflective Practices in Border Making. Routledge.
- Watson, S., & Gibson, K. (Eds.). (2017). Postcolonial Urbanism: Southeast Asian Cities and Global Processes. Routledge.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | ☑ | | ☑ | | | |
| LO-3 | | | ☑ | ☑ | | ☑ | |
| LO-4 | | | | | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2408 | **Module Name:** | Remote Sensing for Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 40 |

**Learning Objectives**

1. To explain the principles of remote sensing
2. To investigate the roles and limitations of remote sensing platforms in different contexts
3. To employ manual and automated techniques to extract information from remotely sensed data

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: recognize and explain the fundamental principles of remote sensing
LO 2: identify the specific applications where the remote sensing tools can be employed
LO 3: acquire skills in processing, interpreting and analyzing remotely sensed data

**Course Content: (Main topics, Sub topics)**

- Introduction to remote sensing
- Digital image interpretation and accuracy testing
- Introduction to multispectral, hyper spectral, microwave and LIDAR remote sensing
- Thermal remote sensing and its applications
- Statistics for remote sensing data analysis
- Digital photogrammetry
- Remote sensing for disaster management & vegetation analysis (using LIDAR and RADAR image analysis techniques)
- Urban Sensing - Remote sensing for urban landscape analysis (Drone & LIDAR techniques)

**Teaching /Learning Methods**:

Discussions, Hands-on sessions, Presentation, Self-studies

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Quizzes - 40%, Practical Exercises - 20%, Assignment - 40% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Wolf, P. R., Dewitt, B. A., & Wilkinson, B. E. (2014). Elements of Photogrammetry with Applications in GIS. McGraw-Hill Education.
- Woodhouse, I. H. (2017). Introduction to microwave remote sensing. CRC press.
- Egan, W. G. (Ed.). (2003). Optical remote sensing: science and technology (Vol. 84). CRC Press.
- Chandra, A. M., & Ghosh, S. K. (2006). Remote sensing and geographical information system. Alpha Science Int'l Ltd.
- Lillesand, T., Kiefer, R. W., & Chipman, J. (2015). Remote sensing and image interpretation. John Wiley & Sons.
- Jensen, J. R. (2014). Remote sensing of the environment: An earth resource perspective 2/e. Pearson Education India.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2409 | **Module Name:** | Advanced Quantitative and Qualitative Research Methods | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To learn regression techniques, inferential tests and multivariate analysis techniques to address planning, policy or other research questions
2. To apply quantitative and qualitative methods for the analysis of a given context for planning, policy, and research.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Recognize quantitative and qualitative techniques in decision-making processes by investigating relationships between variables, inferential tests and applying a range of core qualitative approaches

LO 2: Practice relevant bivariate and multivariate quantitative and qualitative methods to address planning, policy, or other research questions

LO 3: Appraise appropriate quantitative and qualitative data analysis software and present the outcomes based on the APA style in writing reports

**Course Content: (Main topics, Sub topics)**

● Time Series Analysis: Variation in time series, trend analysis, cyclical variation, seasonal variation, irregular variation, forecasting

● Correlation and Regression Analysis: correlation co-efficient, co-efficient of rank correlation, partial correlation and multiple correlation, simple Linear and nonlinear Regression, Multiple Regression

● Statistical Inference: Types of estimation; point, interval, statistical hypothesis, simple and composite tests of significance, null & alternative hypothesis, types of errors, level of significance, critical region; two tailed and one tailed test, large and small sample tests for mean and proportion

● Chi-Square Test and Analysis of Variance (ANOVA)

● Multivariate Analysis Techniques: Cluster Analysis, Factor Analysis.

● Methods of Qualitative data recording (Phenomenological, grounded theory)

● Methods of Qualitative data analysis and data interpretation: Content analysis, thematic analysis, discourse analysis, framework analysis, grounded theory analysis.

● Introduction to computer based quantitative and qualitative data analysis software (SPSS, NVIVO etc.)

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Coursework – 100% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Montgomery, D. C., Jennings, C. L., & Kulahci, M. (2015). Introduction to Time Series Analysis and Forecasting. John Wiley & Sons.
- Howell, D. C. (2012). Statistical Methods for Psychology (8th ed.). Cengage Learning.
- Field, A., Miles, J., & Field, Z. (2012). Discovering Statistics Using R. Sage.
- Braun, V., & Clarke, V. (2013). Successful Qualitative Research: A Practical Guide for Beginners. Sage.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | ☑ | | ☑ |
| LO-3 | | | | ☑ | ☑ | | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2410 | **Module Name:** | Introduction to Infrastructure Planning and Design | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To acquire knowledge on the theories and concepts associated with the planning and designing of infrastructure systems
2. To analyze the level of service of infrastructure in a given context.
3. To examine appropriate infrastructure solutions for a given context.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: diagnose infrastructure-related problems at a given spatial scale

LO 2: compare and contrast appropriate management solutions for physical and social infrastructure

**Course Content: (Main topics, Sub topics)**

- Introduction to Infrastructure Planning
- Infrastructure Assessment Methods
- Norms and Standards for Infrastructure
- Introduction to Infrastructure Systems (Drinking Water, Wastewater, Stormwater, Solid Waste)
- Sustainable Infrastructure Planning and Management Solutions

**Teaching /Learning Methods**:

Interactive Lectures, Discussions, Case Studies, Presentation, Guided Reading, Self study, Evaluation, Problem-Based Learning Activities, Collaborative Learning Activities

**Assessment Strategy**:

| Continuous Assessment 50% | Final Assessment 50% | | |
|---|---|---|---|
| Coursework – 50% | Theory (%)<br><br>Written Exam – 50% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Infastructure Planning Handbook: Planning, Engineering, and Economics by Alvin S. Goodman, Makarand Hastak (2006)
- Baic Environmental Technologies by J.A. Nathanson (2006)
- Water Supply Engineering by Puli Venkateshwara Rao (2005)
- Environmental Engineering: Environmental Health and Safety for Municipal Infrastructure, Land use Planning by Nelson L. Nemerow, Franklin J. Agardy, Joseph A. Salvato (2009)
- Introduction to Envionmental Engineering, 2nd ed. By P.A. Vesilind & S.M. Morgan (2004)
- Handbook of Water & Waste Water Treatment Technologies by N.P. Cheremisinoff (2002)
- Solving Urban Infrastructure Problems Using Smart City Technologies: Handbook on Planning, Design, Development, and Regulation by Vacca, John. (2020)


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level II | Semester 4 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL2411 | **Module Name:** | Social Work | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | NGPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To develop social consciousness and ability of team working
2. To demonstrate social responsibility and hands-on practice of problem solving in a given community

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: identify the community needs of socially disadvantaged groups

LO 2: understand the social responsibility and contribute towards addressing the issues of a given area or a community

**Course Content: (Main topics, Sub topics)**

- Introduction to variety of social Work
- Principles of social communication
- Techniques of understanding the attributes of a target community
- Logic of creativity in society
- Participatory patterns of social interaction

**Teaching /Learning Methods**:

Experiential Learning, Group Discussions and Role-Plays, Creative Projects and Presentations

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Group project – 70%, Report – 30% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Healy, K. (2014). Social Work Theories in Context: Creating Frameworks for Practice. Palgrave Macmillan.
- Trevithick, P. (2012). Social Work Skills: A Practice Handbook (3rd ed.). Open University Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | ☑ | | |
| LO-2 | | ☑ | ☑ | ☑ | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Three - Semester Five

## Course Modules

## Synthesis Stage

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3501 | **Module Name:** | Regional Planning | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand concepts, theories, analysis techniques and statutory aspects in Regional Planning

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Apply regional analysis techniques to elaborate the form and the functionality of a given regional context

LO 2: To carry out boundary delineation in a regional context using appropriate methodology

LO 3: Formulate a strategic framework to address regional issues

**Course Content: (Main topics, Sub topics)**

- A region in Regional Planning
- Spatial Planning in Regional context
- Theories, Concepts of Spatial organization / Structure of Region
- Regional Analysis Techniques
- Regionalization of Cities Delineation of a region (Criteria, Techniques…)
- Alternative Regional Planning approaches
- Regional Planning Process & Statutory Framework
- Regional growth and Sustainable regional development
- Spatial Policy and strategies for regional growth
- Issues in Regional Development

