



ES/AT/US315 URBAN DESIGN AND SUSTAINABILITY

IES Abroad Berlin

DESCRIPTION:

Four momentous changes occurring within the first two decades of the 21st century are having a lasting effect on our planet: (1) More people now live in cities than in the countryside, unprecedented in human history; (2) there is now a consensus that human activity is a powerful, adverse contributor to climate change; (3) a new revolution is underway — replacing the previous model created by the Industrial Revolution — that is based on a search for alternative, renewable energy generation and sustainable living; (4) the COVID-19 pandemic has fundamentally challenged our appreciation of how cities can and should function and, as a result, added a new dimension to our notion of sustainability. The intention of this course is to research the myriad consequences of these radical changes to the city and explore how urban design is adapting to address these changes to create more sustainable cities and communities. Our health crisis and our environmental crisis turn out to be linked in interesting ways. Although we will address many types of cities worldwide, the main urban case study will be Berlin.

CREDITS: 3

CONTACT HOURS: 45

INSTRUCTOR: Jan Otakar Fischer

LANGUAGE OF INSTRUCTION: English

PREREQUISITES: None

ADDITIONAL COST: None

METHOD OF PRESENTATION:

- In class lectures with visual content,
- discussions,
- site visits,
- and Moodle will be used to enhance students' learning experiences.

REQUIRED WORK AND FORM OF ASSESSMENT:

- Participation - 10%
- Blog Entries - 15%
- Midterm Exam - 20%
- Research Project - 30%
- Final Exam - 25%

Participation

Students must complete the assigned readings, participate in class discussions, engage in the group tasks, and attend all planned field trips. The IES grading rubric for participation is available on Moodle.

Blog Entries

Throughout the semester, each student will upload 9 short blog entries (300-400 words) to Moodle summarizing a published story they have found and read in a newspaper, magazine, or reliable online media source, that describes a theme of their choice related to sustainable urbanism, COVID-19-influenced design, or post-pandemic cities. These reports will be shared with other students online and serve as the basis for class discussion and inspiration for the Research Project.

Midterm Exam

A timed, take-home written exam will be given to test the students' understanding of the themes discussed during the first part of the course. Students will submit their paper (1,000-1,200 words) within four days during the midterms week (week 6).



Research Project

Students will identify and pursue a research topic related to the course themes during the semester, elaborate a research outline (ca. 1000 words plus images and bibliography), and present their topics (ca. 15 minutes) in class for discussion (sessions 17-18). Students usually work in teams of two, depending on class size. Students will submit their final research paper based on the outline and presentation during the last week of class (3000-4000 words; week 12).

Final Exam

An exam (in-class; 90 minutes) consisting of a series of essays responding to (usually 5 out of 9) questions will be given in the finals week (week 13) to test the students’ understanding of the themes discussed during the whole semester.

LEARNING OUTCOMES:

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

- explain the problems facing cities during the next few decades and some proposed solutions to these problems, whether they are technical, political, economic, or aesthetic;
- describe German approaches to green or sustainable design, having seen a variety of examples of progressive architecture and urbanism in and around Berlin;
- evaluate the varieties of urban transformation in other cities having used Berlin as a comparative model;
- demonstrate how the principal forces of human occupation, positive and negative, affect contemporary urban development;
- and understand the ideas in the emerging debate about how the post-pandemic city has been transformed, and how disease will play a factor in the design and organization of cities in the future.

ATTENDANCE POLICY:

Attendance and punctuality in all courses and field studies are mandatory. Absences can only be excused for valid reasons. Unexcused absences can affect students’ grades. Students who miss 25% or more of all class sessions will fail the course. Missed exams cannot be taken at another time except in case of documented illness. Late submission of term papers and other work will result in grade reduction unless an extension due to illness or an emergency is approved. Please consult the IES Abroad Berlin academics manual on Moodle for additional details.

ACADEMIC INTEGRITY:

Students are expected to abide by the IES Abroad Academic Integrity Code. Assignments need to be properly and amply footnoted where appropriate, with all sources attributed, including images. This not only applies to written assignments but also presentations by means of PowerPoint, Prezi or posters. Contributions may be checked with plagiarism-detecting software.

