

Tribhuvan University

Institute of Engineering

South Asia Urban Knowledge Hub – Nepal



ADB Project Number: 46465

Regional - Capacity Development Technical Assistance (R-CDTA)

Diagnostic Report and Recommendations for Urban Planning Curricula Improvement

STUDY TEAM

Sudha Shrestha, Prof., PhD
Team Coordinator

Iswar Man Amatya, Assoc. Prof.
Infrastructure Specialist

Ashim Bajracharya
GIS Specialist

Luna Bajracharya
Research Assistant

Nisha Shrestha
Research Assistant

Tribhuvan University
Institute of Engineering
South Asia Urban Knowledge Hub
Lalitpur, Nepal

Acknowledgements. Prof. Dr. Tri Ratna Bajracharya (Dean, Institute of Engineering), Mr. Dipendra Nath Sharma, (Secretary MOUD), Mr. Shambhu K.C. (Joint Secretary MOUD), Padma K. Mainalee (DDG, DUDBC), Keiichi Tamaki (Senior Urban Development Specialist, ADB), Mingyuan Fan Senior Urban Development Specialist), (Vivian Castro-Wooldridge (Urban Development Specialist, ADB Nepal Resident Mission) and Michelle Laurie (Knowledge Management Specialist/ ADB Consultant).



Established in 2014, the South Asia Urban Knowledge Hub ("the K-Hub") is a regional initiative aimed at improving policy making in urban sector based on evidence-based research. The K-Hub initiative is supported by the Asian Development Bank (ADB) and the respective governments of India, Bangladesh, Nepal, and Sri Lanka. The initiative is also being supported by the Bill and Melinda Gates Foundation (BMGF) particularly for innovative on-site sanitation as part of the Sanitation Financing Partnership Trust Fund created by ADB and BMGF. Each participating country has a national center endorsed by the respective government: National Institute of Urban Affairs (NIUA) in India, International Training Network Centre – Bangladesh University of Engineering and Technology (ITN-BUET) in Bangladesh, Tribhuvan University – Institute of Engineering in Nepal, and University of Moratuwa in Sri Lanka. The regional center of the K-Hub is based at the NIUA in India. <http://khub.niua.org/>

CONTENTS

1. BACKGROUND.....	1
2. REVIEW OF EXISTING COURSE STRUCTURE	1
2.1 The Course Contents.....	2
2.2 Review of Existing Course Modules	2
3. THE PROPOSED NEW STRUCTURE/COURSE REVISION.....	3
3.1 Methods adopted	3
3.2 The Outcome	4
3.2.1 Core Courses.....	4
3.2.2 Elective Courses.....	6
3.3 Salient features of the Restructured/Revised Courses.....	7
4. THE CURRENT STATUS.....	7
APPENDIX 1 IOE STANDARD COURSE STRUCTURE FORMAT FOR MASTERS DEGREE	7
APPENDIX 2 COURSE CURRICULUM REVISION COMMITTEE	9
APPENDIX 3 COURSE OUTLINES.....	9

1. BACKGROUND

Department of Architecture and Urban Planning of IOE started MSc. in Urban Planning Course in 1996 with an aim to develop academically and technically sound, and practically oriented human resource in the field of urban development and planning. The course focused on theoretical foundations of urban planning that included planning as theory, planning as methodology and planning as decision making activities. Through urban development issues based on planning studio to planning problem based thesis, it aimed at generating much needed body of knowledge through research in the field of urban planning.

The course since its inception has produced over 350 professional urban planners who are working in responsible and highly recognised position in the field of urban planning and development in public, private and development sectors in Nepal. Significant number of graduates of urban planning has also pursued their career in academia and higher studies. Despite being a successful program highly in demand in the job market, the course had not been revised since its conception in the year of 1996 owing to the limitations related to resources constraints and other technical problems.

For the revision of curriculum of MSc. in Urban Planning, supported by the South Asia Urban Knowledge Hub ("the K-Hub") which was supported by the Asian Development Bank (ADB). In this respect, one of the objectives of K-Hub, Nepal is defined as follows.

Objective 3: Have recommendations for an improved M.Sc. in Urban Planning curricula at the IOE submitted to the Academic Council for approval

To achieve this objective K- Hub team Nepal has initiated the revision process. This report gives a summary of the course restructuring/revision process and its outcome.

1. Need for the Course Revision

The need for the course revision emanated from making the urban planning course up to date in terms of incorporating latest body of knowledge in the field of urban planning. It also needed to incorporate the specialized field of expertise as demanded by the urban planning industry. Moreover, the continuous inputs and updating of course contents by the faculties over past two decades needed to be formalized through revisions. In addition to this, IOE from this academic session required restructuring of all 25 Masters Degree courses offered at the institute to follow the '**standard format**' (*Appendix-1*) in order to achieve compatibility in overall credit structure, examination, enrollment timing and also to introducing interdepartmental elective courses. It is in this context, the course restructuring and revision was carried out.

1. Review of Existing Course Structure

The existing MSCUP was offered as a regular course requiring 2 years of full time with 60 credit courses which could be extended to maximum of 3 years from the joining of the course if it was not completed in 2 years time. It had provisions of completing the course in five years for those registered at part time students. The course was offered in modular system which included subject modules of 'one week', 'two week' and 'three week' duration that begin and operate continuously till they came to an end. At the end of instruction of the each subject module, the necessary assessment, written examination and seminars were held to evaluate the student. The course curriculum was organized in the overall framework of credit system so that student's performance could be subjected to continuous evaluation in terms of success and failure on annual basis. The credit system also allowed flexibility to a part-time student to progress at an optimum pace suited to his ability and convenience. Each course had a certain number of credits which describes its weightage. The number of credits depended upon the contact hours for the course

and its work load. Course with one credit weightage had at least 15 lecture hours and the tutorial, consulting and assessment hours varied depending upon the nature of the course.

1.1 The Course Contents

The course offered was basically classified under two classifications, the core courses and elective courses. While fundamental and foundational core courses that aimed at providing essential knowledge or pre-requisite for taking up higher level courses in the area of Urban Planning, the elective courses allowed the students to specifically train them in a particular direction.

In the existing course structure of a total 60 credits, all together 15 credits were offered in first semester of which 10 credits are theory and 3 credits are studio based followed by 2 credits of practical subjects. In second semester all together 18 credits of 'course works' were offered out of which 11 credits were theory based followed by 7 credits of studio work. Like in second semester, the third semester also included 18 credits in which 11 credits were studio based followed by 7 theory based credit courses. The last semester offered 18 credits of which 2 credit courses was based on studio works followed by 8 credit of theory courses. The fourth semester also included 10 credits of thesis works.

In addition to the aforementioned courses, each student had to undertake a project of 3 credits in each of the first three semesters. The project essentially provides a research and planning synthesis training to the student. The students will work on a specific topic under the guidance of a supervisor for their thesis in the fourth semester. The students are encouraged to think independently, to do systematic review work, to develop computer software or to carry out laboratory experiments and present the outcome of the work in the form of a thesis.

1.2 Review of Existing Course Modules

Based on the feedbacks from the majority faculties involved in delivering the MSCUP existing course, the *Course Curriculum Revision Committee (Appendix-2)* reviewed the existing course curriculum for the prospective revisions in terms of course contents and course structure. In this review, it was observed that the existing course curriculum despite being extensive and effective, there were number of areas that required improvement through revision and restructuring;

- **The total time available for the credit**

According to the feedbacks from the concerned faculties, one credit course was not enough to cover the requirement of intensive knowledge impartation, subsequent assignment requirements and the examination. For example one credit course covering 8 days with the total of 36 hours that included 18 lecture hours, 6 tutorial hours, 3 consulting hours and 9 hours for other activities was too tight. As preparation for field based seminar, reading presentation/assignment for total 18 hours of tutorial plus consulting plus other activities along with lecture was simply not productive.

- **The sequence of modular courses by semester**

Other limitation observed was related to the sequence or distribution of the modules across semesters. For example, there were modules offered in second semester which in fact should have been taught in first semester as the knowledge gained through these modules would be important for the first planning/project studio offered at the end of the first semester. This is evident in case of 3 credit module on planning technique and 2 credit module on regional planning, which if taught in first semester would have immensely benefitted students to test and apply their knowledge in the planning studio in the semester itself.

- **Integration between courses of similar nature**

This is perhaps the most important part of the overall course revision and restructuring process. There are number of courses which are similar in terms of its course contents, teaching method and intellectual

constructs. For example, 2 credit course of planning history and 3 credit course of planning theory course are related on number of occasions. A brief review of course content of both modules indicated that theory and history are partly taught in each module. Similarly, the 1 credit modules on sociology and demography share number of similar course contents and are interrelated. Since the focus of sociology is on urban sociological theory, quantitative methods of social research and urban demography, these could be merged to extend the credit period so that students can benefit from it. Similarly the other example can be taken in case of 1 credit course on statistics. The statistics course could be integrated with the other module having more number of credits.

- **Omission of certain modular courses**

There are certain modular courses that could be taken out from the existing course structure for its significance. For example, the 2 credit module on computer application offered in first semester focusing on applications like statistical data management, project scheduling and others are not really required as one could expect students at Masters level studies are equipped with such knowledge. If not equipped or familiar with such knowledge, modules could be offered for those as elective. In similar vein, omission of 1 credit course on planning graphic is possible as it could be easily integrated in the planning studio itself.

- **Distinctions between the core and elective courses**

During the review it was observed that there are number of courses that could be taught as electives and not as core courses for these courses were focused on specialized area in the field of urban planning. For example, one credit modules on planning legislation, project formulation, urban land management and two credit modules on the urban economics and urban regeneration etc. would very much qualify as elective courses. Similarly, important subject like one credit module on research methodology currently being taught as elective needed to be made core course with increased number of credits. Likewise, in addition to the existing elective courses, new elective courses needed to be introduced to cater to the industry demand.

- **Revision of the course contents and the outlines**

All most all courses needed to incorporate the latest knowledge on theoretical and practical innovations and techniques in the respective subject areas. The books and peer reviewed journal articles suggested as references needed to be updated to keep up with latest development in the field of urban planning. Moreover, the continuous inputs and updating of course contents by the faculties over past two decades needed to be formalized through revisions.

- **Increasing the Thesis Credit**

As suggested by the faculties responsible for thesis supervisions and the review committees assessment, the current 10 credits for thesis works was not enough requiring the increase in number of credits for the better thesis research outputs.