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Student presentations; Guided-Readings; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment 40%) | Theory (%)<br><br>End-Semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Glasson, J., & Marshall, T. (2007). Regional planning (The natural and built environment series). London ; New York: Routledge.;
- John Harrison, Daniel Galland & Mark Tewdwr-Jones (2021) Regional planning is dead: long live planning regional futures, Regional Studies, 55:1, 6-18, DOI: 10.1080/00343404.2020.1750580
- Jeremy Alden (2006) Regional Planning: An Idea Whose Time Has Come? International Planning Studies, 11:3-4, 209-223, DOI: 10.1080/13563470701203801


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3502 | **Module Name:** | Coastal Regional Planning and Design Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 180 | | 90 |

**Learning Objectives**

1. To conceptualize a "region" and its application for a coastal area development
2. To frame problem situations related to the issues prevalent in a coastal region
3. To analyze a coastal region and its context in the form of systems, networks, processes and patterns
4. To formulate spatial planning and design policies for a development of a coastal regional in Sri Lanka

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate an understanding of the theories and concepts related to regional planning

LO 2: record, analyze and interpret the spatial organization of a coastal region

LO 3: Address a problem situation in a regional context and formulate strategic planning and design solutions

**Course Content: (Main topics, Sub topics)**

● Review of Regional Planning and Design Literature

● Coastal economies and resources, coastal ecosystems and conservation, coastal communities, coastal tourism, coastal infrastructure

● Methods and techniques of spatial analysis and simulation at the regional level

● Studio exercises in recording, analysis and strategic design interventions in a selected coastal regional setting

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Davoudi, S., & Strange, I. (Eds.). (2009). Conceptions of Space and Place in Strategic Spatial Planning. Routledge.
- Hanna, S. S., Folmer, H., & Young, C. E. (2013). Integrated Coastal Zone Management. John Wiley & Sons.
- Openshaw, S., & Abrahart, R. J. (Eds.). (2000). GeoComputation: A Practical Primer. CRC Press.
- Carmona, M., Tiesdell, S., Heath, T., & Oc, T. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design (2nd ed.). Routledge.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | | | ☑ | ☑ | |
| LO-3 | | | ☑ | ☑ | | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3503 | **Module Name:** | Eco-sensitive Regional Planning and Design Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 180 | | 90 |

**Learning Objectives**

1. To conceptualize the concept of a "region" and the implications of developing eco-sensitive regions.
2. To diagnose complex problem situations at a given eco-sensitive region.
3. To analyze a region and its context in the forms of systems, networks, processes and patterns.
4. To formulate a desired spatial planning strategy and policies at the regional level.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Demonstrate an understanding of eco-sensitive planning theories and concepts
LO 2: Record, analyze and interpret the spatial organization of a region
LO 3: Address a problem situation at a regional context and formulate strategic design solutions

**Course Content: (Main topics, Sub topics)**

- Review of Regional Framework Planning and Design Literature
- Eco-sensitive planning concepts and exemplary case studies
- Methods and techniques of spatial analysis and simulation
- Studio exercises in recording, analysis and strategic design interventions in a selected regional setting

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Campbell, S., & Fainstein, S. S. (Eds.). (2013). Readings in Planning Theory (4th ed.). John Wiley & Sons.
- Beatley, T., & Manning, K. (Eds.). (2015). The Ecology of Place: Planning for Environment, Economy, and Community. Island Press.
- Openshaw, S., & Abrahart, R. J. (Eds.). (2000). GeoComputation: A Practical Primer. CRC Press.
- Carmona, M., Tiesdell, S., Heath, T., & Oc, T. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design (2nd ed.). Routledge.
- Healey, P. (2007). Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times. Routledge.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | | ☑ | ☑ | |
| LO-3 | | | ☑ | ☑ | | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3504 | **Module Name:** | Agro Regional Planning and Design Studio* | | |
| **Credit Value:** | 6 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 180 | | 90 |

**Learning Objectives**

1. To conceptualize the concept of a "region" and the implications of developing agro regions.
2. To diagnose complex problem situations in a given agro region.
3. To analyze a region and its context in the forms of systems, networks, processes and patterns.
4. To formulate a desired spatial planning strategy and policies at the regional level.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Demonstrate an understanding of region planning theories and concepts

LO 2: Record, analyze and interpret the spatial organization of a region

LO 3: Address a problem situation at a regional context and formulate strategic design solutions

**Course Content: (Main topics, Sub topics)**

- Review of Regional Framework Planning and Design Literature
- Concepts and exemplary case studies related to agro region planning
- Methods and techniques of spatial analysis and simulation
- Studio exercises in recording, analysis and strategic design interventions in a selected regional setting

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Continuous assessment of performance-60%, Interim presentation-20%, Final presentation and project report-20% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Friedmann, J. (2010). Planning in the Public Domain: From Knowledge to Action. Princeton University Press.
- Marsden, T., & Sonnino, R. (Eds.). (2012). The Handbook of Rural Studies. Routledge.
- Openshaw, S., & Abrahart, R. J. (Eds.). (2000). GeoComputation: A Practical Primer. CRC Press.
- Carmona, M., Tiesdell, S., Heath, T., & Oc, T. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design (2nd ed.). Routledge.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | ☑ | ☑ | ☑ |
| LO-3 | ☑ | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3505 | **Module Name:** | Urban Economics | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To incorporate economics in analyzing the systems and functions of an urban economy
2. To examine the economic dimension of urban issues in the contemporary city

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Identify the drivers and dynamics of an urban economy in the context of urbanization

LO 2: analyze the problems and prospects prevailing in urban economies

LO 3: propose appropriate planning interventions to enhance and manage the economy of a city

**Course Content: (Main topics, Sub topics)**

- Market forces and city: why cities exist and where do cities develop?
- Theories and trends of urbanization; Urbanization and Urban Growth in Sri Lanka
- Urban economic growth: role of trade, productivity, capital, labor market
- Growth of contemporary city: Suburbanization and Sprawling
- Managing urban growth: planning interventions and its implications
- Urban informality and the city economy
- Urban Transportation economics

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Student presentations; Guided-Readings; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Guided Readings and Case-based learning exercises (40%) | Theory (%)<br><br>End-semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- O'Sullivan (2012). Urban Economics, 8th Edition. McGraw-Hill International Edition

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3506 | **Module Name:** | Eco-Sensitive Planning Concepts | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. 1. To acquire knowledge and skills on eco-sensitive spatial planning applications and practices.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: explain the ecological discourses and innovative practices

LO 2: design sustainable spatial planning solutions

**Course Content: (Main topics, Sub topics)**

- Environmental sustainability discourses in spatial planning
- Eco-sensitive planning and design approaches for cities and regions
- Exemplary case studies of eco-sensitive planning practices

**Teaching /Learning Methods**:

Discussions, Practical studio, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment – 40%<br>Group project presentation and report – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- World Commission on Environment and Development. Our Common Future. Oxford, UK: Oxford University Press, 1987, pp. ix-v, 1-23, 43-65. ISBN: 019282080X. Redclift, Michael. "The Multiple Dimensions of Sustainable Regenerative Urban Design and Ecosystem Biomimicry
- By Maibritt Pedersen Zari
- Copyright Year 2018 Development." Geography76 (1991): 36-42.
- Meadows, Dennis, Donella Meadows, and Jorgen Randers. Beyond the Limits: Confronting Global Collapse, Envisioning a Sustainable Future. White River Junction, VT: Chelsea Green Publishing Company, 1993, preface, chapters 1 and 6. ISBN: 0930031628.
- Holdren, John P., Gretchen C. Daily, and Paul R. Ehrlich. "The Meaning of Sustainability: Bio-Geophysical Aspects." Excerpted from Defining and Measuring Sustainability. Edited by Mohan Munasinghe and Walter Shearer. Washington, DC: World Bank, 1995. ISBN: 0821331345.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | ☑ | | |
| LO-2 | | | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3507 | **Module Name:** | Political Economy of Space | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand the basic concepts and principles of political economy and its relevance to spatial planning.
2. To comprehend space, its dimensions and conflicts from a political economy perspective.
3. To demonstrate how different political economic systems and structures shape cities, their structures and functions.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Appreciate the significance of different political ideologies and their corresponding economic systems

LO 2: Analyse how communities are located in the city, influenced by different political economic structures

LO 3: Understand socio-economic conflicts in space from a political economy perspective and develop appropriate conflict management strategies

LO 4: Understand the planner‟s role as a „mediator‟ between the people and the market in a neoliberal governing structure

