114 學年度 第二學期

建築、環境與社會

Architecture, Environment, and Society

邱啟新

2/25/2026 updated



❖ 課程概述

當建築遇上環境、生態、自然的概念時，很容易讓人聯想到綠建築標章、國際氣候協定的減碳標準，專家透過高科技、自然科學之模擬與實驗數據所苦口婆心建議的發展目標與技術準則，於是永續建築、生態設計似乎是由一套仰賴權威社群、國際認證黃金標準所定義與控制之「專業技術」領域，它們似乎是去政治的，無關地方及社會的，本課程拒絕這類觀點，而認為綠建築與永續都市設計是社會自然裝配之空間表現與地理現象，其中必然有經濟、權力、地方政治、心理文化等作用力，是深富挑戰、爭議與想像之論述空間與實踐場域。

課程介紹綠建築及永續設計之社會科學研究，這些具備實證田野資料之論文，多奠基於都市政治生態學及政治經濟學之批判都市論與社會建構論觀點，對於(綠)建築之社會自然關係、日常生活與物質性之相依互動性，及低碳設計之資本價值與成長意涵，深入正式探討，而非討論科技工程之應用與成效，研讀這些著作讓我們從空間與環境的本質出發，同時解析永續低碳建築之社會心理面向及背後之權力結構，並將其定位在都市與地區發展之脈絡。課程一方面就思考探究理論概念，同時著重實務應用之解析詮釋、對話國內外相關建築/環境設計策略、空間模式、政策制度，現象事件中關於低碳、節能與生態建築，與其永續發展之實踐、倡議與爭議。

❖ 教學目標

探討影響綠建築、永續設計、低碳住宅之政策、政體、設計規範之政治經濟脈絡，與制度與實作如何與地方、社區與民眾日常生活之文化與社會實踐交相影響，理解科技、技術與設計策略的社會建構特性，分析形塑低碳建築多重尺度的動力--它既受權力、經濟等結構性力量牽引控制，也受到城市形塑過程中，漸進的、日常的、微小的的社會關係與行為表現左右，展現出調適、抵抗，協作，妥協等樣態，既而出現成功、失敗與折衷的永續轉型結果。教學具體目標為:

- ❑ 建立對建築環境議題批判性分析的理論系統與研究架構。
- ❑ 比較不同國家與地區經驗，揭示政策移轉過程之適用度與非相容性。
- ❑ 掌握、熟悉低碳、節能、韌性建築、都市設計與基礎設施規劃造就之不平等及爭議。
- ❑ 結合理論與個案研究，培養與深化政策倡議分析能力與興趣。

❖ 修課要求與配分比例

- ❑ 教材之導讀報告(有※記號者每人選兩篇，不同周) 30%
- ❑ 他人導讀之主對話提問(有※記號者選一次，不與前項重複) 10%
- ❑ 期末個人回饋心得 40%
- ❑ 課堂參與出席 20%

❖ 課程進度與教材

02/26 課程介紹與作業說明 Introduction

03/05 建築之環境社會理論 Critical environmental social theories about architecture

Blok, A. (2013). Urban Green Assemblages: An ANT View on Sustainable City Building Projects. S*cience & Technology Studies* 26(1), 5-24.

Chiu, C. (2026). Understanding Property-associated Urban Greening: Insights from Urban Political Ecology Journal of Planning Literature. (Online first)

Guy, S., & Farmer, G. (2001). Reinterpreting Sustainable Architecture: The Place of Technology. *Journal of Architectural Education*, 54(3), 140-148.

Maier, J. R. A., Fadel, G. M., & Battisto, D. G. (2009). An affordance-based approach to architectural theory, design, and practice. *Design Studies*, 30(4), 393-414.

Noah Quastel (2016): Ecological Political Economy: Towards a Strategic-Relational Approach, *Review of Political Economy*, 28(3), 336-353

延伸閱讀:

Müller, A. L., & Reichmann, W. (2015). *Architecture, materiality and society : Connecting sociology of architecture with science and technology studies*. United States: Palgrave MacMillan.