2. THE PROPOSED NEW STRUCTURE/COURSE REVISION

2.1 Methods adopted

Based on the review of the existing course curriculum and the IOE's requirement for making all Masters Courses compatible with its recommended framework for standardization, the review committee took it as an opportunity to restructure and revise the course. Accordingly, it adopted a method that included *series of consultation workshops (Table 1)* on the draft revision and restructuring proposal with different stakeholders. Then syllabus revisions were carried out by concerned academicians which were peer reviewed by the experts.

S. No	Consultation and Other Activities	Date
1	Review of existing course curriculum and preparation of draft report by Course Revision Committee	Feb 2, 2016
2	Preliminary workshop-1 on Draft Revision with experts.	June 1, 2016
3	Workshop-2 with urban planning experts from academia, public sector and private sector)	March 22, 2017
4	Workshop-3 with graduates of MSCUP	March 29, 2017
5	Workshop-Review of revised syllabus by Experts	April 16,2017
6	Finalization of standard Course Structure and Course content by the subject Committee	April 27, 2017
7	Course Structure and Course outline of MSc. in Urban Planning approved by the Faculty Board	April 28, 2017
8	Endorsement of new structure by Faculty Board of IOE	April 30,2017
9	Presentation of Final Course Structure and contents in National Workshop on Urban Risk Resilience organized by K-HUB/CUPS/IOE	May 3, 2017

2.2 The Outcome

2.2.1 Core Courses

Based on the draft report prepared by the Revision Committee, various feedbacks and suggestions made in series of consultations with concerned stakeholders and the standard format of IOE for course restructure, the final course restructuring and revision was carried out. In this, out of total 60 credits, a total of 28 credits are offered as core courses followed by 16 credits each for elective and the final thesis. The final outcome of this was the new revised course structure as presented below.

Revised Syllabus Structure

Year : I

Part : I

S.No.		Subject	Week	Credit	Course Type
1	Core 1	Planning History and Theory	4	4	Theory
2	Core 2 (a)	Urban Sociology and Demography	2	2	Theory & Method
	Core 2 (b)	Infrastructure Planning	2	2	Theory

3	Core 3	City Planning and Techniques	4	4	Theory
4	Core 4 (a)	Regional Planning	2	2	Theory
	core 4 (b)	Urban Design and Conservation	2	2	Theory
Total Credit			16		

Year : I

Part : II

S.No.		Subject	Week	Credit	Course Type
1	Core 5	Research Methodology	4	4	Method
2	Core 6	Planning Studio I	4	4	Studio
3	Elective 1		4	4	Theory
4	Elective 2		4	4	Theory
Total Credit			16		

Year : II

Part : I

S.No.		Subject	Week	Credit	Course Type
1	Elective 3		4	4	Theory
2	Elective 4	Interdepartmental Course	4	4	Theory
3	Project	Planning Studio II	4	4	Studio
Total Credit			12		

Year : II

Part : II

S.No.		Subject	Week	Credit	Course Type
1		Thesis work	16	16	
Total Credit			16		

2.2.2 Elective Courses

Besides the core courses, a total of 16 credits courses are offered as elective courses. These elective courses are designed to serve the purpose of extending students' knowledge according to individual interests in a specialized area that is in demand in the planning industry. Two courses having 4 credits each are offered in second and third semesters separately. A list of final elective courses for second and third semesters is given as below.

Elective Course: Elective I

Geospatial Technologies for urban planning

Planning Legislation

Urban Economic Theory

Urban Housing and Real Estate Development

Elective II

Planning for Urban Resilience

Energy for Sustainable Urban Planning

Urban Modeling and Simulation

Project Development and Professional Practice

Energy Efficient Housing

Transport Planning

Elective III

Urban Governance and Planning Politics

Urban Regeneration

Urban Economics and Finance

Urban Informal Sector'

Participatory Planning and Community Development

Urban Ecological and Landscape Planning

Elective IV

Interdepartmental Course (Interdepartmental courses related to Urban Planning)

2.3 Salient features of the Restructured/Revised Courses

The basic course structure was classified under three core course categories based on; theory, quantitative technique and methods. The first semester courses in the new revised structure are designed to provide fundamental and foundational knowledge on the field of urban planning. The revision of the courses has included in it the latest knowledge updates and reference as evident in the *revised course curriculum attached herewith (Appendix-3)*. The additional features of the revised structure of the course curriculum are summarized below.

- The new structure has theory and quantitative method based curricula in first semester to equip students with foundational and quantitative knowledge. The second semester starts with research methodology which has sufficient credits for students to get acquainted with qualitative and quantitative research process. With research methodology and foundational knowledge acquired in first semester, students will be able to direct their interest in desired area of specialization through two electives offered in second semester. The two subsequent planning studios in second and third semesters will enhance their practical skills on planning problem solving through real time, field based project works.
- An additional feature of the program now is the interdepartmental elective course which is offered in third semester. This will allow students to choose from a wide range of electives offered in different departments of the campus that are running over 25 Masters Degree Programs. The new structure offers students an option to choose from a pool of elective courses offered by the program.
- At least one research publication in national or international journal is made mandatory during the thesis work so that students have an opportunity to expose their research work and learn the skills of scientific publications.
- The number of credits for thesis work has been raised to 16 credits and a full fourth semester is dedicated for research so that students have ample time to complete their research work.

3. THE CURRENT STATUS

The new course structure, revisions and the content outlines have been endorsed by the faculty board of the Institute of Engineering. From the current academic session, the new structure and course outline has already been introduced in the first semester with the total intake of 20 students. The development of course manuals for the different modules is being planned.

APPENDIX 1 IOE STANDARD COURSE STRUCTURE FORMAT FOR MASTERS DEGREE

For MSc. in Urban Planning, allowed course of 2 credits because Urban Planning is multi disciplinary and it has to offer several courses.

Semester 1	Semester 2	Semester 3	Semester 4
Core Course -1 (4 credits)	Core Course-5 (4 Credit)	Course Course-6 (4 Credits)	Dissertation / Thesis Work (16 Credits)
Core Course -2 (4 credits)	Elective (4 credits)	Elective (Interdepartmental) (4 Credits)	
Core Course -3 (4 credits)	Elective (4 Credits)	Group Projects/Studio (4 Credits)	
Core Course-4 (4 credits)	Core Course-6 (4 Credits) Project/ Studio		
Credit= 16	Credit=16	Credit= 12	

APPENDIX 2 M Sc. in Urban Planning COURSE CURRICULUM REVISION COMMITTEE

1. Prof. Dr Sudha Shrestha, Co-ordinator
2. Associate. Prof Dr. Sushil B. Bajracharya, Member
3. Asst. Prof. Dr. Sanjaya Uprety -Member
4. Admin chief Mr. Raju Shakya, Member Secretary
5. Prof. Dr. Triratna Bajracharya, Dean of the Institute- Expert Advisor

APPENDIX 3 COURSE OUTLINE

COURSE CURRICULA– Year I. Part I

Core 1: PLANNING HISTORY AND THEORY

Course Type: Core, Credits- 4, Year: 1st, Part: 1st (Semester I)

1. Brief Description of the Course

The course on planning history and theory offers students an in-depth knowledge of the development of and modern classic, modern and contemporary theories of planning. It offers a survey on the historical development of planning thought different time (viz. ancient and traditional planning thoughts) and focuses more on the modern/postmodern theory of planning and its development (viz. rationalism, pluralism-advocacy, critical theory etc.) and new directions in contemporary planning theories (viz. ecological planning, multicultural planning etc.) and ethical issues (viz. distributive justice and principles of professional conduct). The structure of course provides opportunity for the students to relate the historical development of planning theories both in the western and eastern contexts of urban development. Since the logic behind the ideas, concepts and actions of planning is continuously challenged with changing social and economic situations, the course will help student develop a deeper appreciation for the profession's historical roots as well as be introduced to some of the "theoretical tools" used to analyze planning.

2. Objective of the Course

The course objective of Planning history and theory is to acquaint student with the historical development of planning thought, theory and practice of urban planning with the historical roots of modern town planning and the contemporary planning theories. It aims at

preparing students for the intellectual dialogue through critical reading, informed discussion and writing assignments on planning theories.

3. Content Outlines

Introduction

- Theory, Need for urban planning theorization, Urban Planning Theory, Planning Types
- Urban Development Concepts; village town and neighborhood,
- What is Urban Planning, Aims and objectives of Urban Planning
- Fundamental Difference between Architecture, Planning and Design

Planning History

- Evolution of human settlements; historic determinants-traditional and modern context,
- Review of Towns- Development in the West (ancient, medieval, renaissance and industrial age, ancient, traditional and modern/utopian planning thought-contribution of Howard, Geddes, Mumford, the other Utopian planning thought by Le-Corbusier and others)
- Review of Towns- Development in the East (ancient context and treatises in settlement planning in SAARC region)
- Review of Towns in Nepali History, Traditional planning thought

Planning Theory:

- Overview of Urbanization and Urban Planning Efforts in Nepal,
- Need to theorize on urban planning, political economy and planning approaches
- Modern/Post Modern Theories of Urban Planning (Synoptic, Incremental, Transactive, Advocacy and Radical/Critical Planning Theories)
- Planning Ethics (distributive justice and principles of professional conduct)
- New Directions in Urban Planning (Viz. Sustainable Development Planning, Multicultural Planning, Communicative Planning etc)
- Models of Urban Structure; Concepts of urban land use; systems affecting land uses and rationale for land use planning; locational attributes of urban land uses; land use planning information systems; activity systems and choice of space qualities.
- Styles of planning in Nepal-critique

4. Teaching method

- Lectures, Group work, interaction and field visit

5. Assessment Method

- Assessment report/Seminar/Written Examination

6. References

- Friedmann, John (1987), Two centuries of planning theory: An overview, Chapter 3 in 'Planning in Public Domain', Princeton University Press, Princeton NJ (10-28)
- Healey, Patsy (1996). "The Communicative Turn in Planning Theory and its Implications for Spatial Strategy Formation". Readings in Planning Theory. 23: 217–234 – via SAGE Journals
- Hudson, Barclay M. (1979), Comparison of Current Planning Theories: Counterparts and Contradictions, Journal of the American Planning Association (JAPA), Vol 45 (4) (386-389)