**Course Content: (Main topics, Sub topics)**

- Political economy, theories of the state and economic crisis
- Evolutionary process of political economy in urban planning
- Dimensions of space and place making in space
- Social conflicts in space and conflict management strategies under different political economic systems.
- Marxist and capitalist principles related to development planning and their implications on urban space
- Economic surplus, state intervention and social welfare
- Structure of cities under different political economic systems

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Details: quizzes %, mid-term %, other % (specify) Assignment – 40% | Theory (%) Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Harvey, D. (2014). Seventeen Contradictions and the End of Capitalism. Oxford University Press.
- LeGates, R. T., & Stout, F. (Eds.). (2015). The City Reader (6th ed.). Routledge.
- Smith, N. (2012). Uneven Development: Nature, Capital, and the Production of Space (3rd ed.). University of Georgia Press.
- Lefebvre, H. (1991). The Production of Space. Blackwell Publishing.
- Giddens, A., & Pierson, C. (Eds.). (2015). Conversations with Anthony Giddens: Making Sense of Modernity. Stanford University Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | ☑ | ☑ | | | ☑ | | |
| LO-4 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3508 | **Module Name:** | Advanced GIS and Remote Sensing for Planning | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To apply Advanced GIS and Remote Sensing tools to evaluate real-world issues
2. To recognize the principles of Spatial Data Infrastructure
3. To develop programs and scripts to automate geospatial tasks

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: develop advanced geospatial models to evaluate real-world issues
LO 2: identify specific applications where Spatial Data Infrastructure can be employed
LO 3: design and implement independent Web GIS application

**Course Content: (Main topics, Sub topics)**

- Advanced 3D & 4D GIS data analysis
- Geocoding and its applications
- Big data and cloud data analysis
- Advanced image analysis and Computer vision
- Web GIS and its applications
- Open data standards and spatial data infrastructure
- Analysis of real-world issues with remote sensing data (floods, landslides, soil erosion, sedimentation, urban heat, deforestation, etc.)

**Teaching /Learning Methods**:

Discussions, Hands-on sessions, Presentation, Self-studies

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment - 40%, Group Project - 60% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Lacomme, P., Marchais, J. C., Hardange, J. P., & Normant, E. (2001). Air and spaceborne radar systems: An introduction (Vol. 108). William Andrew.
- Lusch, D. P. (1999). Introduction to microwave remote sensing. Center for Remote Sensing and Geographic Information Science Michigan State University.
- Sharkov, E. A. (2003). Passive microwave remote sensing of the Earth: physical foundations. Springer Science & Business Media.
- Soergel, U. (2010). Review of radar remote sensing on urban areas (pp. 1-47). Springer Netherlands.
- Agrawal, D., Das, S., & El Abbadi, A. (2011, March). Big data and cloud computing: current state and future opportunities. In Proceedings of the 14th international conference on extending database technology (pp. 530-533).
- Kitchin, R. (2014). The data revolution: Big data, open data, data infrastructures and their consequences. Sage.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | ☑ | ☑ | | |
| LO-2 | | ☑ | ☑ | ☑ | | | |
| LO-3 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3509 | **Module Name:** | Spatial Modeling and Simulation | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 15 | | 45 | | 40 |

**Learning Objectives**

1. To acquire a comprehensive knowledge on the theories, concepts and precepts of spatial modeling and simulation.
2. To acquire skills to apply appropriate modeling and simulation tools in decision-making.
3. To develop an ability to analyze a given problem situation with the support of modeling and simulation

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: develop a spatial model/framework to simulate a given spatial process

LO 2: interpret a given problem situation with the support of modeling and simulation

**Course Content: (Main topics, Sub topics)**

- Introduction to spatial modeling and simulation methodologies
- Principles of model-building
- Rank Size Rule, Power Law, Tobler's Law
- Network Centrality
- Fractal Geometry
- Cellular Automata
- Gravity and Spatial Interaction Models
- Land Use and Accessibility Interaction Models and Land Use Change Modeling
- Agent-Based Modeling
- Modeling Urban Density, Urban Sprawl, Urban Compactness and Urban Morphology

**Teaching /Learning Methods**:

Interactive Lectures, Discussion-Based Learning, Computer-based Hands-on Sessions, Problem-Based Learning, Tutorials

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Practicals & Courseworks - 50%, Assignments - 50% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Winkler, G. (2003). Image analysis, random fields and Markov chain Monte Carlo methods: a mathematical introduction (Vol. 27). Springer Science & Business Media.
- Boshnakov, G. N. (2016). Introduction to Time Series Analysis and Forecasting, Wiley Series in Probability and Statistics, by Douglas C. Montgomery, Cheryl L. Jennings and Murat Kulahci (eds). Published by John Wiley and Sons, Hoboken, NJ, USA, 2015. Total number of pages: 672 Hardcover: ISBN: 978-1-118-74511-3, ebook: ISBN: 978-1-118-74515-1, etext: ISBN: 978-1-118-74495-6.
- Bertuglia, C. S., Clarke, G. P., & Wilson, A. G. (2012). Modelling the city: performance, policy and planning. Routledge.
- Railsback, S. F., & Grimm, V. (2019). Agent-based and individual-based modeling: a practical introduction. Princeton university press.
- Ojo, A. (2020). GIS and machine learning for small area classifications in developing countries. CRC Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3510 | **Module Name:** | Regional Infrastructure Planning and Designing | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | | | 105 |

**Learning Objectives**

1. To synthesis the role of infrastructure in the regional growth and development.
2. To acquire skills to plan and design infrastructure at regional scale.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: explain the role of regional infrastructure systems in regional growth and development

LO 2: plan and design regional infrastructure systems as the catalyst of the sustainable development of a region

**Course Content: (Main topics, Sub topics)**

- Introduction to regional infrastructure
- Plan and design of integrated infrastructure systems
- Plan and design road & railway infrastructure networks
- Plan and design the logistics corridors
- Plan and design the seaport and airport
- Plan and design regional infrastructure projects in energy, communication and irrigation sectors.

**Teaching /Learning Methods**:

Interactive Lectures, Discussions, Case Studies, Presentation, Guided Reading, Self-study, Evaluation, Problem-Based Learning Activities, Collaborative Learning Activities

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Coursework - 50%, Assignments - 50% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Meadows, Dennis, Donella Meadows, and Jorgen Randers. Beyond the Limits: Confronting Global Collapse, Envisioning a Sustainable Future. White River Junction, VT: Chelsea Green Publishing Company, 1993, preface, chapters 1 and 6. ISBN: 0930031628.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 5 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL3511 | Module Name: | Planning Ethics | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To understand professional ethics in planning
2. To understand general work ethics, interpersonal communication skills and ethics of responsibility

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: Aware of proper ethical practice in planning

LO 2: Develop proper work ethics and interpersonal communication skills

**Course Content: (Main topics, Sub topics)**

- Ethical issues in urban, regional and environmental planning
- Codes of behavior in professional planning practice
- Philosophical perspectives on ethical issues
- Planners as experts in planning appeals

**Teaching /Learning Methods**:

Discussions, Field visits,Community consultations, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment – 40%, Group presentation and report – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Beauchamp, T. L., & Bowie, N. E. (2013). Ethical Theory and Business (9th ed.). Pearson.
- Borchard, L. (Ed.). (2017). Ethics and the Built Environment. Routledge.
- Forester, J. (1999). The Deliberative Practitioner: Encouraging Participatory Planning Processes. MIT Press.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Three - Semester Six

## Course Modules

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## Synthesis Stage

| | | | | | |
|---|---|---|---|---|---|
| **Level III** | **Semester 6** | | | | |
| **Module Code:** | PL3601 | **Module Name:** | Cities and Urban Forms | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To develop a thorough understanding on contemporary issues related to Cities, their Environments, their Users and Planning
2. To study different urban forms and their compositions at different scales
3. To analyze urban spaces, their context and issues related to their form

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: to actively engage in contemporary planning discourse on cities and regions

LO 2: to demonstrate a sound understanding on contemporary city environments and their issues from multiple perspectives

LO 3: interpret urban areas and their constituents through theories of urban form

**Course Content: (Main topics, Sub topics)**

- Theories of Urban Form and Spatial Organization
- Urban Morphology and Complexity
- Contemporary Urban Issues and their implications on Planning
- Methods and Techniques of simulation of urban space
- Theoretical Interpretation of a Micro Scale Urban Situation

