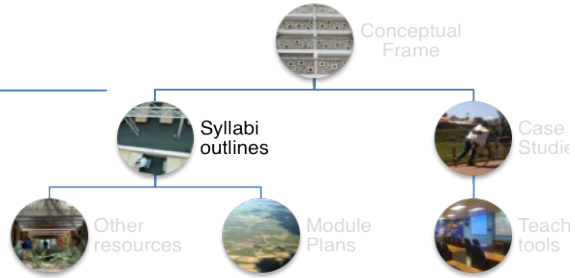
Syllabus Outline: Urban Infrastructure (Post-Graduate)



1. Course Description

The focus of this course is on infrastructure and human settlements as structuring elements in the ongoing development and evolution of cities. The course explores this from a theoretical point of view but uses case studies to enable a more experiential engagement with the intricacies of infrastructure delivery in the contemporary city.

2. Entry Requirements

- Undergraduate degree.
- Completion of course(s) in Urban History and/or History of Urban Form.

3. Time Commitment and Format

- 28 x 45 min sessions

4. Justification / Rationale

The contemporary city is the outcome of historical influences, urbanization patterns that have evolved over the years and the interventions of politicians, state bureaucrats and of course built environment professionals. Underpinning its structure is its natural frame and landscape...elements that determine urban form in conjunction with human intervention in the form of service and social infrastructure. The placing and control of these service elements has become part of an increasingly complex process of negotiations between state service providers, semi-state organizations, community based actors and the private sector. Thus, the physical form of the city represents the outcome of a socio-technical process, explored in detail in this course.

5. Learning Outcomes

- An understanding of the range of infrastructural services that impact on the urban system; what they are and how they are delivered;
- Knowledge of the range of actors that are responsible for the planning, delivery and maintenance of service and social infrastructure;
- Insight into how infrastructural services shapes the built environment.
- Understanding of the operational interface between planning and infrastructure

6. Pedagogical Approach

The lecture format is used t lend structure to the courses and introduce students to the main theoretical work that informs this field. However, this course relies largely on mixed delivery methods, ranging from using film, facilitating group discussions and peer learning. Case studies are used.

7. Support and Mentoring

The course requires some assistance to students in poster preparation and the Pecha Kucha method of presentation. Resources are provided in this regard.

8. Learning Units and Objectives

The course comprises four parts:

i. The evolution of the relationship between infrastructure, urban planning and cities.
ii. Material elements of utility, social and eco-service infrastructure
iii. Actors, agency and socio-technical relations in the city.
iv. When infrastructure fails

The learning objectives for each, learning sessions (lectures) and formats are outlined below. Where resources and teaching tools are made available in this toolkit, reference is made to it in the right-hand column.

Part	Learning Objectives	Sessions	Format	Resources
i. Historical Evolution	Understanding of how infrastructures have shaped cities historically	1. INTRODUCTION COURSE OUTLINE 2. CORE CONCEPTS 3. HISTORY OVERVIEW 4. CASE 1: PARIS 5. CASE 2: LONDON 6. REFLECTING ON THE CASES 7. INFRASTRUCTURE AND + CITIES OF THE GLOBAL 8. SOUTH	Student introductions and sharing of their expectations Lecture Lecture Film Film Class discussion on Paris and London **Group Assignment (10%)** Pecha Kucha Presentations	 Urban Infrastructure 1.PPT Urban Infrastructure 2.PPT http://www.yourdiscovery.com/history/we_built_this_city/ History Cases Questions.DOC UI Assignment 1.DOC www.pechakucha.org
ii. Material Elements	A thorough understanding of the material elements, the standards that guide them (a questioning thereof) and implementation	9. UTILITY INFRASTRUCTURE 10. 11. TRANSPORT 12. INFRASTRUCTURE 13. ECO-SYSTEMS SERVICES 14. 15. SOCIAL FACILITIES 16.	Lectures by specialists; engineers, natural scientists and practitioners. The requirement is an engagement with practice and examples from the Global South and the immediate country context.	See Bibliography
iii. Actors, Agency and Socio-technical relations	Knowledge of the many actors that make up the infrastructure landscape and how the relations between them shapes the urban; understanding the role of the planner in this	17. SPLINTERING URBANISM 18. Critique 19. VALUE CAPTURE 20. 21. UNCOVERING ACTORS AND 22. AGENCY	Lecture Class discussion Lecture by Property Development Specialist Group poster presentations	 UI Assignment 2.DOC See Case Studies
iv. When Infrastructure Fails	Uncovering the dynamics of infrastructure failure	23 WHEN INFRASTRUCTURE 24 FAILS 25 26 27 28	Lecture	When Infrastructure Fails.DOC See Case Studies

9. ASSESSMENT

Assignment Topics

- Lewis Mumford referred to the constellation of infrastructural elements that make up utilities as the 'invisible city', invisible on the surface yet critical to the ongoing functioning of cities.