- McLoughlin, J. B. (1969), *The Guidance and Control of change: Physical planning as the Control of Complex Systems*. *Urban and Regional Planning; A System Approach*, London Faber (75-103)
- Lindblom, Charles E (1979), *The Science of Muddling Through*, appeared in *A reader in Planning theory*, Faludi, A. ed., Pergamon Oxford (151-169)
- Davidoff, P. (1965), *Advocacy and Pluralism in Planning*, *Journal of American Institute of Planners* 31 (November: (331-337)
- Friedmann, John (1973), *The Transactive Style of Planning*, in *Retracking America; A theory of Transactive Planning*, Garden City, New York: Anchor. (173-193)
- Harvey David (1985), *On Planning the Ideology of Planning*. In *The Urbanization of Capital*, Baltimore: John Hopkins University Press. (165-184)
- Sagar Tore (2001), *Planning Style and Agency Properties*, *Environmental and Planning A*, Vol 33, P. 509-532, 2001
- Schon, Donald (1983), *From Technical Rationality to Reflection- in -Action*, in *Reflective Practitioner*, Basic Books, Newyork (21-69)
- Innes J. (1995), *Planning Theory's Emerging Paradigm: Communicative Action and Interactive Practice*, *Journal of Planning Education and Research*, 14 (3) (183-191)
- Arnstein, Sherry R. (1969), *A Ladder of Citizen Participation*, *JAIP*, Vol 35, No. 4, July 1969
- Fainstein, Susan S. (2000), *New Direction in Planning Theory*, *Urban Affairs Review* 35 (4): 451-478
- Christensen, K. S. (1985), *Coping with uncertainty in Planning*, *JAPA*, Vol. 51, 1s 1, PP 63-73
- Beatley, T. (1984), *Applying Moral Principles to Growth Management*. *APA Journal*, Autumn 1984.
- Howe, E. (1990), *Normative Ethics in Planning*, *Journal of Planning Literature*, November 1990
- Howe, E. (1992), *Professional Roles and the Public Interest in Planning*. *Journal of Planning Literature*, February 1992
- MOUD (2016), *HABITAT III, Nepal National Report*

Additional References

- Kaufman, J.L. & Jacobs, H.M. (1987): *A Public Planning Perspective on Strategic Planning* *APA Journal*, Vol. 53, No. 1, 1987.
- Alexander, E.R. (1981): *If Planning isn't Everything, Maybe it's Something*. *Town Planning Review* 1981.
- Wildavsky, A. (1973): *If Planning is Everything, Maybe it's Nothing* *Policy Sciences* 1973.
- Friedmann, J. (1981): *Planning as Social Learning*. *Out of Retracking America: A Theory of Transactive Planning*, Rondale Press, 1981.
- Harper, T.L. & Stein, S.M. (1992): *The Centrality of Normative Ethical Theory to Contemporary Planning Theory*, *Journal of Planning Education and Research*, Winter: 1992.

Core 2(a): URBAN SOCIOLOGY AND DEMOGRAPHY

Course Type: Core 2(a) Credit: 2, Year: I, Part: I (Semester I)

1. Brief Description of the Course :

Urban planning requires addressing human issues of urban area. It is, therefore, required to develop competency of students on how society exists in urban area; current and future population structure; and its impact on development paradigm. Urban sociology deals with life and human interaction in urban area with reference to social structures and processes. Demography provides useful understanding about population structure, its change pattern, relationship with development and future structure. This subject provides instrumental and intrinsic value on urban planning and policy making.

2. Objectives of the Course:

This course aims at developing competency of students to understand human issues and interaction, provide fundamental knowledge and skills of analyzing social behaviours of people, analyze population structure and change, define people and development relationship and estimate future population structure.

3. Content Outline:

Part A: Urban Sociology

Contents

I. Understanding Urban Society

- Concept and definition of urban sociology
- Relevance of urban sociology in modern world
- Social structure and urban societies in Nepal
- Critiques of urbanism and urban social reform in Nepal
- Approaches and methods in studying urban societies

II. Urbanization and Urban Social Characters

- Social history of urbanization
- Characteristics of urban society
- Urban social structure and social organization
- Urban society and social mobility [gender, caste and ethnic relation in cities]
- Urban life [individualism vs collectivism], social differences and social interaction
- Urbanization, development and urban ecology

III. Theories on Urban Social Lives and Social Relations

- “The city as a growth machine”: Harvey Molotch
- “Urbanism as a way of life”: Louis Wirth

- “The metropolis and mental life”: Georg Simmel
- “Theories of urbanism”: Claude S. Fischer
- “The city neighborhoods”: Jane Jacobs
- “The urban process under capitalism”: David Harvey
- “The Cost of Racial and Class Exclusion in the Inner City”: Loïc J. D. Wacquant and William Julius Wilson

Teaching Method	▪ Lectures, Group work, interaction and field visit
Assessment Method	▪ Assessment report/Seminar/Examination

4. References Recommended

- Kleniewski, N. (ed.).(2005). *Cities and Society*. London: Blackwell Publishing.
- Lin, J. &Mele, C. (eds.). (2015). *The Urban Sociology Reader*. New York: Routledge.
- Morris, R. N. (2007). *Urban Sociology*. New York: Routledge Publishing.
- Nottridge, H. E. (2007). *The Sociology of Urban Living*. New York: Routledge&. Kegan Paul Ltd.

Part B: Demography

Demography acquaints students with the theoretical and methodological bases of size, distribution, structure, characteristics and processes of population and its relationship with development. Demography feeds with important inputs for urban planning and trains to generate meaning of population statistics and human behaviors. Students will have foundations of population characteristics, growth pattern, spatial distribution and movement, future trend and factors affecting urban growth. This course is designed to develop fundamental knowledge and skills of students in demography so that they will consider human factors into urban planning.

Contents

I. Demography in Urban Planning

- Introduction to demography: Definition, origin and scope
- Demography and urban planning: World and Nepal’s demographic scenario, development indicators

II. Population Dynamics

- Population change: Components and measures of change, sources of data
- Population growth and decline: Concept, growth models and replacement
- Age-sex composition: Population pyramids, measures of population structure and interpretation

III. Demographic Theories

- Demographic Transition Theory
- Population and development
- Optimum theory of population
- Proximate determinant of fertility

- Migration theory: Ravenstein, world system theory and push and pull theory

IV. Demographic Techniques

- Basic measures of fertility, mortality and migration
- Measures of spatial distribution of population
- Life table
- Population projection

Teaching Method ▪ Lectures, Group work, interaction and field visit

Assessment Method ▪ Assessment report/Seminar/Examination

5. References Recommended

- Rowland, Donald T. (2003). *Demographic Methods and Concepts*. New York: Oxford University Press.
- Siegel, JS & Swanson, D (eds). (2004). *The Methods and Materials of Demography*. London: Elsevier Academic Press.
- Caselli, G., Vallin, J., & Wunsch, G. (2006). California: Elsevier.
- Central Bureau of Statistics. (2014). *Population Monograph Vol. I, II & III*. Kathmandu: Central Bureau of Statistics.

Additional Reading and Resources

- United Nations. (2006). *World Urbanization Prospects 2007*. New York: United Nations.
- UNFPA. (various years). *State of World Population*. New York: UNFPA.
- Population Reference Bureau (www.prb.org)
- Central Bureau of Statistics (www.cbs.gov.np)

Core 2(b): INFRASTRUCTRE PLANNING

Course Type: Core 2(b), Credit: 2, Year: I, Part: I, (Semester I)

1. Brief Description of the Course :

The economic development of any country is dependent on its Infrastructure development and it is considered as a basic prerequisite for development. Developing infrastructure enhances the efficiency of production, transportation, and communication, and also helps provide economic incentives to public and private sector participants. The accessibility and quality of infrastructure in a region determines the region's attractiveness to foreign investors. The sustainable development of cities rely on the provision of transport networks, water, and sewerage, electricity and telecommunications infrastructure. The access to a broad range of infrastructure facilities including physical and social does help in shaping the spatial form of cities, and increase their livability and inclusiveness and help in meeting the daily needs of diverse groups of people including the elderly, young, children, different cultural groups etc. There is a growing need for professionals capable of directing planning and construction of infrastructure networks and facilities especially in developing and emerging economies and this course will fulfill the need to some extent. The course will be delivered basically in a lecture mode with interactions, supplemented by field based tutorial and practice sessions, Presentations, Assignments and participatory knowledge building through case study analysis and exam.

2. Objectives of the Course:

The objectives of the course are to:

- Introduce the role of infrastructure planning both in urban and rural context;
- Enable application of infrastructure planning in designing and planning
- To update on the recent developments, emerging trends and issues in infrastructure planning including the global and national urban policy issues.

3. Content Outline

I. Introduction

- Basic definitions, concepts, significance and importance
- Elements of infrastructure (physical, social)
- Role of infrastructure in development

II. Planning and management of water supply

- Water sources, current scenario: Conflicts and Co-operation – Trans boundary water conflicts: inter-state, international water treaties, National Water Policy, Water Rights: Excess and underutilization of water.
- Water quantity, demand and supply analysis, water quality, treatment, storage, and distribution,
- Water harvesting, recycling and reuse, technological choices and alternatives, issues related to choice of centralized water supply system versus decentralized systems, Privatization of Water and its implications; Pricing and access

- Norms and standards of provision, institutional arrangements, planning provisions and management issues. Institutions in Water provision: PPP, SPV in water. Role of Community in water provision.
- Policies and Programs in the provision of water supply at various levels

III. Waste water management

- Waste generation processes in the cities.
- Waste water: points of generation, collection, treatment, disposal including storm water drainage, designs, technological and environmental considerations, grey water disposal, DEWATS
- Biological concepts in environmental sanitation, Low cost sanitation technologies and concepts related to developing countries.
- Norms and standards, institutional arrangements, planning provisions and management issues.
- Access to Sanitation: Cost and Coverage; Role of Institutions: Public, Private and community; Sanitation and environment; Sanitation and health.
- Policies and Programs in the provision of Sanitation at various levels
- Fecal Sludge Management and its various levels.

IV. Solid waste management

- Municipal and other wastes –generation, typology, quantity, collection, storage, transportation, treatment, disposal,
- Resource recovery in waste management, recycling and reuse,
- Norms and standards, institutional arrangements (formal and informal), planning provisions and management issues.

V. Power supply, energy and planning for fire protection

- Sources of power procurement, distribution networks, demand assessment, norms and standards, planning provisions and management issues.
- Planning for fire protection, methods of firefighting, services and space standards, planning provisions and management issues.
- Renewable energy sources

VI. Social Infrastructure

- Social Infrastructure – Education, Health, Civic etc.
- Types, hierarchical distribution of facilities, Access to facilities,
- Social infrastructure provision and location criteria, Norms and standards etc.