**Teaching /Learning Methods**:

Discussions, Practical studio, Field visits, Brain storming and group works, Presentation, Guided Reading, Self-study

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Holdren, John P., Gretchen C. Daily, and Paul R. Ehrlich. "The Meaning of Sustainability: Bio-Geophysical Aspects." Excerpted from Defining and Measuring Sustainability. Edited by Mohan Munasinghe and Walter Shearer. Washington, DC: World Bank, 1995. ISBN: 0821331345. Marshall, S. (2009). Streets and Patterns: The Structure of Urban Geometry. Routledge.
- Batty, M. (2013). The New Science of Cities. MIT Press.
- Sassen, S. (2018). Expulsions: Brutality and Complexity in the Global Economy. Harvard University Press.
- Hillier, B. (1996). Space is the Machine: A Configurational Theory of Architecture. Cambridge University Press


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | ☑ | ☑ | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | | |
|---|---|---|---|---|---|---|
| **Module Code:** | PL3602 | **Module Name:** | Coastal City Planning and Design Studio* | | | |
| **Credit Value:** | 7 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA | |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning | |
| | 30 | | 225 | | 95 | |

**Learning Objectives**

1. To study and discuss contemporary issues in coastal areas as reflected in urban planning and urban design literature.
2. To have a training in strategic design approach towards addressing issues in a coastal urban area.
3. To illustrate the urban planning and design process and its application within the statutory framework.
4. To formulate strategic action projects for the development of a coastal urban area.
5. To develop versatility in the application of methods and techniques of urban spatial analysis and synthesis

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a wider awareness in contemporary urban design discourse related to coastal urbanism.

LO 2: approach a given problem situation in a coastal urban area through a design orientation.

LO 3: acquire a comprehensive understanding on statutory framework and institutional setting for the preparation of a plan for a coastal urban area

LO 4: demonstrate skills in analysis and synthesizing space at the urban scale

**Course Content: (Main topics, Sub topics)**

- Discussions on Urban Design theories & concepts
- Coastal development Policies and statutes
- Coastal urbanism
- Exemplary case studies on coastal urban design and development
- Studio exercises of conceptualizing, analysis and strategic design interventions in a selected local setting.

**Teaching /Learning Methods**:

Project-Based Learning Activities, Collaborative Learning Activities, Problem-Based Learning Activities, Interactive Lectures, Discussions, Guided Reading, Self-study, Field Visits, Individual Supervision, Formative Assessments

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assessment of Individual Contribution to the Group - 40%, Viva voce examination – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design (2nd ed.). Routledge.
- Williams, A. T., & Armitage, R. P. (2016). The Routledge Handbook of Ocean Resources and Management. Routledge.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | ☑ | | | ☑ | ☑ | |
| LO-4 | | | | | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3603 | **Module Name:** | Heritage Area Planning and Design Studio* | | |
| **Credit Value:** | 7 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 225 | | 95 |

**Learning Objectives**

1. To develop a wider awareness on urban planning and design through the comprehension of theories and concepts relating to heritage, conservation and preservation.
2. To be trained in alternative planning and design approaches towards addressing issues in an urban area with significant heritage values.
3. To be able to illustrate the planning and design process and its application within the statutory framework, with specific focus on heritage of an urban area.
4. To develop skills in formulating strategies and action projects for the development of an urban area with heritage values.
5. To be trained in using methods and techniques of urban spatial analysis and synthesis

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a wider awareness on contemporary urban planning and design discourse

LO 2: approach a given problem situation in an urban area with significant heritage values through a design orientation

LO 3: acquire a comprehensive understanding on the statutory framework and institutional setting of planning and design of urban heritage areas

LO 4: demonstrate skills in analysis and synthesizing space at the urban scale

**Course Content: (Main topics, Sub topics)**

- Discussions on Urban Design theories & concepts relating to heritage, conservation and preservation
- Urban heritage area development Policies and statutes
- Cultural Landscapes/ UNESCO World Heritage Sites
- Exemplary case studies on urban heritage area design and development
- Studio exercises of conceptualizing, analysis and strategic design interventions in a selected local setting.

**Teaching /Learning Methods**:

Project-Based Learning Activities, Collaborative Learning Activities, Problem-Based Learning Activities, Interactive Lectures, Discussions, Guided Reading, Self-study, Field Visits, Individual Supervision, Formative Assessments

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assessment of Individual Contribution to the Group - 40%, Viva voce examination – 60% | Theory (%) | Practical (%) 100 | Other (%)(specify) |

**Recommended Reading:**

- Solow, R. "Sustainability: An Economist's Perspective." In Economics of the Environment. Edited by R. Dorfman and N. Dorfman. 3rd ed. New York: W.W. Norton & Co., 1993, pp. 179-187. ISBN: 0393963101.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | ☑ | | | ☑ | ☑ | |
| LO-4 | | | | | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3604 | **Module Name:** | Transit City Planning and Design Studio* | | |
| **Credit Value:** | 7 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | 225 | | 95 |

**Learning Objectives**

1. To develop a wider awareness on transit-oriented development discourse through investigations of theories and concepts.
2. To be trained in design approach towards addressing issues in a transit hub/ transport corridor.
3. To illustrate the urban planning and design process and its application within the statutory framework.
4. To be trained in using methods and techniques of urban spatial analysis, simulation and synthesis.
5. To analyze, simulate and synthesize space at the urban scale.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: demonstrate a wider awareness in contemporary transit-oriented development discourse

LO 2: acquire a comprehensive understanding of the statutory framework and institutional setting of preparing plan for a transit city/ transport corridor

LO 3: approach a given problem situation in a transit city/ transport corridor through a design orientation

LO 4: formulate strategic action projects for the development of a transit city

**Course Content: (Main topics, Sub topics)**

- Discussions on urban design theories & concepts
- Policies, statutes and guidelines
- Exemplary case studies on transit city/ transport corridor design and development
- Studio exercises of conceptualizing, analysis, simulation and strategic design interventions in a selected urban setting

**Teaching /Learning Methods**:

Project-Based Learning Activities, Collaborative Learning Activities, Problem-Based Learning Activities, Interactive Lectures, Discussions, Guided Reading, Self-study, Field Visits, Individual Supervision, Formative Assessments

**Assessment Strategy**:

| Continuous Assessment<br>100% | Final Assessment<br>0% | | |
|---|---|---|---|
| Assessment of Individual Contribution to the Group - 40%, Viva voce examination – 60% | Theory (%) | Practical (%) | Other (%)(specify)<br><br>100 |

**Recommended Reading:**


- Lynch, K. (1984). Good City Form. MIT Press.
- Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2010). Public Places, Urban Spaces: The Dimensions of Urban Design. Routledge.
- Cervero, R., & Kockelman, K. (1997). Travel demand and the 3Ds: Density, diversity, and design. Transportation Research Part D: Transport and Environment, 2(3), 199-219.
- Knaap, G. J., & Talen, E. (Eds.). (2005). New Urbanism and Smart Growth: The Case of Portland, Oregon. Ashgate Publishing


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | ☑ | | | ☑ | ☑ | |
| LO-4 | | | | | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3605 | **Module Name:** | Real Estate Development | | |
| **Credit Value:** | 2 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To explain the economic principles underlying investment decision-making
2. To apply techniques and methodologies underpinning investment appraisal and valuation
3. To appraise alternative revenue enhancement methods for municipal assets with valuation and assessment tax methods

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: value property from the perspectives of owners and occupiers

LO 2: appraise real estate investment decisions

LO 3: select the best land for a development by comparing alternative lands & considering the potentials and merits of lands

**Course Content: (Main topics, Sub topics)**

- Role of real estate in national development
- Real estate development process
- Real property market and market analysis
- Time value of money
- Basic property valuation principles & methods of valuation
- Valuation and taxing in Sri Lanka: procedures, challenges and way forward
- Property laws

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Student presentations; Guided-Readings; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Case/Problem based Learning Exercise (40%) | Theory (%)<br><br>End-Semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Miles, M. E., Netherton, L. M., & Schmitz, A. (2015). Real estate development : principles and process (Fifth edition.). Urban Land Institute.;

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3606 | **Module Name:** | Planning for Climate Resilience** | | |
| **Credit Value:** | 1 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To acquire knowledge on the risk and resilience of human settlements.
2. To develop skills on disaster response plan-making at a given regional context.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, students will be able to:

LO 1: assess the risk and the resilience of a given disaster-prone area

LO 2: formulate a spatial strategy for making resilient human settlements

**Course Content: (Main topics, Sub topics)**

- Phenomena and processes of natural disasters
- Hazard, vulnerability, risk and resilience to disasters
- Climate change
- Frameworks of risk and resilience assessment of human settlements
- Anthropology of disasters
- Spatial planning approaches for resilience-building

**Teaching /Learning Methods**:

Discussions, Practical studio, Field visits, Brain storming and group works, Presentation, Guided Reading

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment – 40%, Group presentation and report – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. Global Environmental Change, 18(4), 598-606.
- IPCC (Intergovernmental Panel on Climate Change). (2014). Climate Change 2014: Impacts, Adaptation, and Vulnerability. Cambridge University Press.
- Wisner, B., Gaillard, J. C., & Kelman, I. (2012). Handbook of Hazards and Disaster Risk Reduction. Routledge.
- United Nations. (2015). Sendai Framework for Disaster Risk Reduction 2015-2030. United Nations Office for Disaster Risk Reduction.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | ☑ | | |
| LO-2 | | | | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL3607 | Module Name: | Participatory Planning | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 15 | | 45 | | 40 |

**Learning Objectives**

1. To explore relationships between participatory planning and democratic governance.
2. To develop a critical understanding of the strengths and weaknesses of different concepts of, and approaches to, public participation.
3. To demonstrate workshops and different techniques to enhance public participation.
4. To understand the regulatory background of public participation.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Reflect on "what is participation for?" and "what is „good" participation?"
LO 2: develop knowledge of different approaches and techniques for public participation
LO 3: design instruments for public participation and conduct a workshop on participatory planning
LO 4: formulate a report on public comments & views of a draft plan

**Course Content: (Main topics, Sub topics)**

- The theory of democracy and public participation concepts
- What participation is and why it matters: participation in contemporary context
- Rethinking participation in the context of planning
- Participatory planning approaches and techniques
- Practices of participation in the developed and developing world
- Statutory requirements for public views on a draft plan

**Teaching /Learning Methods**:

Discussions,Field visits, Workshops, Community consultations, Perception surveys, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Participatory planning workshop 100% – (Individual contribution - 50%, group contribution – 50%) | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Sen, Amartya. Development as Freedom. New York, NY: Alfred A. Knopf, 1999, Introduction and chapter 1. ISBN: 0385720270.Arnstein, S. R. (1969). A ladder of citizen participation. Journal of the American Institute of Planners, 35(4), 216-224.
- Fung, A., & Wright, E. O. (2001). Deepening democracy: Innovations in empowered participatory governance. Politics & Society, 29(1), 5-41.
- Innes, J. E., & Booher, D. E. (2010). Planning with complexity: An introduction to collaborative rationality for public policy. Routledge


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | | | | |
| LO-2 | | | ☑ | ☑ | | | |
| LO-3 | | | | | ☑ | ☑ | ☑ |
| LO-4 | | | | | ☑ | ☑ | |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| **Level III** | **Semester 6** | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3608 | **Module Name:** | Urban Informatics | | |
| **Credit Value:** | 1 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To design effective systems to communicate spatial information in urban planning and management.
2. To develop new urban planning and management tools applying urban informatics

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Demonstrate the application of urban informatics in urban planning and management

LO 2: Develop new computer-based applications to support urban planning and management

**Course Content: (Main topics, Sub topics)**

- Introducation to urban informatics
- Open data and standards
- Human and sensor inputs data collection
- Data as a service
- Data dissermination and visualization
- Web processing services
- Internet of Things (IoT)
- Location Based Services (LBS)
- Citizen Science

**Teaching /Learning Methods**:

Discussions, Hands-on Exercises, Presentation, Self-studies

**Assessment Strategy**:

| Continuous Assessment<br>100% | Final Assessment<br>0% | | |
|---|---|---|---|
| Individual study – 50%<br>Group project – 50% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Book: "Urban Informatics: Community Integration and Implementation" by Rob Kitchin and Sung-Yueh Perng. (2016). Springer.
- Davies, C., & Picht, R. (2019). Open Data and Standards for Urban Sustainability: Lessons from European Cities. In S. Carver, & J. C. Sun (Eds.), Urban Sustainability and Governance: New Challenges in Nordic-Baltic Housing Policies (pp. 29-43). Springer.
- Goodchild, M. F. (2007). Citizens as Sensors: The World of Volunteered Geography. GeoJournal, 69(4), 211-221.
- Shadbolt, N., Hall, W., & Berners-Lee, T. (2006). The Semantic Web Revisited. Intelligent Systems, IEEE, 21(3), 96-101.
- Ratti, C., & Townsend, A. M. (2011). Urban Informatics: Challenges and Opportunities. CACM, 54(2), 148-154.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | ☑ | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level III | Semester 6 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL3609 | **Module Name:** | Project Formulation and Appraisal | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To explain the key concepts of project formulation and appraisal.
2. To illustrate the methods pertaining to project formulation & appraisal
3. To apply different development appraisal methods and evaluate alternative development proposals.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Demonstrate knowledge of the terms and concepts associated with project formulation and appraisal

LO 2: Appraise potential development proposals and propose an optimum development strategy

LO 3: Prepare project feasibility reports in conformity with physical, economic, environmental and social aspects of a proposed development

**Course Content: (Main topics, Sub topics)**

- Project, project formulation, appraisal and project attributes
- Project Life Cycle
- Project team and stakeholders
- Project appraisal methods
- Project Planning and Scheduling
- Cash flow statements and Project feasibility Report
- Method and techniques for Project Risk Analysis
- Development appraisal issues

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Kerzner, H. (2017). Project Management: A Systems Approach to Planning, Scheduling, and Controlling. Wiley.
- Pinto, J. K. (2016). Project Management: Achieving Competitive Advantage. Pearson.
- Turner, J. R. (2014). The Handbook of Project-based Management (4th ed.). McGraw-Hill Education.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | ☑ | ☑ | ☑ | | |
| LO-3 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| **Level III** | **Semester 6** | | | | |
| **Module Code:** | PL3610 | **Module Name:** | Urban Infrastructure Planning and Designing | | |
| **Credit Value:** | 3 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | | | 105 |

**Learning Objectives**

1. To learn on the methods and techniques appropriate to address urban infrastructure design related issues in a given urban area
2. To develop skills for formulation and implementation of urban infrastructure proposals

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: interpret problem situations in urban areas relating to urban infrastructure

LO 2: design infrastructure solutions for urban problems

**Course Content: (Main topics, Sub topics)**

- Fundamentals related to urban infrastructure
- Planning and design urban transport infrastructure systems
- Planning and design mass rapid transit systems
- Planning and design urban sanitation systems
- Planning and design urban amenities
- Planning and design SMART infrastructure

**Teaching /Learning Methods**:

Discussions, Field visits, Brain storming and group works

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment-40%, Planning and design project and report – 60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Cervero, R., & Kockelman, K. (1997). Travel demand and the 3Ds: Density, diversity, and design. Transportation Research Part D: Transport and Environment, 2(3), 199-219.
- Button, K., & Hensher, D. (2018). Handbook of transport strategy, policy & institutions. Emerald Publishing Limited.
- Gwilliam, K. M. (1999). Infrastructure planning and finance: A smart and sustainable guide. World Bank Publications.
- UN-Habitat. (2013). Planning and Design for Sustainable Urban Mobility: Global Report on Human Settlements 2013. Earthscan.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Four - Semester Seven

## Course Modules

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## Product Stage

| Level IV | Semester 7 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4701 | **Module Name:** | Research Methods | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To obtain an understanding on 'research'
2. To acquire knowledge to formulate objective and hypotheses for a research
3. To develop appropriate research methods in undertaking research

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: explain the need and use of conduction researches

LO 2: develop a comprehensive research proposal

**Course Content: (Main topics, Sub topics)**

- Definition of research
- Framing research problem and developing the hypothesis, objectives
- Literature survey
- Research designing
- Quantitative and qualitative data collection and analysis
- Interpretation of results
- Research writing methods
- Research ethics

**Teaching /Learning Methods**:

Interactive Lectures, Discussions, Guided Reading, Self-study, Evaluation, Collaborative Learning Activities

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignments - 100% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**