  Focusing on an infrastructural element, explain its interrelationship with other elements, and its relationship to urban form. Use examples to illustrate the relationship, firstly, between infrastructural elements, and secondly between city form and networked infrastructure.

- The unbundling of infrastructural networks and economic liberalisation has resulted in "…an entirely new infrastructural landscape that radically challenges established assumptions that have underpinned the relations between integrated networks and cities." (Graham and Marvin 2001: 139).

  How does this apply to cities of the Global South? Use examples in your discussion.

- The relationship between spatial planning and infrastructure, under the modernist ideal of the integrated city, has been seen to be complimentary and mutually supportive. In many ways urban planning has been seen as a key instrument in implementation of the modern infrastructural ideal.

  Discuss how this relationship has been undermined in the last 20 years and what is required for planning to play a more pro-active role in the contemporary infrastructural landscape.

Requirements

- Between 5 000 and 6 500 words
- Use annotated diagrams and photos where appropriate

10. Secondary Sources

GENERAL READINGS (More detailed references are given in relation to particular topics)

The Role of Infrastructure in the Evolution of Urban Systems

Gandy, M. (2005) Cyborg Urbanization: Complexity and Monstrosity in the Contemporary City, in International Journal of Urban and Regional Research, Vol. 29: 1 26-49.

International Journal of Urban and Regional Research: Special Issue on Cities and Infrastructure Networks. Vol. 24.1. March 2000. (Selected papers)

Graham, S. Introduction , in Graham, S. (Ed.) (2009) Disrupted Cities: When Infrastructure fails. London, Routledge.

Heller, L. (1999) Who really benefits from environmental Sanitation Services in the cities: An intra-urban Analysis in Betim, Brazil, in Environment and Urbanization, Vol. 11, No. 1.

Horner, M.W. (2004) Spatial Dimensions of Urban Commuting: A Review of Major Issues and their Implications for Future Geographic Research, In The Professional Geographer, 56 (2), pages 160 - 173.

Material Elements

Transportation

Angel, S (2008) “An Arterial Grid of Dirt Roads” Cities 25, 146-162

Appleyard D (1983) "Streets can Kill, Third World Beware: Guidelines for Street Design in Third World Cities" Habitat International, 7 (3/4)

Dewar D, Todeschini F (2004), Rethinking Urban Transportation After Modernism: Lessons From South Africa, Ashgate, London

Guilicano G (1995) "Land Use Impacts of Transportation Investments: Highway & Travel" chapter 13 in Hansen S (ed) The Geography of Urban Transportation, 2nd edition, Guilford Press, New York

Nijkamp, P. Ouwersloot, H. and Rienstra, S.A. (1997) Sustainable Urban Transport Systems: An Expert-based Strategic Scenario Approach, in Urban Studies, Vol. 34, No. 4, 693 - 712.

Tolley R and Turton B (1995) Transport Systems, Policy and Planning: A Geographic Approach, Chapter 8, Longman, Harlow

Guilicano G (1995) "Land Use Impacts of Transportation Investments: Highway & Travel" chapter 13 in Hansen S (ed) The Geography of Urban Transportation, 2nd edition, Guilford Press, New York

Tolley R and Turton B (1995) Transport Systems, Policy and Planning: A Geographic Approach, Chapter 8, Longman, Harlow

Public Space and Public Facilities

Behrens R and V Watson (1998) Making Urban Places: Principles and Guidelines for Layout Planning, UCT Press

Dewar D, RS Utenbogaardt, F Todeschini (1999) Guidelines for the Making of Settlements, CSIR, Pretoria

Utilities

Behrens and Watson (1998), Making Urban Places: Principles and Guidelines for Layout Planning, UCT Press

“Cities and Infrastructural Networks” (2001) Special edition, International Journal of Urban and Regional Research, 24(1)

Gandy, M. (2004) Rethinking Urban Metabolism: Water, Space and the Modern City, in City, Vol. 8, No. 3.

Housing

Bassett K & Short JR (1980): Housing and Residential Structure: Alternative Approaches. Routledge & Kegan Paul, London

De Soto, H (2000) The Mystery of Capitalism: Why Capitalism Triumphs in the West and Fails Everywhere Else, Basic Books, New York

Dewar D (1996) The Urban Housing Issue, Free Market Foundation Monograph Series, Johannesburg

Drakakis-Smith D (1979) "Low-cost housing provision in the Third World: some theoretical and practical alternatives", in Murison HS & Lea JP (eds): Housing in Third World Countries: Perspectives on Policy and Practice. Macmillan.