VII. Transportation management

- Functions of Transport, Classification of Travel, Features of a Trip; origin-destination, transport zones, trip generation, trip attraction; types of travel, travel by trip purpose, by commodity, by location, by distance, by comfort or convenience; variations over time and space
- Relationship between transport and land use.
- Impacts of Transport: Economic, Social and cultural values, Environment
- Theories of Transport Study & Traffic Flow Land Use theory; Physical Theories, Economic Theories

VIII. Urban infrastructure finance and management

- Economics of infrastructure services, financing and managing urban water, energy systems etc.
- Public private partnerships

XI. Community participation in delivery of infrastructure

- Socio-cultural aspects, community participation in the delivery of infrastructure,
- Problems of operation and maintenance

4. Teaching Method

- Lectures, Group work, interaction and field visit

5. Assessment Method

- Assessment report/Seminar/Examination

6. **Expected Output:** Students will be familiar with Urban Transportation and its importance,

7. References Recommended

- Cockburn, J., Dissou, Y., Duclos, J.-Y., & Tiberti, L. (Eds.). (2013). *Infrastructure and Economic Growth in Asia*. Springer.
- Kagioglou, M., & Tzortzopoulos, P. (Eds.). (2010). *Improving Healthcare through Built Environment Infrastructure*. John Wiley & Sons Ltd.
- Wellman, K., & Spiller, M. (Eds.). (2012). *Urban Infrastructure: finance and management*. West Sussex, UK: John Wiley & Sons, Ltd.
- Novotny, V., Ahern, J., Brown, P. (2010). *Water Centric Sustainable Communities: Planning, Retrofitting, and Building the Next Urban Environment* John Wiley & Sons, Ltd.

Core 3: CITY PLANNING AND TECHNIQUE

Course Type: Core 3, Credit: 2, Year I-Semester (I)

1. Brief Description of the Course :

City Planning and Technique course in Urban Planning teaches a robust way of critical thinking on city structure and its development over time. This course emphasizes on post industrial era tools and techniques of making plan of a neighbourhood to metropolis in national and international contexts. Further it encompasses contemporary thinking, tools and techniques of city planning and emergence of metropolis in Nepal along with various policy and strategies at international and national level to address the ever changing urban issues from garden city to green city.

2. Objectives of the Course:

The course aims to teach for robust analysis on the urban issues and demand with application of various techniques of city planning to address those issues over different time period. The emphasis will be on understanding different approaches to the plan making of neighborhood to metropolis, such as neighborhood planning, master planning, integrated development planning, and climate change responsive planning with sub-discipline of urban environment, urban sociological and economic demands in different magnitude of cities.

3. Content Outline

I. Introduction:

- Fundamentals of City Planning

II. Survey Techniques and Mapping:

- Data base for physical surveys including land use, building use, density, building age, etc., and socio-economic surveys;
- Survey techniques;
- Land use classification or coding and expected outputs;
- Techniques of preparing base maps including understanding the concepts of scales, components and detailing for various levels of plans like regional plan, city plan, zoning plan, and local area plan

III. Planning Standards:

- Spatial standards, Infrastructure Standards, Zoning Regulations and Building Bye Laws

IV. Analytical Techniques:

- SWOT Analysis, Threshold Analysis, Urban Concentration and Centrality

V. Plan Preparation:

- Types, Scope. Approaches: Master Planning, Structure Planning, Strategic Planning, Comprehensive Planning, Sectoral Planning, Local Area Planning, Integrated Action Planning, Periodic Planning, Risk Sensitive and Climate Responsive Planning

VI. International and National Policies and Strategies on City Planning

VII. Case Studies

4. Teaching method Lectures, Group work, interaction and field visit

5. Assessment Method Assessment report/Seminar/Examination

6. Expected Output: Students will be familiar with city and metropolitan planning techniques and methodologies.

7. References Recommended

- Robert M, A introduction to town planning techniques 1974 Hutchinson Educational, University of California
- Keeble L. B. Principles and practice of town planning 1967 Estates Gazette
- Braken I. Urban Planning Methods 2007 Routledge,
- Kruekeberg D. A. and Silvers A. A. Urban Planning Analysis 1988 John Willey and Sons Inc.
- Major M. D. The city's essential DNA: Formal design and spatial processes in the urban patterns, The Journal of Space Syntax ISSN: 2044-7507, 2013 volume: 4 issue: 1
- Gallion A. B. The urban pattern, city planning and design Published 1963

Core 4 (a): REGIONAL PLANNING

Course Type: Core 4 (a), Credit: 2, (Semester I)

1. Brief Description of the Course :

Regional Planning in Urban Planning course teaches a robust way of linking cities to its surrounding geography, humane and resources for its role in settlement and development. It deals with Regional Development Dynamics, Regional Structure, Regional Policies and Programmes in national and international context.

The course aims to impart know how on regional structure and regional development dynamics and its linkage with cities. The emphasis of the course is on different theories of settlement pattern and understanding the interdependence of different components of region specially the city and its hinterlands.

2. Objectives of the Course:

Teach for robust analysis on the urban issues and demand with application of various techniques of city planning to address those issues over different time period. The emphasis will be on understanding different approaches to the plan making of neighborhood to metropolis, such as neighborhood planning, master planning, integrated development planning, climate change responsive planning with sub-discipline of urban environment, urban sociological and economic demands in different magnitude of cities.

3. Content Outline

I. Introduction:

- Basic Concepts in Regions, Defining a region: fluidity and purposiveness, Aims and objectives of regional development, evolution of regional planning in National and in international context

II. Concepts and Typology of Regions and Regional Dynamics:,

- Typology of Regions:
- Resource Regions, Mega, Macro, Meso, and Micro Regions; Regional Dynamics:
- Growth of Mega and Metro Regions: Scale, Complexity and its impact on national and international scenario, convergence and divergence.
- Regional Economy, competitiveness among regions, backward and leading regions in development; Special Regions:
- SEZ, Agro Regions, Ecological regions, etc.

III. Regional Planning Techniques:

- Region and Regionalism. Delineation of region, spatial structures of region, analysis of nodes, hierarchy, nesting and rank size.

IV. Regional Planning Theories:

- Export Base Theory, Sectoral Shift, Growth Pole, Central Place, Webers theory of industrial localtion, core periphery theory, spread and Back Wash theory, Contemporary thoughts on regional planning

V. Regional Development Issues in Nepal:

- Migration, employment, industrialization, regional disparities and imbalances

VI. National regional development strategies, corridor planning, city region and district planning

VII. Case Studies

4. Teaching Method

- Lectures, Group work, interaction and field visit

5. Assessment Method

- Assessment report/Seminar/Examination

- 6. Expected Output:** Students will be familiar with different aspects of regional planning.

7. References Recommended

- Chaudhuri, R. J. 2001 An Introduction to Development and Regional Planning Orient Longman Ltd., Kolkata
- Carter H 1995 The Study of Urban Geography, Edward Arnold,
- Misra R.P. 2002Regional Planning, Concept, Techniques, Policies and Case Studies, Concept Publishing Company, New Delhi.
- Glasson J and Marshall T. Regional Planning 2007 Routledge, Oxford shire.
- Hall P. and John M.T. 2008 Urban and Regional Planning, Routledge, New York
- ADB 2007, National Strategy for Regional Development Nepal
- Gurung H.B 1969, Regional Planning in Nepal, National Planning Commission Nepal

Core 4(b): URBAN DESIGN AND CONSERVATION

Course Type: Core 4 (B), Credit: 2, (Semester I)

Part A: Urban Design

1. Brief Description of the Course :

Ancient and medieval cities and settlements were designed with ancient planning principles (Vedic) with appropriate form in Nepal and these cities have all ingredients which city needs to provide comfort to the people. Unfortunately, contemporary cities of Nepal except few cities, developed in haphazard manner. Thus in this subject, students will be taught how to design cities with all necessary services and facility with its form and design according to the design principles. Different urban designed cities will be studied as case study.

2. Objectives of the Course:

To provide necessary theories, process and practices of Urban Design of Urban Areas.

3. Content Outline

Introduction to Urban Design, Relationship between architecture, urban design and planning. Theories of Urban Design, Understanding the historical development of cities, design principles and elements of urban design.

- City as a three dimensional entity- Physical Volume-3D of cities, Social, Cultural and Physical Aspects of cities
- Study of open spaces at all levels (Hierarchy and order of open spaces)
- A brief historic review of development of the urban design, discipline and principles
- Urban form as determined by inter-play of masses, voids, building typology, scale, harmony, symmetry, color, texture, light and shade. Dominance, height, urban signage and graphics; Organization of spaces and their articulation in the form of squares, streets, vistas and focal points.
- Image of the city and its components such as edges, paths, landmarks, street features, sky-line, etc. urban transportation.
- Morphology of places. Form, size and structure of cities. Elements of cities and their interrelationships;
- Concept of sense of place. Concept of space and Place.
- Community and public space are the essence of civilized urban life; Compact and Scattered settlement.
- Neighborhood Design and Planning
- Design guidelines of different cities
- Urban design and Climate: Street pattern and orientation; Bioclimatic design in planning and designing.
- Related Issues for public interventions.

- Case studies of urban design characteristics of cities of Nepal and abroad.
4. **Expected Output:** Students will be exposed to understand terminologies and concepts of urban design, different theories methodological approaches and their manifestations in urban Design and Conservation.
 5. **Teaching Method**
 - Lectures, Group work, interaction and field visit
 6. **Assessment Method**
 - Assessment report/Seminar/Examination

7. References Recommended

- Alexander C., (1979). *The Timeless Way of Building*. Oxford University Press.
- Barnett, J. (1982). *An Introduction to Urban Design*. New York: Harper & Row.
- Eliade Mercia, (1959). *The Sacred and the Profane*.
- Golany, G. S. (1995). *Ethics and Urban Design, Culture, Form and Environment*, New York: John Wiles and Sons, Inc.
- Gordon, C., (1961). *The Concise Townscape*. Architectural Press.
- Jacobs, Jane (1961). *The Life and Death of Great American Cities*. New York: Random House.
- Kostof, Spiro, 1991. *The City Shaped—Urban Patterns and Meanings through History*. Bulfinch Press, New York.
- Lynch, Kevin (1960). *The Image of the City*. Boston: MIT Press.
- Lynch, Kevin (1981). *A Theory of Good City Form*. Cambridge: the MIT Press.
- Morris, AEJ.,(1984). *History of Urban Form (Before the Industrial Revolutions)*. Second Edition, third impression, John Wiley & Sons, New York.
- Norberg-Schulz, Christian (1980). *Genius Loci: Toward a Phenomenology of Architecture*. London: Academic Editions.
- Pant, Mohan, (2007). *Stupa and Swastika—Historic urban Planning Principles of Nepal's Kathmandu Valley*. Kyoto University Press.
- Sitte, Camilo, (1890). *City Design from Artistic Principles*.
- Schulz, Christian N., (1976). *The Phenomenon of Place*.
- Schulz, Christian N., (1971). *Existence, Space and Architecture*. Praeger Publishers,
- Rapoport, Amos (1977). *Human Aspects Of Urban Form: Towards A Man- Environment Approach To Urban Form And Design*. Oxford: PergamonPress.
- Rossi, Aldo, 1982. *The Architecture of the City*. Opposition Books.
- Tiwari, S. R., 2002. *Ancient Settlements of Kathmandu Valley*. CNAS, Tribhuvan University.