Marcus, L., Giusti, M., & Barthel, S. (2016). Cognitive affordances in sustainable urbanism: Contributions of space syntax and spatial cognition. Journal of Urban Design, 21(4), 439-452.

Spinks, M. (2011). Adoption of a network approach to sustainable building standard process, not product: a response column to 'A political-ecology of the built environment: LEED certification for green buildings', *Local Environment*, 16(1), 87-92.

Sovacool, B. K. (2006). Reactors, Weapons, X-Rays, and Solar Panels: Using SCOT, Technological Frame, Epistemic Culture, and Actor Network Theory to Investigate Technology. Journal of Technology Studies, 32(1), 4-14.

03/12 老師出國開會 (4/16 補課)

03/19 生態現代化(之侷限)　　(The limits to) Ecological modernization

※F.H. Buttel (2000). Ecological modernization as social theory. *Geoforum,* 31, 57-65.

Gibbs, D. (2000) Ecological modernisation, regional economic development and Regional Development Agencies. *Geoforum* 31, 9-19.

※Xie, L., Flynn, A., Tan-Mullins, M., & Cheshmehzangi, A. (2019). The making and remaking of ecological space in China: The political ecology of Chongming Eco-Island. Political Geography, 69, 89–102. https://doi.org/10.1016/j.polgeo.2018.12.012

黃信勳、徐世榮 (2014)。戰後臺灣的環境治理進路：一個生態現代化視角的考察， 思與言，52 (4)， 5-63。

延伸閱讀:

Evans, P., 1995. *Embedded Autonomy*. Princeton University Press, Princeton.

Evans, P., 1996. Government action, social capital, and development: reviewing the evidence on synergy. *World Development* 24, 1119- 1132.

03/26 氣候調適建築與基礎設施之不平等　The inequality in climate-adaptive buildings and infrastructure

※Broto, V. C., & Bulkeley, H. (2013). Maintaining climate change experiments: Urban political ecology and the everyday reconfiguration of urban infrastructure. *International Journal of Urban & Regional Research,* 37(6), 1934-1948.

※Edwards GAS, Bulkeley H. (2017). Urban political ecologies of housing and climate change: The 'Coolest Block' Contest in Philadelphia. Urban Studies. 54(5):1126-1141

Swyngedouw, E, N Heynen and M Kaika (2006). Urban Political Ecology: Politicizing the Production of Urban Natures. In Heynen N., Kaika M., and Swyngedouw E, (Ed.). *In the Nature of Cities – Urban Political Ecology and the Politics of Urban Metabolism*. London: Routledge .

邱啟新(2025)。都市政治生態學趨勢與展望：地理概念擴展與研究演進分析。地理學報，112, 79-112.

延伸閱讀:

Gandy, M. (2022). Urban political ecology: a critical reconfiguration. Progress in Human Geography, 46(1), 21–43. https://doi.org/10.1177/03091325211040553

Gandy, M. (2005). Cyborg urbanization: Complexity and monstrosity in the contemporary city. *International Journal of Urban and Regional Research*, 29(1), 26-49.

Lawhon, M., Ernstson, H., & Silver, J. (2014). Provincializing urban political ecology: Towards a situated UPE through African urbanism. Antipode, 46(2), 497-516.

04/02 永續轉型下之綠設計與低碳住宅的社會物質相依　Socio-material entanglement in green and low carbon designs under sustainable transition

※Chatterton, P. (2016) Building transitions to post-capitalist urban commons. Transactions of the Institute of British Geographers

※Walker, G., Karvonen, A., & Guy, S. (2015). Zero carbon homes and zero carbon living: sociomaterial interdependencies in carbon governance. *Transactions of the Institute of British Geographer*s, 40(4), 494-50.

延伸閱讀:

吳嘉苓(2015)。永久屋前搭涼棚：災後家屋重建的建築設計與社會改造，科技、醫療與社會，20：9- 74。

04/09 綠建築、社區及低碳都市之政策移動批判 Critiques of policy mobilities of green buildings, neighborhoods and low-carbon cities

※Affolderbach, J., O'Neill, K., & Preller, B. (2019). Global-local tensions in urban green neighbourhoods: a policy mobilities approach to discursive change in Freiburg, Vancouver and Luxembourg. Geografiska Annaler Series B: Human Geography, 101(4), 271–290.