CONTENT:

The course will provide students with key texts and expert literature, and expose them to research papers. Consequently, both mandatory and optional readings are assigned for each session. In addition to the optional readings, the lecturer will suggest extra material (videos, blog entries, etc.) during class and via Moodle. The students are encouraged to bring related material to class to spark fruitful discussions.

| Week | Content | Readings and Assignments |
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| Week 1 | Session 1: Introduction: syllabus, learning objectives and expectations, definitions of sustainability | <ul style="list-style-type: none"> • No readings assigned |
| | Session 2: Fossil Fuels and Climate Change | <ul style="list-style-type: none"> • Thomas L. Friedman, “Today’s Date: 1 E.C.E. Today’s Weather: Hot, Flat, and Crowded,” in <i>Hot, Flat, and Crowded 2.0</i> (New York: Picador, 2009). (pp. 63-84) |

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| | | <ul style="list-style-type: none"> • Bill McKibben, “A Very Hot Year,” in <i>The New York Review of Books</i>, March 12, 2020. (5 pages) • Blog entry 1 due |
| Week 2 | Session 3: The Comfort Zone/Low-Tech vs. High-Tech Design | <ul style="list-style-type: none"> • Lisa Heschong, “Necessity,” in <i>Thermal Delight in Architecture</i> (Cambridge: MIT Press, 1985). (pp. 1-17) • Manfred Hegger, “Doing things right-on efficiency and sustainability,” in M. Hegger, M. Fuchs, T. Stark, M. Zeumer, <i>Energy Manual: Sustainable Architecture</i> (Berlin: Birkhäuser, Edition Detail, 2008). (pp. 24-27) • <u>Optional</u>: Reyner Banham, <i>The Architecture of the Well-tempered Environment</i> (Second Edition, Chicago: University of Chicago Press, 1984). |
| | Session 4: Berlin Ecology/ Policy and Practices | <ul style="list-style-type: none"> • Timothy Beatley, “Why Study European Cities?” introduction to <i>Green Cities of Europe</i> (Washington DC: Island Press, 2012). (pp. 1-28) • Laura Storm, ed., “Cities,” chapter of <i>Guide to Sustainia: Exploring the Sustainable Society of Tomorrow</i> (Copenhagen: Project Green Light, 2011). (pp. 40-69) • <u>Optional</u>: Burdett Ricky and Deyan Sudjic, eds., <i>The Endless City</i> (London: Phaidon, 2007). • Blog entry 2 due |
| Week 3 | Session 5: Case Studies: Dubai vs Lagos—Instant and Mega-Cities | <ul style="list-style-type: none"> • Mike Davis, “Sand, Fear, and Money in Dubai,” in <i>Evil Paradises: Dreamworlds of Neoliberalism</i> (New York: The New Press, 2007). (pp. 48-68) • George Packer, “The Megacity: Decoding the Chaos of Lagos,” in <i>The New Yorker</i>, November 13, 2006. (pp. 64-75) • Mathias Agbo, Jr., “Letter from Nigeria: Covid and the African City,” in <i>Common Edge</i>, June 8, 2020. (6 pages) |
| | Session 6-7: Field Trip: “Schöneberg Loop” (green park corridor on former freight lines) | <ul style="list-style-type: none"> • “Enrique Peñalosa, “A U.S. Template for a Third-Millennium City,” in <i>Urban Land Magazine</i>, April 23, 2013. (7 pages) • <u>Optional</u>: Ferrier Jacques, “The Sensual City: The Artificial Enabling the Sensual,” in the <i>Harvard Design Magazine</i>, Spring/Summer 2009, #30. • Blog entry 3 due |
| Week 4 | Session 8: Urban Ecology | <ul style="list-style-type: none"> • Rem Koolhaas, “Junk Space,” in <i>Content</i> (Köln: Taschen, 2004). (pp. 162-171) • Michael Sorkin, “Eutopia Now!” <i>Harvard Design Magazine</i> (Nr. 31), Fall/Winter 2009. (pp. 6-21) • <u>Optional</u>: Mike Davis, <i>Planet of Slums</i> (New York: Verso, 2006). |
| | Session 9: Sustainable Futures for the 21st-Century City | <ul style="list-style-type: none"> • Michael Specter, “The Climate Fixers” in <i>The New Yorker</i>, May 14, 2012. (7 pages) • Kyle Chayka, “How the Coronavirus will Reshape Architecture,” <i>The New Yorker</i>, June 17, 2020. (16 pages) • <u>Optional</u>: Dunham-Jones Ellen and June Williamson, <i>Retrofitting Suburbia: Urban Design Solutions for Redesigning Suburbs</i> (New Jersey: John Wiley & Sons, 2009). |