- Yoshinobu. A. (1983). The Aesthetic Townscape. Cambridge, Mass.: MIT Press.

Part B: Urban Conservation

1. Brief Description of the Course:

This course covers conservation of monuments and traditional settlements of Nepal. Nepal is very rich in cultural Heritage. Numerous monuments and traditional settlements were waiting for conservation. At present, after Nepal earthquake 2015, numerous national and international importance monuments were collapsed and damaged, conservation is very necessary in the country, Students who study in Urban Planning need to know the process and theories of conservation so that they could perform conservation activities in their professional life.

2. Objective of the Course the

Provide basic knowledge on the concept of conservation, Development of conservation idea and present context of Nepal and abroad. Knowledge on various approaches on conservation of historic built heritage as well as cultural heritage.

3. Course Outlines

- Overview and introduction of the basic concepts of conservation values, attitudes and principles. Importance of conservation, Conservation sites and areas, typology. Scope and basic techniques of urban conservation.
- Principles and approaches of conservation.
- Legal and administrative aspects, archeological acts/charters pertaining to conservation. Conservation Easement.
- World Heritage Centre and World Heritage Sites of Nepal and abroad, issues related to the management and conservation of the 'living' WH sites (with specific focus on the Kathmandu Valley Site).
- History and Present State of Conservation in Nepal.
- Conservation of traditional towns of Nepal (Focus on Kathmandu Valley) and abroad.
- Conservation of Cultural Heritage, NARA Declaration, international conventions on heritage conservation. International bodies: UNESCO and ICOMOS.
- Traditional conservation management through Guthi System in Nepal.
- Conservation issues, Conservation and Economy, Conservation and Tourism, Conservation and Transportation, Conservation and Development, Conservation and Disaster etc.
- Case studies of conservation Master Plans of different conservation sites and areas.
- Conservation practice in Nepal and international cooperation.
- Emerging issues and concepts in heritage.

4. Expected Output

Students will understand about conservation theories, Process and practices of different monuments and traditional settlements, towns and cities of Nepal and abroad.

5. Teaching Method

- Lectures, Group work, interaction and field visit

6. Assessment

- Assessment report/Seminar/Examination

Method

7. References

- Amatya S.,(2009). Conservation in Nepal..
- Bonapace C., Sestini V., (2003). Traditional Material and Construction Technologies used I the Kathmandu Valley. UNESCO, Paris. 2003.
- Feiden B.M., (1989). Conservation of Historic Buildings. Butterworth, London.
- Fitch J.M., (1990). Historic Preservation. Curatorial Management of the Built Environment. Charlottesville, University of Virginia.
- Gutchow N., Koelver B., Shresthacharya I.,(1987), Newari Towns and Buildings. VGH Wissenschaftsverlag Sankt Augustin, Germany.
- Gutchow N.,(1976), The Pujai Math: A Survey of Newar Building Techniques and Restoration Methods in the Kathmandu Valley.
- Korn, W.,(1979). The Traditional Architecture of the Kathmandu Valley. RatnaPustakBhandar, Kathmandu..
- ParajuliY.K.,(1986). Bhaktapur Development Project: Experience in Restoration and Preservation in Medieval Town (1974-1985). GTZ.
- Ranjitkar, R., (2006). Heritage Homeowner's Preservation Manual. UNESCO, Bangkok.
- Slusser M. Nepal Mandala, (1982). Princeton University Press.
- Ancient Monuments Preservation Act.(1963), Department of Archaeology.
- International Charters (Venice 1964, Burra 1981, Nara 1994, and ICOMOS and UNESCO Conventions Concerning the Protection of the World Cultural and Natural Heritage etc)

COURSE CURRICULA – Core Courses

(Year I/Part II)

RESEARCH METHODOLOGY

Course Type: Core, Credit: 4

1. Brief Description of the Course

The course on research methodology offers students an opportunity to prepare themselves for performing effective and responsible graduate level research in any discipline of choice. It is primarily focused at enabling student to perform and communicate research effectively in the field of urban planning. It is designed to provide an understanding of basic research methods and techniques used in social science. The course provides the knowledge of basic language of research, research methodology, research design, methods and technique of research performance. In addition to this, the course also offers

knowledge and techniques on research proposal preparations, literature review, and research report writings. After attending the course, the student will develop the ability to collect, structure, analyze and present information in logical form in order to make convincing arguments and well referenced and reasoned findings from research.

Objective of the Course

The course objective of research methodology is to acquaint students with the various available research methods with a special focus on the social research methods. The course is expected to increase awareness of the role of research design and methodology for urban research that have both scientific and social aspects. It aims at preparing students for the intellectual discussions on the range of methodologies available through critical reading and making an informed choice of the methodology and research design for doing urban research both in project works and thesis.

Content Outlines

- i. Introduction, nature and types of research, Qualitative and Quantitative approaches, language of research. Structure and processes of research (basic and applied research).Field research
- ii. Building blocks of research (ontology, epistemology, methodology, methods, sources). Paradigms in social research
- iii. Research and criticism, the research process (applied and basic research), Inductive and deductive logic.
- iv. Literature Survey, Building theory for research, Referencing formats and standards.
- v. Research methodology and methods, Basics of Questionnaire Survey, Ethnography, Experiments, Case Study, Modeling and Simulations. Details, concentrated tutorials and fieldworks for Questionnaire survey, Ethnography and Case Studies
- vi. Data analysis, interpretation and discussions, Tools in statistical analysis (SPSS software use), Methods of Inference and conclusions drawing
- vii. Research Proposals, Research reports: contents, formats and components, writing approaches.
- viii. Qualitative and quantitative methods and their application to questions regarding the effectiveness of urban planning/development policies and programs across the different level of governance

4. Expected Output: Students will be familiar with qualitative and quantitative research methodology and they should have clear understanding on methodology of their thesis.

5. Teaching Method: Lecture, consult, individual work

6. Assessment Method: Cumulative assessments will be made of interactions, presentations and reports of assigned activities in tutorial classes. In addition, outcomes (written report and presentation) of field works will form important basis for internal evaluation. Attendance requirements will be as per TU regulations (minimum 75% of contact hours have to be attended for eligibility to sit for examination).

7. References and Texts

- *Rossi, P.H., Wright, J.D. & Anderson, A.B. (1983), Handbook of Survey Research, Academic Press Inc., London.
- *McQueen, R. & Knussen, C. (2002), Research Methods for Social Science, Prentice Hall.
- *Jonker, J. & Pennik, B. 2002, The Essence of Research Methodology, Springer.
- Polonsky, M.J. & Waller, D.S. (2005), Designing and Managing a Research Project, SAGE Publications, Thousand Oaks.
- **Yin, R.K. (1994), Case Study Research, SAGE Publications, Thousand Oaks.
- **Groat, L. & Wang, D. (2002), Architectural Research Methods, John Wiley & Sons, Inc., New York.
- Alasuutari, P., Bickman, L., Brannan, J. & Brannen, J. (2008), The SAGE Handbook of Social Research Methods, SAGE Publications, London.
- Denzin, N.K. (1989), The Research Act, a Theoretical Introduction to Sociological Methods. (3rd ed). New Jersey: prentice hall, Englewood cliffs
- Denzin, N. K. & Linclon, Y. S. (Eds). (2005), The Sage Handbook of Qualitative Research. 3rd edition, London: Sage Publications
- Field, A. (2009), Discovering Statistics using SPSS, 3rd edn, SAGE Publications, London.
- Miles, M.B. & Huberman, A.M. (1990), Qualitative Data Analysis, SAGE Publications, Beverly Hills.
- Creswell, J.W. 1994, Research Design: Qualitative and Quantitative Approaches, SAGE Publications, Thousand Oaks.
- McGarth, R.E. (1997), Understanding Statistics: A Research Perspective, Longman, New York.

Core 6: Planning Studio-I

Course Type: Core, Studio oriented, Credit Hr.-4

1. Brief Description:

Students of Urban Planning should know how to prepare plan and in this subjects students will be taught on How to prepare Plan with background knowledge of core courses and elective course offered before this course.

2. Objective of the course

Provide knowledge on different plans and the process of Plan Preparation.

3. Course outlines

Planning graphics, survey methods, Data Collection analysis methods and plan preparation such as Local Area Plan/Action Plan/Physical Development Plan/Integrated Urban Development Plan/Strategic Plan

4. **Teaching Methods:** Practical- Site Visit, Case Study, Group Work-Single large work to be given to the students.
5. **Assessment Method:** Internal assessment of Submissions and Presentations. There will be no written exams.
6. **Expected Output:** Students will be able to conduct socio economic survey-data collection, Profile preparation, analysis of collected data and Plan preparation of urban areas.

References:

Student should refer prepared plans of different cities in national and international context.

COURSE CURRICULA – Elective – I (Year I / Part II)

ELECTIVE I: GEOSPATIAL TECHNOLOGY FOR URBAN PLANNING

Course Type: Elective, Credit Hr: 4

1. Brief Description of the Course

Geospatial Technology has wider definition and incorporates all the technologies use to acquire, store, analyse and visualize geographic information. Geospatial Technology include Geographic Information System (GIS), Global Navigation Satellite System (GNSS), Remote Sensing and other new and emerging technologies. These new and emerging technologies include Web GIS, mobile GIS, geofencing, geotagging, volunteered geographic information, virtual reality, Unmanned Aerial Vehicle/Unmanned Aerial System (UAV/UAS) mapping and host of other technologies. Tremendous leap in development of information communication technology and mapping technology over the last decade; their amalgamation and ease of access has made geospatial technologies ubiquitous. This has provided with huge opportunities to use geospatial technologies in urban sector. Geospatial technologies can play critical roles in capturing information of urban system and dynamics, examine things synoptically, help manage existing infrastructure and services, predict and model future scenarios(Jensen et al. 2005).