- Farthing, Stuart. Research design in urban planning: a student's guide. Sage, 2015.
- Vogt, W. P., Gardner, D. C., & Haeffele, L. M. (2012). When to use what research design. Guilford Press.
- Silva, E., Healey, P., Harris, N., & Van den Broeck, P. (Eds.). (2014). Research methods in spatial planning: A case-based guide to research design. Routledge.
- Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
- Greene, W. H. (1999). Econometric Analysis. New York, NY: Prentice Hall.
- Graff, G., Birkenstein, C., & Maxwell, C. (2014). They say, I say: The moves that matter in academic writing. Gildan Audio.
- Foth, M. (Ed.). (2008). Handbook of research on urban informatics: the practice and promise of the real-time city: the practice and promise of the real-time city. IGI Global.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 7 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4702 | **Module Name:** | Individually Supervised Research Project (ISRP) | | |
| **Credit Value:** | 11 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | 360 | | 145 |

**Learning Objectives**

1. To develop knowledge on the basics of research methodology.
2. To demonstrate the techniques of referencing source material.
3. To be trained on the skills required for conducting a research and writing a research report.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Demonstrate a familiarity with relevant literature

LO 2: Conduct a research study in a logical and coherent form

**Course Content: (Main topics, Sub topics)**

The Individually Supervised Research Study is to enable the Student to prepare, in written form, a research study in an area relevant to Town & Country Planning. It should consist of above 5000 words but may not exceed 7500 words. It should reflect the student‟s ability to complete a research and analysis exercise, and to write it up in a coherent form. Further, it should be adequate in its methodology. The student will be assigned a Principal supervisor for guidance during the research study.

**Teaching /Learning Methods**:

Individual Supervision, Discussions, Guided Reading, Self-study, Formative Assessments (Commenting report and progress presentations)

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Supervisor's marks-20%, Examiners' marks-40%, final presentation-40% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Farthing, Stuart. Research design in urban planning: a student's guide. Sage, 2015.
- Vogt, W. P., Gardner, D. C., & Haeffele, L. M. (2012). When to use what research design. Guilford Press.
- Silva, E., Healey, P., Harris, N., & Van den Broeck, P. (Eds.). (2014). Research methods in spatial planning: A case-based guide to research design. Routledge.
- Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.
- Graff, G., Birkenstein, C., & Maxwell, C. (2014). They say, I say: The moves that matter in academic writing. Gildan Audio.
- Shi, W., Goodchild, M. F., Batty, M., Kwan, M. P., & Zhang, A. (Eds.). (2021). Urban informatics (pp. 723-726). Singapore: Springer. 8.Thakuriah, P., Tilahun, N. Y., & Zellner, M. (2017). Introduction to seeing cities through big data: Research, methods and applications in urban informatics (pp. 1-9). Springer International Publishing."
- Foth, M. (Ed.). (2008). Handbook of research on urban informatics: the practice and promise of the real-time city: the practice and promise of the real-time city. IGI Global.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 7 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4703 | **Module Name:** | Academic Writing | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To develop academic writing skills focusing on quantitative and qualitative research
2. To develop skills in writing research publications
3. To demonstrate methods to avoid plagiarism in academic reports/ publications

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Write academic reports/ publications effectively using appropriate tone and language

LO 2: Present quantitative and qualitative data in a logical manner and articulate claims/ propositions leading to main research arguments

LO 3: Thorough review of previous theoretical and empirical work and provoke academic debates in academic reports/ publications

**Course Content: (Main topics, Sub topics)**

- Quoting, paraphrasing and rephrasing
- Logical writing
- Data presentation and interpretation
- Advanced grammar and use of punctuations
- Summarizing
- Writing research publications

**Teaching /Learning Methods**:

Peer Review and Collaborative Writing, Workshops and Writing Centers, Scaffolded Writing Assignments

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment-30%, Research paper- 70% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Swales, J. M., & Feak, C. B. (2012). Academic Writing for Graduate Students: Essential Tasks and Skills (3rd ed.). University of Michigan Press.
- Strunk, W., Jr., White, E. B., & Kalman, M. (2000). The Elements of Style (4th ed.). Pearson.
- Day, R. A., & Gastel, B. (2012). How to Write and Publish a Scientific Paper (7th ed.). Greenwood.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | | | | | |
| LO-2 | | | ☑ | ☑ | ☑ | ☑ | |
| LO-3 | | ☑ | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| | | | | | |
|---|---|---|---|---|---|
| **Level IV** | **Semester 7** | | | | |
| **Module Code:** | PL4704 | **Module Name:** | Internship | | |
| **Credit Value:** | 4 | **Core/Elective:** | Core | **GPA/NGPA:** | NGPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 400 (4 months x 4 weeks x 25 hrs per week | | |

**Learning Objectives**

1. To gain an exposure to the working environments in planning related agencies
2. To participate in practical applications of the knowledge gained in planning-related work

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Apply the knowledge with other professionals involved in the industry

LO 2: Appraise office procedures, work environments and work ethics in planning and related agencies

LO 3: Involve in both office and field work to understand stakeholder perceptions and get exposed to real ground problem solving activities.

LO 4: Improve individual decision-making skills and professional interpersonal skills

**Course Content: (Main topics, Sub topics)**

- Preliminary data collection and analysis exercises, using different techniques and computer aided software.
- Plan/ Project Planning and Designing
- Involve with planning related preliminary studies such as EIA, SEA, SIA, PFS, FS, etc.
- Plan Implementation
- Monitoring and Evaluation process
- Project Management and Financial Assessment related activities in planning
- Legal Procedures of the Plan Preparation and Implementation
- Office Procedures and Protocols
- Maintaining daily diary and record of the tasks performed in an objective manner

**Teaching /Learning Methods**:

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Viva-20%, Daily diary-20%, Training report-30%, Reflection paper-30% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Yelon, S. L., & Cosentino, C. J. (2013). Internships: Theory and Practice. Routledge.
- Ash, S. L., Clayton, P. H., & Moses, M. S. (2009). Learning through Critical Reflection: A Tutorial for Service-Learning Students. University of North Carolina at Chapel Hill.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | ☑ | ☑ | | |
| LO-3 | | | | | | ☑ | ☑ |
| LO-4 | | | | ☑ | ☑ | | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# Level Four - Semester Eight

## Course Modules

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## Product Stage

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4801 | **Module Name:** | Urban Design | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To learn on the methods and techniques appropriate to address urban design related issues in a given urban area
2. To have a training in critique and methods of evaluating urban design proposals
3. To develop skills for the management of inputs from different disciplines involved in the formulation and implementation of urban design proposals

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: interpret problem situations in urban areas relating to design theories, regulations, guidelines and standards

LO 2: assess the suitability of an urban design proposal relating to the physical, social and economic aspects of the situation

LO 3: identify and organize different inputs required for the formulation of an urban design proposal for a selected site

**Course Content: (Main topics, Sub topics)**

- The discipline of urban design and its current involvement in development process
- Urban design functions, contemporary urbanism and urban design discourse
- Study of the trends and patterns of urban development and different disciplines involved in the process.
- Concepts and techniques involved in the management of the design process and decision making
- Formulation of Urban Design proposals, standards and regulations

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Studio work-based group assignments-100% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Carmona, M. (2014). Public Spaces, Urbanity, and Urban Design. Routledge.
- Gehl, J. (2010). Cities for People. Island Press.
- Cuthbert, A. R. (2019). The Form of Cities: Political Economy and Urban Design (2nd ed.). John Wiley & Sons.
- Hebbert, M. (2016). London: More by Design than Accident. Routledge.
- Lynch, K. (1981). A Theory of Good City Form. MIT Press.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | ☑ | | |
| LO-2 | | | | ☑ | ☑ | ☑ | |
| LO-3 | | | | | | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4802 | **Module Name:** | Individually Supervised Site Planning and Design Studio Project | | |
| **Credit Value:** | 8 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 45 | | 225 | | 130 |

**Learning Objectives**

1. To acquire skills in the application of different tools and techniques in planning at locality and site level.
2. To develop knowledge in devising strategic planning and design solutions at the site level
3. To acquire knowledge in theories, concepts, formalities and procedures in planning a locality for development
4. To understand alternative aspects of development that need to be considered and different forces which need to be addressed in a development project

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Demonstrate a comprehensive understanding of the processes and procedures involved in planning a locality for a development

LO 2: The application of skills acquired in strategizing, designing, action planning and defending a planning an urban design/site development project

**Course Content: (Main topics, Sub topics)**

A Design project that involves a strong Urban Design/ Regional or local Planning/ Urban Management / Infrastructure / etc, component that involves the exploration of a particular spatial entity (city, locality, region, etc), simulation of it, identify the problems and root causes of the problems, development of a proposal to address such problems and their roots in an innovative design approach. It is required to present the design solutions through any mode of communication, including a project report. The presentation and the report shall reflect the Student‟s capacity to comprehend, interpret, innovate, justify and effectively communicate the project. The Student will be assigned a Principal supervisor and a tutor for the guidance during the project.