※Caprotti, Federico & Duarte, Catalina & Joss, Simon. (2024). The 15-minute city as paranoid urbanism: Ten critical reflections. Cities. 155. 10.1016/j.cities.2024.105497.

※Cidell, J. (2015). Performing leadership: municipal green building policies and the city as role model. *Environment and Planning C*: *Government and Policy*; 33(3):566-579.

Faulconbridge, J. (2015). Mobilising sustainable building assessment models: agents, strategies and local effects. *Area*, 47(2), 116-123.

延伸閱讀:

Cidell, J. (2009). A political ecology of the built environment: LEED certification for green buildings. *Local Environment*, 14(7), 621-633.

Pow, C. P. (2014) License to travel, *City,* 18(3), 287-306.

04/11 (週六)「氣候變遷・高溫環境・生物多樣性與人文景觀」跨領域論壇

(10:10-17:40 國立臺灣大學社會科學院梁國樹國際會議廳，**自由參加**)

04/16 Living 4.0 +易構屋參訪 (9:30-11:30，智慧化居住空間展示中心，校外集合)

04/23 綠建築開發、誘因與地產市場　　Green building development, incentives and property market

※Chiu, C., Huang, H.-Y., Wu, S.-T., & Lee, Y.-W. (2025). Conversion, coordination and care: Unpacking housing-featured urban renaturing in Taichung. Environment and Planning E: Nature and Space, Online First.

※Jocoy, C. L. (2018). Green growth machines? Competing discourses of urban development in Playa Vista, California. *Urban Geography* 39(3), 388-412.

Cidell, J. & Cope, M. A. (2014) Factors explaining the adoption and impact of LEED-based green building policies at the municipal level, *Journal of Environmental Planning and Management,* 57 (12), 1763-1781.

※Knuth, S. 2019. Cities and planetary repair: The problem with climate retrofitting. Environment and Planning A: Economy and Space 51(2): 487–504.

延伸閱讀:

Knuth, S. (2016). Seeing Green in San Francisco: City as Resource Frontier. Antipode 48(3): 626-644.

Dilworth, R., & Stokes, R. (2012). Green growth machines, LEED ratings and value free development: The case of the philadelphia property tax abatement. *Journal of Urbanism,* 6(1), 1-15.

Nurick, S., Le Jeune, K., Dawber, E., Flowers, R., & Wilkinson, J. 2015. Incorporating Green Building Features and Initiatives into Commercial Property Valuation. The Journal of Sustainable Real Estate, 7(1), 21-40.

Nielsen, S. B. Quitzau, B. H. & Elle, M. (2009). Mobilizing the Courage to Implement Sustainable Design Solutions: Danish Experiences. *Architecture Engineering and Design Management*, 5(1), 53-61.

04/30 非正式性與氣候/環境治理　　Informality and climate/environmental governance

※Chiu, C. (2024). Greening informality through metabolic coordination: An urban political ecology of governing extralegal housing forms in Taiwan. Urban Studies, 61(6), 1127-1146. DOI: 10.1177/00420980231202684

※Jabeen, H. & Guy, S. (2015). Fluid engagements: Responding to the co-evolution of poverty and climate change in Dhaka, Bangladesh, Habitat International, 47, 307-314.

Nie X (2021) Empowering informal settlements in Jakarta with urban agriculture: Exploring a community-based approach. Urban Research and Practice 14(3): 325–339.

推薦閱讀:

Wigle J (2014) The 'graying' of 'green' zones: Spatial governance and irregular settlement in Xochimilco, Mexico City. International Journal of Urban and Regional Research 38(2): 573–589.