Hardoy JE & Satterthwaite D (1989): Squatter Citizen: Life in the Urban Third World, Earthscan, London

Huchzermeyer, M (1999), The Exploration of Appropriate Informal Settlement Intervention in South Africa, Contributions from a Comparison with Brazil, unpublished PhD Thesis, UCT

Huchzermeyer, M (2002), Informal Settlements: Production and Intervention in Twentieth-Century Brazil and South Africa. in Latin American Perspectives, Vol. 29, No. 1.

Payne, G (ed) (2002) Land Rights and Innovation: Improving Tenure Security for the Urban Poor, LTD G Publishing, London

Wilkinson P (1981) "The housing question reconsidered: towards a political economy of housing in South Africa", in Development Studies Group (eds): Debates on Housing DSG/SARS Information Publication No 4

Actors and Agency in Urban Systems

Geoforum Special Issue on Splintering Urbanism, Vol. 39.

Graham, S. and S. Marvin (2001). Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition. London, Routledge. Chapters 1 and 2.

Kuyucu, T and Unsal, O. (2010) 'Urban Transformation' as State-led Property Transfer: An Analysis of Two Cases of Urban Renewal in Istanbul, in Urban Studies, 47(7) 1479-1499.

Sahely, H.R. Kennedy, C.A. and Adams, B.J. (2005) Developing sustainability criteria for urban infrastructure systems, in NRC Journal Canada.

Straub, S. (2008) Infrastructure and Development: A Critical Appraisal of the Macro Level Literature, World Bank Policy Research Paper no 4590.

When Urban Systems 'fail'

Asdar Ali, K. and Rieker, M. (2008) Introduction: Urban Margins, in Social Text 95, Vol .26, No 2.

Barredo, J.I. and Demicheli, L. (2003) Urban Sustainability in Developing Countries' Megacities" Modelling and Predicting Future Urban Growth in Lagos, in Cities, Vol. 20, No. 5, p 297-310.

Gandy, M. (2006) Planning, Anti-planning and the Infrastructure Crisis Facing Metropolitan Lagos, in Urban Studies, Vol. 43, No. 2, 371-396.

Gandy, M. (2006) Water, Sanitation and the Modern City: Colonial and Post-colonial Experiences in Lagos and Mumbai, UNDP Human Development Report Occasional Paper.

Graham, S. (Ed.) (2009) Disrupted Cities: When Infrastructure fails. London, Routledge.

McFarlane, C. (2009) Infrastructure, Interruption, and Inequality: Urban Life in the Global South, in Graham, S. (Ed.) (2009) Disrupted Cities: When Infrastructure fails. London, Routledge.

Morka, F.C. (2007) A Place to Live: a Case Study of the Ijora-Badia Community in Lagos, Nigeria, Case Study prepared for Enhancing Urban Safety and Security: Global Report on Human Settlements 2007, UNHabitat.

Obayagbona, H. (2008) Governance without Government: Water Provision in Lagos, Nigeria, Institute of Social Studies Research Paper, in partial fulfilment of Masters of Arts in Development Studies.

Olajide, O. (2010) Confronting the Lagos Informal Land Use: Issues and Challenges, in CORP Proceedings, Vienna, 18-20 May 2010.

Other General Readings on Urban Change

Bentley, I (2004), Urban Transformations, Routledge, London

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Gilbert, A, J. Gergler (1992), Cities, Poverty and Development: Urbanisation in the Third World, Oxford University Press, Oxford.

Harvey, D (1998) “The Urbanization of Urban Capital” in Harvey D, Studies in the History and Theory of Capitalist Urbanisation, Basil Blackwell.

Kwill, P (1993) Land and the City: Patterns & Processes of Urban Change, Routledge, London

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Hinderink, J. and Titus, M. (2002) Small Town and Regional Development: Major Findings and Policy Implications from Comparative Research, in Urban Studies, Vol. 39, No 3, 379-391.

Kaiser, E.J. et al. (1998): Hypothetical City Workbook, University of Illinois Press, Urbana and Chicago

Musil, J. (1993) Changing Urban Systems in Post-communist Societies in Central Europe: Analysis and Prediction, in Urban Studies, Vol. 30, No. 6, 899-905.

Murray, M.J (2004), The Evolving Spatial Form of Cities in a Globalizing World Economy: Johannesburg and Sao Paulo, HSRC Publishers, Pretoria

Van der Laan, L. (2010) Changing Urban Systems: An Empirical Analysis at two Spatial Levels, in Regional Studies, 32-3, 235-247.

Wheeler, SM, J, Beatley (ed) (2004), The Sustainable Urban Development Reader, Routledge, London and New York