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Tutorials, Discussions, Practical studio, Field visits, Community consultations, Perception surveys, Brain storming and group works, Presentation, Self-study

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Preparation of DGP-40%, Site development project proposal-60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Lynch, K. (1984). Site Planning (3rd ed.). MIT Press.
- Motloch, J. L. (2014). Introduction to Landscape Design. John Wiley & Sons.
- Booth, N., & Hiss, T. (2019). Site Design and Construction Detailing. Routledge.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | ☑ | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4803 | **Module Name:** | Project Management | | |
| **Credit Value:** | 2 | **Core/Elective:** | Core | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To explain the terms and concepts associated with project management concepts.
2. To demonstrate the ability to use project management knowledge in implementing physical development projects.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Apply project management processes, tools and techniques to solve project planning and management issues in urban & rural areas

**Course Content: (Main topics, Sub topics)**

- Concepts of urban management and project management
- Project management process
- Overview of issues involved in managing urban projects.
- Introduction to Procurement
- Arbitration and Negotiation
- Marketing and Branding

**Teaching /Learning Methods**:

Discussions, Brain storming and group works, Presentation, Guided Reading, Self-study, Evaluation

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Assignment – 40% | Theory (%)<br><br>Written Exam – 60% | Practical (%) | Other (%)(specify) |

**Recommended Reading:**


- Healey, P., & Robinson, F. (2013). Managing Cities: The New Urban Context. John Wiley & Sons.
- Lock, D. (2017). Project Management (11th ed.). Gower Publishing.
- Karami, M. (2017). Project Management in the Context of Organizational Change: Processes, Practices, and Bodies of Knowledge. Routledge.
- Turner, R. (2014). The Handbook of Project-based Management: Leading Strategic Change in Organizations (4th ed.). McGraw-Hill Education.
- Kotler, P., & Keller, K. L. (2016). Marketing Management (15th ed.). Pearson.


**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL4804 | Module Name: | Environment Management Systems* | | |
| Credit Value: | 1 | Core/Elective: | Elective | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To acquire knowledge and skills on planning and implementation of Environmental Management Systems (EMS) in local and site levels.
2. To design environmental management strategies that reduce environmental impacts, optimize resource use, promote waste reduction and recycling, prevent pollution, and involve public stakeholders.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: apply EMS in cities and project sites

LO 2: formulate effective environmental management strategies

**Course Content: (Main topics, Sub topics)**

- Basic Principles of Environmental Management Systems
- Environmental Management Practices (EMPs)
- Life Cycle Assessment (LCA)
- Ecological fooPLrint assessment
- ISO Standards for sustainable human settlements and smart cities
- Environmental Assessment standards and legislation (EIA/SEA)

**Teaching /Learning Methods**:

Lectures, Computer Lab Practicals, Score Cards

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment-40%, Group presentation and report-60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- US Green Building Council, (2016) 'SITES Rating System and Scorecard', LEED Rating System, USA;
- World Resource Institute, (2014) 'Global Protocol for Community Level Greenhouse Gas Emission Inventories: An accounting and reporting standards for cities', USA
- International Organization for Standardization, (2015) 'Introduction to ISO 1400: 2015, Switzerland
- International Organization for Standardization, (2014) 'Smart Cities Preliminary Report' 2014, Switzerland

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | ☑ | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL4805 | Module Name: | Urban Regeneration and Conservation* | | |
| Credit Value: | 1 | Core/Elective: | Elective | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To develop an understanding of the theories and concepts of urban regeneration and conservation
2. To understand the backward and forward linkages of urban design involving urban spaces and its relationships to property development
3. To illustrate the concept of obsolescence and regeneration of prime locations in cities and towns to create better living environments
4. To apply tools of regeneration and conservation for revitalizing urban centers in the new global economy
5. To demonstrate urban planning as the means of enhancing city competitiveness through strategic interventions

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Conceptualize urban regeneration and conservation as a technique to diagnose and review problems associated with urban sites

LO 2: Express wide knowledge on contemporary urban regeneration and conservation ideas and practices

LO 3: Analyze the need of conservation and/ or regeneration for a selected site from multidisciplinary perspectives

LO 4: Formulate place making interventions to utilize the conservation and regeneration potentials of specific urban localities

LO 5: Evaluate the proposed interventions by using qualitative and quantitative methods of regeneration and conservation

**Course Content: (Main topics, Sub topics)**

- Urban conservation and regeneration theories and approaches
- Authenticity and sense of place in planning of conservation sites and obsolescence sites
- Social and Economic perspectives with case study reviews
- Role of Implementation agencies in Urban Regeneration and conservation
- Pros and cons in the post implementation of regeneration and conservation projects
- Identification of Case Studies for regeneration and conservation in the urban context with theoretical concepts of improvement
- Stakeholder perspective on the regeneration and conservation projects
- Importance of urban design framework and implementation arrangement
- Different methods of project evaluation for regeneration and conservation projects and role of private sector in financing

**Teaching /Learning Methods**:

Continuous Studio sessions in a Case study approach with Lectures, Interactive sessions, Discussions, Practical studio, Field visits, Brain storming and group works, Presentation

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignment-40%, Group presentation and report-60% | Theory (%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Carter, C., & O'Mahony, M. (2014). Regeneration and Renewal: Renewing a City through Regeneration. Routledge.
- De Mel, P. (2015). Heritage Conservation and Urban Regeneration: Case Studies from Sri Lanka. Urban Development Authority of Sri Lanka.

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | ☑ | ☑ | | | ☑ | ☑ |
| LO-3 | | | ☑ | ☑ | ☑ | | |
| LO-4 | | | | | ☑ | ☑ | ☑ |
| LO-5 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| **Module Code:** | PL4806 | **Module Name:** | Computer Programming and Artificial Intelligence* | | |
| **Credit Value:** | 1 | **Core/Elective:** | Elective | **GPA/NGPA:** | GPA |
| **Hourly Breakdown** | Theory | | Practical | | Independent Learning |
| | | | 45 | | 05 |

**Learning Objectives**

1. To acquire a fundamental knowledge on programming and artificial intelligence.
2. To be trained on applying AI and GIS in developing new urban planning tools.

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: customize the GIS applications to meet the spatial planning and management

LO 2: develop new computer-based applications to support the urban planning and management decision-making process

**Course Content: (Main topics, Sub topics)**

- Basic programming
- Vector and Raster programming
- System development (Open-source plugin development)
- Machine Learning
- Big Data Analysis and Data Mining
- Intelligent Solutions for Spatial Planning

**Teaching /Learning Methods**:

Colloborative learnings, Hands-on sessions, Presentation, Live coding, Case studies, Problem based learning

**Assessment Strategy**:

| Continuous Assessment 100% | Final Assessment 0% | | |
|---|---|---|---|
| Assignments - 100% | Theory (%) | Practical (%) | Other (%)(specify) |
| | | | |

**Recommended Reading:**

- International Organization for Standardization, (2015) 'Introduction to ISO 1400: 2015, Switzerland

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | ☑ | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

| Level IV | Semester 8 | | | | |
|---|---|---|---|---|---|
| Module Code: | PL4807 | Module Name: | Public Project Financing | | |
| Credit Value: | 2 | Core/Elective: | Core | GPA/NGPA: | GPA |
| Hourly Breakdown | Theory | | Practical | | Independent Learning |
| | 30 | | | | 70 |

**Learning Objectives**

1. To explain the principles of annual budgeting at local, provincial and national government.
2. To illustrate alternative revenue sources to implement physical plans within the local governance framework
3. To discuss management aspects in relation to public finance such as management of public expenditure and revenue

**Course Aim/Intended Learning Outcomes:**

At the completion of this course, student will be able to:

LO 1: Compose mandated sources of revenue generation

LO 2: Reconcile the programs & projects in the physical development plan with the budgetary process