05/07 生態城特區、永續性修補　　Eco-cities/towns, sustainability fix

※Chatterton, P. (2013). Towards an Agenda for Post-carbon Cities: Lessons from Lilac, the UK's First Ecological, Affordable Cohousing Community. [Article]. International Journal of Urban & Regional Research, 37(5), 1654-1674.

Janos, N. (2020). Urbanising territory: The contradictions of eco-cityism at the industrial margins, Duwamish River, Seattle. Urban Studies, 57(11), 2282-2299. https://doi.org/10.1177/0042098018797284

※While, A., Jonas, A. E.G., & Gibbs, D. (2004). The Environment and the Entrepreneurial City: Searching for the Urban "Sustainability Fix" in Manchester and Leeds. *International Journal of Urban and Regional Research*, 28. 3: 549-69.

延伸閱讀:

邱啟新（2020 年 06 月）。非正式城市之永續性修補：高雄市違章住宅轉型之空間與環境策略。都市與計畫，47(2), 111-148。

Caprotti, F. (2014). Eco-urbanism and the Eco-city, or, denying the right to the City? *Antipode*, 46(5), 1285-1303.

Chang, I-CC.(2017). Failure matters: Reassembling eco-urbanism in a globalizing China. *Environment and Planning A*: Economy and Space. 2017;49(8):1719-1742.

Pow, C. P., & Neo, H. (2015). Modelling green urbanism in China. Area, 47(2), 132–140.

05/14 新能源、建築及都市之國際個案　　Renewable energy, buildings, and cities in the global context

※Fernando, D. R., Herreros, F., &Uriel, L. (2013). Technifying Public Space and Publicizing Infrastructures: Exploring New Urban Political Ecologies through the Square of General Vara del Rey. International Journal of Urban & Regional Research, 37, 3, 1035-1052.

※Fontaine, A., & Labussière, O（2018） Community-based solar projects: Sun-sharing politics and collective resource construction trials. Local Environment, 24(11）, 1015-34.

※Zhang F, Chung CKL, Lu T and Wu F (2021) The role of the local government in China's urban sustainability transition: A case study of Wuxi's solar development. Cities (117): 103294.

5/21 公民電廠與都市建築在臺灣 Civic energy and urban buildings in Taiwan

※Chiu, C., Wu, ST. & Chen, CT. (2025). The promise and pitfalls of energy commons: the paradox of municipality-led civic solar programs in Taipei. Sustainability Science. DOI:10.1007/s11625-025-01748-x

※Lai, H.-L. (2022). Foregrounding the community: Geo-historical entanglements of community energy, environmental justice, and place in Taihsi Village, Taiwan. Environment and Planning E: Nature and Space, 5(2), 666-693. https://doi.org/10.1177/25148486211000745

邱啟新、吳蘇庭、劉柔妤、陳炯廷(2025)。以類都市共有建構治理之永續性?台北市有房地發展公民電廠之機制策略探析。都市與計劃, 52(2), 201-227.

陳穎峯、高淑芬(2019)。公民電廠:能源轉型的四種聚焦。出自周桂田等(2019)著。*日常生活的能源革命*。台北:春山。

05/28 期末報告

06/04 期末報告

06/11 期末考周 (期末心得截止)

作業與要求說明

＊導讀

導讀要求: (20-30 分鐘，需做簡報，並於課前上傳)

一、內文之重點摘要報告:

- 作者之研究目的與主要發問
- 理論架構與理論基礎(或回顧文獻之範疇為何)
- 核心發現或所辯證之觀點

二、實踐與延伸

舉例國內或亞洲相關案例(可以是設計規劃、事件、制度、政策、法規)，與論文觀點加以對話、比較

或

延伸文章、書籍推薦簡介(中英文可)

＊主對話

主對話要求: (10-15 分鐘，口頭，無需做簡報)

- 對論文之感想與看法分享
- 提出自我見解或疑問與導讀者討論、對話

＊期末回饋心得 (5000 字內)

包含 1.閱讀心得、啟示與批評建議。2.修課之心得與收穫 3 對自己後續研究之影響啟發。報告內容包含前言、上課內容回顧、反饋與心得。期末需口頭報告。