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| | | <ul style="list-style-type: none"> • Blog entry 4 due |
| Week 5 | Session 10: Case Studies: Las Vegas vs New York City—H2O Agonistes | <ul style="list-style-type: none"> • Nicole Huber and Ralph Stern, “Las Vegas—From Excess to Environment,” in <i>Return of Landscape</i>, Donata Valentien, ed. (Berlin: Jovis Verlag, 2010). (pp. 161-171) • David Owen, “Embodied Efficiency,” in <i>Green Metropolis</i> (New York: Riverhead Books, 2009). (pp. 203-47) |
| | Session 11-12: Field Trip: Reichstag Building, seat of the German Bundestag (conversion by Norman Foster, 1999) | <ul style="list-style-type: none"> • Norman Foster, “The Reichstag Energy Story,” first published in <i>Spektrum der Wissenschaft</i>, February 1999. (3 pages) • <u>Optional:</u> Hegger, M. and M. Fuchs, T. Stark, M. Zeumer, <i>Energy Manual: Sustainable Architecture</i> (Berlin: Birkhäuser, Edition Detail, 2008). • Blog entry 5 due |
| Week 6 | Midterm | <ul style="list-style-type: none"> • Take-home exam (assignment to be delivered this week) |
| Week 7 | Session 13: High-Performance Sites | <ul style="list-style-type: none"> • Carol J. Burns, “High-Performance Sites,” in <i>Site Matters: Design Concepts, Histories, and Strategies</i> (New York: Routledge, 2005). (pp. 297-310) • <u>Optional:</u> Mostafavi, Mohsen ed., <i>Ecological Urbanism</i>, (Baden: Harvard University GSD, Lars Müller Publishers, 2010). • Blog entry 6 due |
| | Session 14-15: Field Trip: Adlershof (City of Science, Technology and Media) | <ul style="list-style-type: none"> • Research Outlines due |
| Week 8 | Session 16: Environmental Inequity and Justice | <ul style="list-style-type: none"> • Anthony Flint, “The Destiny of Density: Affordability, Equity, and the Impacts of an Insidious Virus,” <i>The Lincolnist</i>, The Lincoln Institute of Land Policy, June 24, 2020. (pp. 8-15) • Bryan Lee Jr., “America’s Cities were Designed to Oppress,” <i>Bloomberg CityLab</i>, June 3, 2020. (5 pages) • Research topic consultation • Blog entry 7 due |
| Week 9 | Session 17-18: Student Research Project Presentations (ca. 15 minutes each plus discussion) | |
| Week 10 | Session 19: Plagues and the City: Historical Overview | <ul style="list-style-type: none"> • Elizabeth Kolbert, “Pandemics and the Shape of Human History,” in <i>The New Yorker</i>, March 30, 2020. (9 pages) • Peter Watson, “The Dynamics of Disease: Virchow, Koch, Mendel, Freud,” in <i>The German Genius</i> (London: Simon & Schuster, 2010). (pp. 383-397) • Frank Snowden, “Cholera,” in <i>Epidemics and Society: From the Black Death to the Present</i> (New Haven: Yale University Press, 2019). (pp.233-268) • <u>Optional:</u> Beatriz Colomina, <i>X-Ray Architecture</i> (Zurich: Lars Müller, 2019). |

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| | Session 20: Sanitation and Public Health in the 19 th Century | <ul style="list-style-type: none"> Felix Bentlin, “Understanding the Hobrecht Plan. Origin, composition, and implementation of urban design elements in the Berlin expansion plan from 1862”, in <i>Planning Perspectives</i>, 33:4 (pp. 633-655) Thomas Fisher, “Frederick Law Olmsted and the Campaign for Public Health,” in <i>Places Magazine</i>, November 2010. (4 pages) <u>Blog entry 8 due</u> |
| Week 11 | Session 21: The Urban Impact of Covid-19 | <ul style="list-style-type: none"> Meehan Crist, “What the Coronavirus Means for Climate Change,” <i>The New York Times</i>, March 27, 2020. (4 pages) Patrick Sisson, “What is a 15-Minute City?” <i>City Monitor</i>, September 21, 2020 (7 pages) Richard Florida, “The Lasting Normal for the Post-Pandemic City,” <i>Bloomberg CityLab</i>, June 25, 2020. (9 pages) <u>Optional:</u> Jeff Speck, <i>Walkable Cities</i> (New York: Farrar, Straus and Giroux, 2012). <u>Blog entry 9 due</u> |
| Week 12 | Session 22: Urban Design and Sustainability – Solutions for a Better Future? | <ul style="list-style-type: none"> Final discussion and wrap-up Research paper consultation Final Research Paper due |
| Week 13 | Finals | <ul style="list-style-type: none"> <u>Final Exam</u> (in-class; 90 minutes) |

FIELD TRIPS:

- The “Schöneberg Loop” green corridor
- Reichstag Building (seat of modern Bundestag)
- Adlershof (City of Science, Technology, and Media)

REQUIRED READINGS:

The required readings are noted above in the syllabus and will be available in PDF form as downloads from Moodle.