**Course Content: (Main topics, Sub topics)**

- Principles of annual budgeting at Local, Provincial and National Levels of government
- Statutes governing local and provincial power over finance
- Devolution of financial powers
- Local authority accounting, budgeting and financial reporting
- Local authority revenue and expenditure
- Issues and challenges in local authority budget management
- Participatory budgeting
- Possibility and process of financing the urban planning projects

**Teaching /Learning Methods**:

Lectures; Class-room discussions; Group work; Student presentations; Guided-Readings; Self-studies

**Assessment Strategy**:

| Continuous Assessment 40% | Final Assessment 60% | | |
|---|---|---|---|
| Guided readings & Case-Based Assignment on Public Financing in Sri Lanka (40%) | Theory (%)<br><br>End-Semester Examination (60%) | Practical (%) | Other (%)(specify) |

**Recommended Reading:**

- Viktkovic, C.F. & Kopanyi, M. (2014) Municipal Finances A Handbook for Local Government. The world Bank

**Mapping of Module Learning Outcomes (MLO) to the Program Outcomes (PO)**

| Graduate Profile / Program Outcomes | 8.1 | 8.2 | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 |
|---|---|---|---|---|---|---|---|
| LO-1 | ☑ | ☑ | ☑ | ☑ | | | |
| LO-2 | | | | | ☑ | ☑ | ☑ |
| **Module** | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |

# SECTION V

# BY-LAW

**For the Award of Bachelor of Science Honours in Town & Country Planning**

**UNIVERSITY OF MORATUWA, SRI LANKA**
**BY-LAW FOR THE AWARD OF THE BACHELOR OF SCIENCE HONOURS DEGREE IN TOWN & COUNTRY PLANNING**

By-Law made by the Council of the University of Moratuwa under section 135 of the Universities Act No: 16 of 1978

**BY-LAW**

This By-Law may be cited as the Bachelor of Science Honours in Town & Country Planning By-Law No: 27 of 2001.

**1.0 Award of Degree**

1.1 The Bachelor of Science Honours in Town and Country Planning, hereinafter referred to as the Degree, may be awarded by the University of Moratuwa, Sri Lanka, hereinafter referred to as the University, to a Student who:

**(a)** has fulfilled all the eligibility requirements for admission to the course as set out in Section 2.0

**(b)** has been admitted to the University as a student under the Universities Act No: 16 of 1978;

**(c)** has been a duly registered student of the University for the period prescribed for the course of study leading to the degree and whose registration continues to be in force up to the time of completion of requirements laid down in the Performance Criteria

**(d)** has paid such fees as prescribed by the University and any other dues payable to the University;

**(e)** has completed to the satisfaction of the Senate of the University hereinafter referred to as the Senate, the prescribed course requirements leading to the Degree as set out in Section 4.0 and Section 6.0 and the Performance Criteria.

**(f)** has fulfilled all other conditions and requirements prescribed by this By-Law and Rules and Regulations of the University;

1.2 The Degree shall be conferred on a student qualified as in Section 1.1, in accordance with the Performance Criteria as laid down by the Senate.

**2.0 Eligibility for Registration**

2.1 An Applicant may be considered for Admission to the University to follow the Degree Course, if he/she:

2.1.1 has attained the prescribed minimum standards at the G.C.E. Ordinary Level and Advanced Level Examination in a manner as determined by the University Grants Commission of Sri Lanka, and approved by the Senate; and

2.1.2 has attained other prescribed minimum standards at such examinations as determined by the Senate.

**3.0 Registration for the Course**

3.1. A candidate selected for admission to the University for the Course of Study as laid out in Section 2.0 may register to follow its First Semester in the manner prescribed by the Senate.

3.2. Eligibility for registration for the subsequent Semesters of the Degree Course shall be as determined by the Senate.

3.3. Provisional registration may be permitted by the Senate under exceptional circumstances.

3.4. The prescribed fees payable for registration, tuition and examinations shall be as determined by the University Council.

3.5. A Student registered for this Course shall not be permitted concurrent registration for any other Course of Study at this University or any other University unless prior approval of the Senate is obtained for such registration.

3.6. A Study may withdraw from a Course Module within two (02) weeks of the commencement of the Semester and also substitute same with another Module or add Country Planning, hereinafter referred to as the Department.

**4.0 Course of Study**

3.7. The Course of Study leading to the Degree shall envelope inter alia the Human Settlements in both Urban & Rural Sectors in its Planning and Implementation based on the integration of its Physical, Economic, Social & Environmental dimensions and incorporation its Spatial & Non-Spatial attributes.

3.8.

**(a)** The Course of Study shall be conducted under the Semester System with Course Module Examinations to be held as set out in Section 5.0

**(b)** Subject to this By-Law the minimum period of study for the Degree shall be Eight Semesters (For this purpose a Semester will normally consist of about 15 weeks excluding examinations and vacations)

4.3.

**(a)** The Course of Study and its relevant Modules in each Semester shall be as laid down by Senate.

**(b)** The syllabus and learning outcome for each Module shall be as prescribed by the Senate on the recommendation of the Department of Town &Country Planning and the Board of the Faculty of Architecture hereinafter referred to as the Faculty Board.

**(c)** The Senate may on the recommendation of the Faculty Board approve any change, amendment or addition to the Course Modules, Syllabi, and/or any rules and regulations relating to the Course subject to adequate notice of same being given to the Student.

4.4 The Course of study shall consist of:

(a) Lectures, Seminars, Tutorials
(b) Studio Work and Laboratory Work
(c) Field Work
(d) Group Project Work
(e) Supervised Individual Research Project

## 5.0 Examinations

5.1 The Examination of each Module of the Course of Study will be held at the end of each Semester.

5.2 To be eligible to appear for the Examination of each Module, a Student shall have followed to the satisfaction of the Senate, the course of Study of the relevant Module in the manner approved by the Senate.

5.3 A Student may not be permitted to appear for any Examination unless he/she has satisfied the requirements of the relevant Course Module, including but not limited to minimum of 80% attendance and submission of assignments at the appropriate time.

5.4 The Semester Examination prescribed by this By-Law shall be conducted by Examiners appointed by the Senate on the recommendation of the Faculty Board.

5.5

**(a)** Each Lecture based Module shall have a Set-Paper Examination.

**(b)** Each Seminar or Tutorial Module shall be assessed on the basis of a Presentation in the prescribed manner.

**(c)** All Studio Work and Laboratory Work Modules shall respectively have a prescribed number of Assignments in a Portfolio for Assessment.

**(d)** Each Field Work Module shall be assessed on a Report not exceeding 800 words.

**(e)** Each Group Project Work shall be assessed in respect of every Individual Student on the basis of a Presentation in the prescribed manner before a Panel of Examiners.

**(f)** The Individually Supervised Research Project on a topic approved by the Head of Department shall be assessed on the basis of a Report completed and consisting of about 5000 words. A viva-voce may also be held if considered necessary.

5.6 A Student shall appear for each Course Module Examination on the first occasion on which the Examination is held after the completion of relevant Course Module. However, if unable to do so, due to reasons of illness, he/she shall appear on a subsequent occasion without penalty, with the approval of the Senate, subject to the completion of the Course requirements for the award of the Degree as per the period approved by the Senate.

## 6.0 Performance Assessment

**(a)** The performance assessment for each Course Module shall be in accordance with the grading criteria as prescribed in the Performance Criteria approved by the Senate.

**(b)** The award of the Degree and of the Class Rating shall be based on the Overall Grade Point Average in accordance with the Performance Criteria approved by the Senate.

## 7.0 Regulations & Revisions

7.1 Regulations under this By-Law may be framed by the Senate and approved by the Council as it deems necessary.

7.2 This By-Law may be revised or amended as a when necessary.

## 8.0 Interpretation

8.1 In this By-Law unless the context otherwise requires:

"Council" means the Council of the University of Moratuwa as constituted by the Universities Act No: 16 of 1978

"Senate" means the Senate of the University of Moratuwa as constituted by the Universities Act No. 16 of 1978

"Faculty Board" means the Faculty Board of the Faculty of Architecture of the University of Moratuwa as constituted by the Universities Act. No: 16 of 1978

"Department" means the Department of Town & Country Planning of the University of Moratuwa as constituted by the Universities Act. No: 16 of 1978

8.2 Any question regarding interpretation of this By-Law shall be referred to the Council whose decision thereon shall be final.