Requirement of geospatial data about the cities are growing exponentially. Ability to digitally represent and model various aspects of the cities using GIS in an enhanced visual environment has enabled planners to view their cities in virtual reality and predict future scenarios of polices and activities. Realizing the need of such information and tool, urban sector in Nepal has started using GIS based information and maps at municipal levels for various planning and governance works through the efforts of private sector and some support from the government department. Though all the cities have not implemented such system due to lack of human and financial resources.

Dept. of Architecture and Urban Planning at the Institute of Engineering, started GIS module (two credits) in MSc Urban Planning under the course module Computer Applications since 2005. The GIS Module contained fundamentals of GIS and its applications in urban studies, planning and management, focusing on the application cases in the context of Nepal. GIS module contained academic lectures and hands-on practical exercises using data on various aspects of urban environment developed for real urban planning projects. However, due to limited course hour of two credits, the scope of the module was very limited. Over the years, the GIS module has proved to be very useful for the students. The updating of the course structure with relevant course title and upgrading of the contents is deemed very important to keep in pace with the current development trends in geospatial technologies and its applicability in urban planning and studies.

Recognizing the need to extend the scope and contents of GIS in urban planning applications, the course has been upgraded to 4 credits as an elective with the change in the subject title as “Geospatial Technology for Urban Planning”. The contents of the course are also updated to incorporate various aspects of the subject matter and their applications in urban studies, planning and management.

2. Objective of the course

The elective module “Geospatial Technology for Urban Planning” aims to build knowledge and skills in using Geospatial and Earth Observation¹Science and Technology in current themes of urban planning and management. These themes include urban environment, urban transportation, infrastructure, disaster preparedness and management, land use, land administration and management, spatial decision support system, urban poverty, smart city and various others pertinent topics in urban sector. The objectives of the course are:

- To impart concepts and techniques of Geographic Information Science (GIS), Earth Observation Science and data integration focusing applications in urban systems
- To impart technical skills in usages of various geospatial methods to model urban environment and systems
- To impart concept and techniques of Planning Support System for sustainable urban development

3.Course Outline

Part 1 - Introduction to GIS and Remote Sensing for Data Acquisition, Analysis and Visualization of Urban Environment

Introduction to Geographical Information Science and Spatial Data Modelling

Spatial data acquisition using Remote Sensing

Spatial data acquisition using GNSS and other Methods

¹Earth Observation (EO) is method of gathering information about earths’ bio-physical systems using remote sensing methods supported by earth surveying techniques; encompassing collection, analysis and presentation of data.

Spatial Data Analysis

Data Visualization and Cartography

Part 2 – Advance Methods for Spatial Analysis and Modeling of Urban Environment

**Spatial Analysis for Site Selection/Suitability Analysis
Land Use Trends and Projection for Land Use Planning
Network and Flow Analysis**

Urban Application Case Studies

Case Study 1: Urban Hazard Vulnerability Assessment

Case Study 2: Risk Sensitive Land Use Planning

Case Study 3: Urban Environment/Infrastructure Planning

Case Study 4: Open Spaces and Evacuation Planning

Case Study 5: Others

- 4. Teaching Method** : Lectures, Group work, interaction and field visit. Hands on exercises
- 5. Assessment Method** : Assessment report/Seminar/Examination
- 6. Expected Output:** Students will be familiar with GIS and Remote Sensing application in context of urban planning.

7. References

Jensen, R.R., Gatrell, J.D., & McLean, D.D. (2005). *Geo-spatial technologies in urban environments*. Springer

Elective I: Urban Economics

Course Type: Elective, Credit hour: 4

1. Brief Description of the Course

The course presents theoretical understanding of cities, urban growth and urban problems from the perspective of economics. Different economic models are discussed to represent real-world issues including the use of regulations to address urban problems which can be treated as urban externalities. The course also highlights the role of economic forces in housing market, affecting the price of lands and thereby the intensity of land use. The course also includes financing mechanism for urban and infrastructure development.

2. Objective of the Course

The course aims to familiarize students with the economic version of how cities form, grow and decline as well as how economic actors (governments, developers and consumer residents) act in the housing market affecting the intensity of land use in terms of time as well as density. Students will also understand why certain urban problems exist and what types of regulations are necessary to mitigate them. Students will also learn about financing tools for urban projects such as land value capture.

3. Course Content

- Principles of economics for planners: Concepts and techniques of microeconomic analysis, the role of government in the economy, externalities, tax and pricing policy, economic modeling (closed versus open city model, mono-centric versus polycentric model, land ownership models, concept of utility and social welfare)
- Economist's view on urbanization: urbanization and economic development, market forces in the development of cities (existence of cities, clustering of firms, city size and primacy, urban growth)
- Land rent and land-use patterns: Urban land rent, bidding and land-use patterns, neighborhood choice, equilibrium land use versus optimum land use, zoning and growth controls (floor area ratio regulation, lot size zoning, urban growth boundary)
- Agglomeration: localization economies, urbanization economies
- Urban transportation: Externalities from auto (traffic congestion), congestion pricing as first-best solution and alternative second-best options
- Pattern of economic growth; industrial structure and location, city size and growth: characteristics, income inequality and urbanization
- Urban issues and policy approaches – Urban environment, urban crimes, urban regeneration/ redevelopment, urban blight, urban sprawl, gentrification, traffic congestion, housing

- Urban land market and real estate market: Supply and demand, types of interventions (land use regulations, tax/subsidies) and their impact on supply and demand, cost of land and infrastructure development; fringe land market, speculation
- Real estate economics: Development of real estate, process and financial calculations, concepts of discounting (net present value and internal rate of return), real estate markets
- Urban finance: source of urban finance; constraints in resources; private vs. public sector; replicability and feasibility, Henry George theorem, land value capture.

4. Teaching method

Lectures, group work, interaction, debates

5. Assessment Method

Assessment report, seminar presentation, seminar report/working paper, written examination

6. References

- Anas, A. (1978). Dynamics of Urban Residential Growth. *Journal of Urban Economics*, 5, 66-87.
- Anas, A., and Rhee, H.-J. (2006). Curbing excess sprawl with congestion tolls and urban boundaries. *Regional Science and Urban Economics*, 36, 510-541.
- Anas, A., and Rhee, H.-J. (2007). When are urban growth boundaries not second-best policies to congestion tolls? *Journal of Urban Economics*, 61, 263-286.
- Arnott, R., Davidson, R., and Pines, D. (1983). Housing Quality, Maintenance and Rehabilitation. *The Review of Economic Studies*, 50, 467-494.
- Arnott, R.J., and MacKinnon, J. G. (1977). Measuring the costs of height restrictions with a general equilibrium model. *Regional Science and Urban Economics*, 7, 359-375.
- Bertaud, A., and Brueckner, J. K. (2005). Analyzing building-height restrictions: predicted impacts and welfare costs. *Regional Science and Urban Economics*, 35, 109-125.
- Brueckner, J. K. (1990). Growth Controls and Land Values in an Open City. *Land Economics*, 66, 237-248.
- Brueckner, J. K. (2000). Urban Growth Models with Durable Housing: An Overview. In J. -M. Huriot and J. -F. Thisse, eds., *Economics of Cities*, pp. 263-289. Cambridge University Press.
- Brueckner, J. K., and Lai, F. -C. (1996). Urban growth controls with resident landowners. *Regional Science and Urban Economics*, 26, 125-143.
- Fischel, W. A. (2004). An Economic History of Zoning and a Cure for its Exclusionary Effects. *Urban Studies*, 41, 317-340.
- Fujita, M. (1989). *Urban Economic Theory- Land Use and City Size*. Cambridge University Press.
- Henderson, J. V. (1977). *Economic Theory and the Cities*. Academic Press.
- Kanemoto, Y. (1987). Externalities in Space. In T. Miyao and Y. Kanemoto, eds., *Urban Dynamics and Urban Externalities*, pp. 43-103. Harwood Academic Publishers.

- Joshi, K. K., Kono, T. (2009). Optimization of floor area ratio regulation in a growing city. *Regional Science and Urban Economics* 39(4), 502 –511.
- Kono, T., Joshi, K. K. (2012). A new interpretation on the optimal density regulations: Closed and open city. *Journal of Housing Economics*, 21(3), 223-234.
- Kono, T., Joshi, K. K., Kato, T., and Yokoi, T. (2012). Optimal regulation on building size and city boundary: An effective second-best remedy for traffic congestion externality. *Regional Science and Urban Economics*, 42(4), 619-630.
- Lai, F. -C., and Yang, S. -T. (2002a). A view on optimal urban growth controls. *The Annals of Regional Science*, 36, 229-238.
- Lai, F. -C., and Yang, S. -T. (2002b). Reply to the alternative optimal growth controls. *The Annals of Regional Science*, 36, 241-245.
- Lin, C. -C., Mai, C.-C., and Wang, P. (2004). Urban land policy and housing in an endogenously growing monocentric city. *Regional Science and Urban Economics*, 34, 241-261.
- Litman, T. (1995). Land use impact costs of transportation. *World Transport Policy & Practice*, 1, 9-16.
- Miyao, T. (1987). Urban Growth and Dynamics. In T. Miyao and Y. Kanemoto, eds., *Urban Dynamics and Urban Externalities*, pp. 1-42. Harwood Academic Publishers.
- O’Sullivan, Arthur (2012). *Urban Economics*, 7th edition. McGraw-Hill.
- Pasha, H. A. (1992). Maximum Lot Size Zoning in Developing Countries, *Urban Studies*, 29, 1173-1181.
- Pasha, H. A. (1996). Suburban Minimum Lot Zoning and Spatial Equilibrium, *Journal of Urban Economics*, 40, 1-12.
- Reifschneider, A. P. (2006). *Competition in the Provision of Local Public Goods: Single Function Jurisdictions and Individual Choice*. Edward Elgar.
- Ross, C. L., and Dunning, A. E. (1997). *Land Use Transportation Interaction: An Examination of the 1995 NPTS Data*. U.S. Department of Transportation Federal Highway Administration.
- Rossi-Hansberg, E. (2004). Optimal urban land use and zoning. *Review of Economic Dynamics*, 7, 69-106.
- Sakashita, N. (1995). An economic theory of urban growth control. *Regional Science and Urban Economics*, 25, 427-434.
- Sasaki, K. (1998). Optimal urban growth controls. *Regional Science and Urban Economics*, 28, 475-496.
- Sasaki, K. (2002). Alternative view on optimal urban growth controls. *The Annals of Regional Science*, 36, 239-240.
- Solum, L. B. (2006). Public Legal Reason. *Virginia Law Review*, 92, 1449-1501.
- Varian, H. L. (2005). *Intermediate Microeconomics- A Modern Approach*. W. W. Norton & Company.
- Wheaton, W. C. (1998). Land Use and Density in Cities with Congestion. *Journal of Urban Economics*, 43, 258-272.

COURSE CURRICULA – Elective – II

(Year I: Part II)

Elective II: Urban Modeling & Simulation

Course: Elective; Credits: 4

Brief Description of the Course

The city is complex and multidimensional. The change in the urban environment is continuous and the actions are not easily predictable. Effective urban planning and infrastructure investment rely on our ability to assess future needs today. Models are one instrument for obtaining projections of what future conditions will be. Thus, Urban Model provides a planning tool that enables the quantification and qualification of the impact of an urban development in the city. With the development of computer systems, new simulation models, which detect the elements, relationships and the dynamics in a simplified form, allow us to achieve urban development goals. It helps to make more transparent decision-making processes and to make aware all stakeholders; the advantages and disadvantages associated with a project and contribute to the democratization of urban policy decisions.

Objective

The goal of the course is to provide students with skills to design and implement different models that represent the urban phenomenon and structures.

Outline of Course Contents

- What are Models: The Scientific Context: Definitions of Model and Theory: The Model - Building Process, Data Analysis to Calibration to Prediction. Accuracy Assessment
- Modeling Types and Styles: Urban Models defined: Classifications of Models, Model Terminology
- Land Use Transportation Models (Spatial Interaction Centre for Advanced Spatial Analysis)
- Urban Infrastructure Models (Urban Water and Sanitation, Utilities, Transport Networks)
- Urban Disaster Models (Flood, Earthquake)
- Models' Documentation: Experimental Results' Statistical Processing and Analysis
- Using Models in Urban Planning Support Systems
- Challenges and Limitations in Modeling and Simulation

Teaching Method: Lectures, Group work, Interaction

Assessment Method: Assessment report/Seminar/Examination

Expected outcome: After the course completion, students will have understanding of model formulation and knowledge of different urban models and its application.

Prerequisites: Basic knowledge of computer, Geographic Information Systems and Statistics.

References:

- Marengo, M.C. (2014), Urban Simulation Models: Contributions as Analysis-Methodology in a Project of Urban Renewal ; Current Urban Studies, 2014, 2, 298-305;
- Batty, M. (2010), Urban Simulation: Methods, Models and Planning Applications, University College London
- Johnston, R. A. & Clay, M. J.. (2004), A Graduate Course Comparing the Major Types of Urban Models; Journal of Planning Education and Research.
- Juan de Dios Ortúzar, Luis G. Willumsen, Modelling Transport, Fourth Edition, ISBN: 9780470760390

Elective II: URBAN ECOLOGICAL AND LANDSCAPE PLANNING

Course Type: Elective, Credit Hr: 4

1. Brief Description of the Course:

Faced with global challenge of climate change, and forecasted scarcity of resources at one side and at the other, exponentially increased number of municipalities, sub metropolitan and metropolitan town and cities have created new opportunities as well as challenges to the architects and planners of our country Nepal. Therefore, our professional pedagogies and practices needs to realign to promote an interdisciplinary and cross-sector response to the urban conditions.

Hence, we intent to examine the challenges faced and opportunities for the next generation of architects, planners, engineers, scientists, and other professionals as we undertake necessary cultural, ethical and behavioral shifts towards more sustainable and resilient urban settlements.

This is a elective but studio based course which synthesizes the work from the field so far landscape ecology, environmental planning, and landscape design. This is a journey and investigation of the roles landscape planning play in making the upcoming towns and cities livable. It will include study of landscape planning methods, assessment of natural, cultural and political conditions; technological tools that enhance the execution of classic Mc Hargian principles; methods of the public participatory process, techniques for communication and documentation; implementation strategies. It will focus on real life design results of adopted and constructed visions large and small.

Students will develop an enhanced understanding of where landscape planning (design) plays an imperative role in reconciling natural, social, cultural, political and economic conflicts in cities.

2. Objectives of the course

The objectives of this course is to explore the ways in which the natural world interacts with cities, regions, and sites, and in turn how designs at these scales can incorporate the natural world into the urban environment in a way that maximizes environmental protection and enhances the human experience.

Develop an understanding of ecological systems and processes relevant to design,

Develop an understanding of sites as part of bioregional systems,

Develop methods for inventorying, recording and mapping site data,

Develop skills to integrate and synthesize data into sustainable design solutions,

Gain an overview of projects and practices that incorporate ecological thinking into design,

3. Course Contents

Part I : Theoretical Orientation

Introduction to course, syllabus, class structure, readings, expectations and assignments.

Landscape Urbanism: Introduction to the role of the landscape architect in city planning, merging physical design with proposals for new development. Survey on human influence on the land, ancient to new; and emerging trends in the practice of landscape architecture in the city. Historic land planning; evolution of trends – defensive town planning, the market place, plazas, parks and focus on the public nature and purpose of these methods of landscape urbanism. McHarg , his principles, and their application in the evolution of landscape planning; moving McHarg forward through the methods of GIS. Landscape planning in the urban context. Introduction to social, cultural and political factors. Corridor Ecology. Survey of public participation practices: public meetings, public hearings, charrettes, engaging communities in dialogue for change and the implementation of change.

Part II. Field Study

Introduction to different case studies. Focus on cases evocative of the tension between development (no matter how well intended) and conservation: new urbanize town inserted into agricultural land. Resources mapping, inventorying, and analysis. Key stakeholders meetings.

4. **Teaching Method:** Lectures, Group work, Interaction, Field visit and field work.
5. **Assessment Method:** Assessment report/Seminar/No examination
6. **Expected Output:** Students will understand Landscape and Ecological Phenomena of cities and settlements. They will be able to prepare Landscape Planning considering ecological aspects.

Reference Books

- Sucher,D., (2003), City Comforts, How to Build an Urban Village by David, City Comforts, Inc., Seattle.
- Jodi A, Hilty, (2006), Corridor Ecology, The Science of Linking Landscapes for Biodiversity Conservation, Island Press,
- McHargue,I., (1992),Design with Nature, John Wiley & Sons,
- Karen C., Hanna, (1999), GIS for Landscape Architects, ESRI Press.
- Lynch,K., (1960), Image of the City, MIT Press.
- Waldheim,C., ed., (2005), Landscape Urbanism Reader, Princeton Architectural Press.
- William M.(2010), Landscape Planning: Environmental Applications, 5thEdition. John Wiley & Sons, New York.

Elective II: GEOLOGICAL CONSIDERATION IN URBAN PLANNING

Course Type: Elective, Credit hrs. -4

1. Brief Description of the Course

Urban development is continuous process as human civilization continued. Safe habitat for comfort life is present people's expectation. To fulfill this desire the engineering and scientific institutions should initiate better education to consider human necessity as well as requirement.

The present course will fulfill the selection of best urban sites in conflict as per nature and human interactions. Urban Planners could select safe site for the development of neighborhood and cities.

2. Objectives of the Course

The objectives of present course is to provide scientific theoretical knowledge for students who will be responsible persons as experts in national / international urban planning , so that they should know about earth processes, geological formations, structural geological factors that play key role in landform development, and their impact in urban planning where people will able to settled/resettled for better and comfortable life.

3. Course Outline

1. Development of Urban and Urbanization
2. Sociological & Anthropological aspect of Urban development
3. Stages or phases of Urban Planning
4. Economic Factors affecting urban planning w.r.t. Physical aspects
5. Earth materials and their formations
6. The Earth process and development of landform
7. Geological or Earth Processes (Internal & External)
8. Landform development processes by actions geological agents
9. The analysis of Impacts of landform development processes in urban planning
10. Consideration of geological processes in urban planning
11. Challenges facing worldwide due to earth or geological processes in safe urban site selections
12. Geomorphologic and structural geological analysis in best site selection for urban planning

8. Teaching Method: Lectures, Group work, interaction and field visit

Fieldwork: Field visit for observation & analysis of geomorphologic features around Kathmandu Valley and outside KTM.

Practical work: Topographical, Regional geological, satellite image study for landform development analysis

Case study with reference to national as well International perspectives

9. **Assessment Method** : Assessment report/Seminar/Examination

10. **Expected Output:** Students will be familiar with geological phenomena and its consideration in Urban Planning.

11. References:

- Holme's Principles of Physical Geology, Edited by P. McL. D. Duff, ELBS, 4th Edition
- Newsome, D. & Dowling, R. K. 2010, Geotourism, The Tourism of Geology & Landscape, Oxford, Goodfellow, Publisher.

Elective II: Project Development and Professional Practice

Course Type: Elective, Credit hours: 4

1. Brief Description of the Course

The course deals with the development and management aspects of projects with focus on urban and infrastructure development. The course explains various components/stages of a project, and highlights the application of logical framework approach and its different manifestations adopted by various development agencies. The course content also includes project appraisal techniques including financial analysis and risk analysis, project management techniques including PERT and CPM, and different aspects of professional practice.

2. Objective of the Course

The course aims to prepare students to take the role of project developer/manager. Students will learn about the project cycle and its stages, and about project formulation using logical framework approach, and in the way, they will be familiar with the different forms of project formulation approaches adopted by different development agencies. The course will familiarize students about financial analysis through the concepts of present worth, future worth, discounting, compounding, methods, financial vs social cost benefit analysis, project risk analysis, sensitivity analysis. Students will also learn about project management, planning and scheduling using tools such as PERT and CPM. Finally, students will be familiarized with the government processes regarding project development and execution as well as with the challenges of professional practice in Nepal.

3. Course Content

- Introduction to project development: Definitions, resources, approach, dimensions, constraints, project versus program, project lifecycle
- Project lifecycle: Concepts, stages (selection, initiation, planning, execution, monitoring and evaluation, closure)
- Logical framework approach: Hierarchy of objectives, concepts, logframe matrix, analytical stage (stakeholders analysis, problems analysis, objectives analysis, alternatives analysis), planning stage (logframe, plans of operations, assumptions and risks, indicators), applications of logical framework approach (e.g., Design and Monitoring Framework, Project Framework Matrix)
- Planning and project appraisal: Uniqueness of planning projects; interlinkages of various projects; role of investment plans and financial plans in the planning exercises.
- Financial analysis: Concepts of present worth, future worth, discounting, compounding methods (NPV, IRR, ERR, payback period, cost-benefit analysis) and drawbacks/ limitations, financial vs social cost benefit analysis, project risk analysis, sensitivity analysis.
- Decision-making under risk and uncertainty – Sources of error in demand forecasting; conditions of certainty, risk and under certainty; sensitivity analysis and probability analysis; traditional and new approaches, use of simulation techniques.

- Policy parameters for appraisal of projects: Governmental decision-making process, finance – private and public, cost recovery, standards and design, operational maintenance, public involvement
- Project management, planning and scheduling: Problem solving cycle, models, techniques in project management (Gantt chart, CPM, PERT), type of problems encountered in project implementation, cost and time over runs – possible sources of delay, project crashing.
- Professional practice: Aims and objectives of professional institutes, professional bodies, professional role and responsibility of planning consultants, professional ethics, code of conduct, consultancy agreements and contracts, managerial aspects, role in inter-disciplinary groups, appreciation of the decision-making processes.

4. Teaching method

Lectures, group work, interaction, debates

5. Assessment Method

Assessment report, seminar presentation, seminar report/working paper, written examination

6. References

- Danida (1996). *LFA - a Flexible Tool for Participatory Development*. Danish Agency for International Development Cooperation
- European Commission (1993). *Project Cycle Management: Integrated Approach and Logical Framework*, DGVIII, Evaluation Unit.
- GTZ (1996). *Project Cycle Management (PCM) and Objectives-Oriented Project Planning (ZOPP) – Guidelines*. Deutsche Gesellschaft für Technische Zusammenarbeit.
- NORAD (1996). *The Logical Framework Approach (LFA) - A Handbook for Objective-Oriented Planning*, Norwegian Agency for Development Cooperation.
- Panneerselvam, R. (2013). *Engineering Economics*, Second edition. New Delhi: PHI Learning.
- SIDA (1996). *Guidelines for the Application of LFA in Project Cycle Management*. Swedish International Development Agency, Methods and Institutional Development Unit.
- Toffolon-Weiss, M. M., Bertrand, J. T., and Terrell, S. S. (1999). *The Results Framework -- An Innovative Tool for Program Planning and Evaluation*. Evaluation Review.
- UNIDO (1986). *Guide to Practical Project Appraisal -- Social Benefit Cost Analysis in Developing Countries*. United Nations Industrial Development Organization, Vienna.

COURSE CURRICULA – Project/Planning Studio-II

(Year II / Part I, 4 credits)

Project / Planning Studio-II

Course Type: Core, Credit hr:4, (Semester III)

1. Brief Description of the Course

In this studio based course, students should know all knowledge of basic courses and also they should know the process of plan preparation. With the background knowledge of Urban Conservation, students will be taught on how to prepare Conservation Master Plan of traditional settlements, Towns, cities,

- 2. Objective:** To provide knowledge on preparation of Conservation Plan of different traditional towns.

3. Course Contents

Conservation Plans of Different cities, Conservation Areas, World Heritage Sites. Site Visit, Data Collection and Analysis of collected data, preparation of Conservation Plan.

- 4. Expected Output:** Students will be able to prepare Conservation Master Plan of Heritage Sites, Conservation Areas etc,
- 5. Teaching Methods:** Practical, field Visit, Case study, data collection, Group work
- 6. Assessment Methods:** Internal Assessment (submissions and presentations). There will be no written examination.

References:

Students have to refer Conservation Master Plans of different Cities, towns, Conservation Areas and World Heritage Sites of national as well as international context.

COURSE CURRICULA – Elective – III

Elective III: Urban Informal Sector

Credit hour: 4

1. Brief Description of the Course

In many developing cities, informal sector accounts for more than half of the city economy, and yet informal workers or enterprises are often dismissed in urban discourse as “hidden, gray, shadow, informal, clandestine, illegal, unobserved, unreported, unrecorded, second, parallel, and black” (Fiege, 1990). However, there is now an increasing recognition of the important role played by the informal sector in reducing urban unemployment and thereby poverty and crime. At the same time, cities cannot afford to ignore potential revenues lost to tax-evading informal sector. This course discusses the conceptual emergence of informal sector from historical, economic and statistical perspectives, and the conceptual evolution from ‘informal sector’ to ‘informal economy’ or simply ‘informality’. The course also highlights the needs for ‘formalization’ and examines both policy and non-policy barriers to formalization. The course covers the spatial aspect of informal economy to aid urban planning exercises. The issue of informal settlements is also addressed as an example of informality in housing.

2. Objective of the Course

The course aims to familiarize students with the historical context and economic forces behind the emergence of informal sector, and how informal sector dominates the urban economy in developing cities relative to developed cities. Students will learn about different economic models that explain rise of informal sector in different economic contexts. Students will also learn about the necessity for formalization, barriers, and ways to overcome them. The course also aims to equip students to think spatially about informality in terms of where and when informal activities take place in the city. Students will also be exposed to the issues of informal settlements. The course aims to enable students to think about appropriate policy measures to address informality in Nepal’s context.

3. Course Content

- Development of the concepts: Historical overview, definitions (economic, statistical), hypothesis, characteristics, subsectors.
- Economic perspectives in understanding the urban processes and their outcome manifested in urban poverty, migration, rapid urbanization, growth of low-income settlements, growth and characteristics of the informal sector.
- Policy implications and dilemma
- Gender perspectives
- Informal economy: Conceptual evolution from 'informal sector' to 'informal economy', formal versus informal economy (differences), share of informal economy in global and national context, impact of informality on economy, causes of informality (demand-side, supply-side, and structural)
- Economic models: Dual Sector Model (Lewis Model) of development, Harris-Todaro Model of rural-to-urban migration, Bid Rent Theory

- Views examining the non-economic factors determining urban change, marginality and marginalization
- Measuring informal economy: Rationale, types of agents under the rubric of informality, employment in the informal sector/ informal employment (ICLS definitions and conceptual evolution), informal sector enterprises, margins of informality, methods of measuring informal sector (direct, indirect, model approach), measuring informal sector/economy in Nepal (approach and practices)
- Informal enterprises: Characteristics, factors of production (land, labor, and capital), linkages with rest of the economy, socio-demographic components, legal issues including provision in Nepal to establish enterprises, barriers against formalization (capacity versus willingness), policy options
- Spatial dimension: Study of informal sector from the perspective of urban planning, Hotelling's Location Model, spatial behaviors of street vendors, relationships between formal and informal enterprises/ workers, spatial-temporal analysis of informal economic activities, use of urban space
- Informal settlements: Economic perspectives, rural-urban migration, locational choice, housing conditions, formation of informal settlements, slums versus squatter settlements, linkage between informal settlers and informal sector, housing for the urban poor, role of government, shelter policy of Nepal
- Critical perspectives, key issues, proscriptive policies/ strategies and planning practices in – basic needs approach, community planning approach, integrated action planning, urban informal sector planning, urban infrastructure planning.

4. Teaching method

Lectures, group work, interaction, debates, A/V.

5. Assessment Method

Assessment report, seminar presentation, photo essays, seminar report/working paper, written examination

6. References

Benería, L and M. Floro (2006). *Labor Market Informalization, Gender and Social Protection: Reflections on Poor Urban Households in Bolivia, Ecuador and Thailand*. In: in S. Razawi and S. Hassim, eds. *Gender and Social Policy in a Global Context: Uncovering the Gendered Structure of "the Social"*, Basingstoke: Palgrave.

Feige, Edgar L., 1990. *Defining and estimating underground and informal economies: The new institutional economics approach*. *World Development*, Elsevier, vol. 18(7), pp. 989-1002, July.

Fukuchi, T. (1998) *A Simulation Analysis of the Urban Informal Sector*. *The Developing Economies*, XXXV1-3, pp. 225-256.

- ILO (1972). *Employment, incomes and equality -- A strategy for increasing productive employment in Kenya*. International Labour Organization, Geneva.
- ILO (1991). *The Dilemma of the Informal Sector*, Report of the Director-General, International Labour Conference, 78th Session, International Labour Office, Geneva.
- ILO (1999). *Decent Work*. Report of the Director-General to the 87th Session of the International Labour Conference. International Labour Office, Geneva
- ILO (2000), *World Labour Report 2000*, Geneva: International Labour Office.
- ILO (2002). *Decent Work and the Informal Economy*. Geneva: International Labour Office.
- Schneider, F. and Enste (2000). *Shadow economies: Size, causes, and consequences*. Journal of Economic Literature. Vol. XXXVIII, pp. 77-114.
- Sethuraman, S. V. (1976). The Urban Informal Sector: Concept, Measurement and Policy. International Labour Review, Vol. 114, No. 1.
- Sethuraman, S.V., 1981. *The urban informal sector in developing countries: Employment, poverty and environment*. Geneva: International Labour Office.
- UN-HABITAT (2006). *Innovative policies for the urban informal economy*. United Nations Human Settlements Programme.
- World Bank (2001). *World Development Report 2000/2001: Attacking Poverty*. Washington D.C. World Bank.

COURSE CURRICULA – Elective – IV

(Year II / Part I, 4 credits)

Elective IV: Interdepartmental Courses

Credit hour: 4

Student can take the elective course of 4 credits, offered in any other M.Sc Program in the Department of Architecture or any other Department, that relevant to urban planning.

COURSE CURRICULA – Thesis Work

(Year II: Part II, 16 Credits)

1. Brief Description of the course

After having knowledge on all core and elective courses of MSc. in Urban Planning, students have to do thesis on related issues of urban planning. In thesis students do research on their interested topic on Urban Planning. Students work on thesis for the whole semester (fourth semester). They have to present Preliminary, Mid Term and Final Presentation. Final Presentation is the Final Defense.

2. **Teaching Method:** For thesis, supervisor will be nominated according to the thesis title and students have to consult with their respective supervisors.
3. **Assessment method:** Different phases of presentations, written reports. No return examination. Students have to publish their article on their thesis in National or international journal for defense their thesis.
4. **Expected Output:** Students will be familiar with one of the urban issues in depth.

After defense and submission of their final thesis, students will be awarded the degree on MSc. in Urban Planning.