- Mathias Agbo, Jr., “Letter from Nigeria: Covid and the African City,” in *Common Edge*, June 8, 2020. (6 pages)
- Timothy Beatley, “Why Study European Cities?” introduction to *Green Cities of Europe* (Washington DC: Island Press, 2012). (pp. 1-28)
- Felix Bentlin, “Understanding the Hobrecht Plan. Origin, composition, and implementation of urban design elements in the Berlin expansion plan from 1862”, in *Planning Perspectives*, 33:4, 633-655, DOI: 10.1080/02665433.2017.1408484
- Carol J. Burns, “High-Performance Sites,” in *Site Matters: Design Concepts, Histories, and Strategies* (New York: Routledge, 2005). (pp. 297-310)
- Kyle Chayka, “How the Coronavirus will Reshape Architecture,” *The New Yorker*, June 17, 2020. (16 pages)
- Meehan Crist, “What the Coronavirus Means for Climate Change,” *The New York Times*, March 27, 2020. (4 pages)
- Mike Davis, “Sand, Fear, and Money in Dubai,” in *Evil Paradises: Dreamworlds of Neoliberalism* (New York: The New Press, 2007). (pp. 48-68)
- Thomas Fisher, “Frederick Law Olmsted and the Campaign for Public Health,” in *Places Magazine*, November 2010. (4 pages)
- Anthony Flint, “The Destiny of Density: Affordability, Equity, and the Impacts of an Insidious Virus,” *The Lincolnist*, The Lincoln Institute of Land Policy, June 24, 2020. (pp. 8-15)

- Richard Florida, “The Lasting Normal for the Post-Pandemic City,” *Bloomberg CityLab*, June 25, 2020. (9 pages)
- Thomas L. Friedman, “Today’s Date: 1 E.C.E. Today’s Weather: Hot, Flat, and Crowded,” in *Hot, Flat, and Crowded 2.0* (New York: Picador, 2009). (pp. 63-84)
- Norman Foster, “The Reichstag Energy Story,” first published in *Spektrum der Wissenschaft*, February 1999.(3 pages)
- Manfred Hegger, “Doing things right-on efficiency and sustainability,” in M. Hegger, M. Fuchs, T. Stark, M. Zeumer, *Energy Manual: Sustainable Architecture* (Berlin: Birkhäuser, Edition Detail, 2008). (pp. 24-27)
- Lisa Heschong, “Necessity,” in *Thermal Delight in Architecture* (Cambridge: MIT Press, 1985). (pp. 1-17)
- Nicole Huber and Ralph Stern, “Las Vegas—From Excess to Environment,” in *Return of Landscape*, Donata Valentien, ed. (Berlin: Jovis Verlag, 2010). (pp. 161-171)
- Elizabeth Kolbert, “Pandemics and the Shape of Human History,” in *The New Yorker*, March 30, 2020. (9 pages)
- Rem Koolhaas, “Junk Space,” in *Content* (Köln: Taschen, 2004). (pp. 162-171)
- Bryan Lee Jr., “America’s Cities were Designed to Oppress,” *Bloomberg CityLab*, June 3, 2020. (5 pages)
- Bill McKibben, “A Very Hot Year,” in *The New York Review of Books*, March 12, 2020. (5 pages)
- David Owen, “Embodied Efficiency,” in *Green Metropolis* (New York: Riverhead Books, 2009). (pp. 203-47)
- George Packer, “The Megacity: Decoding the Chaos of Lagos,” in *The New Yorker*, November 13, 2006. (pp. 64-75)
- Enrique Peñalosa, “A U.S. Template for a Third-Millennium City,” in *Urban Land Magazine*, April 23, 2013. (7 pages)
- Patrick Sisson, “What is a 15-Minute City?” *City Monitor*, September 21, 2020 (7 pages)
- Frank Snowden, “Cholera,” in *Epidemics and Society: From the Black Death to the Present* (New Haven: Yale University Press, 2019). (pp.233-268)
- Michael Sorkin, “Eutopia Now!” *Harvard Design Magazine* (Nr. 31), Fall/Winter 2009. (pp. 6-21)
- Michael Specter, “The Climate Fixers” in *The New Yorker*, May 14, 2012. (7 pages)
- Laura Storm, ed., “Cities,” chapter of *Guide to Sustainia: Exploring the Sustainable Society of Tomorrow* (Copenhagen: Project Green Light, 2011). (pp. 40-69)
- Peter Watson, “The Dynamics of Disease: Virchow, Koch, Mendel, Freud,” in *The German Genius* (London: Simon & Schuster, 2010). (pp. 383-397)

RECOMMENDED READING:

In addition to the required readings above (in the reader and Moodle), the following texts, among others, can be found in the IES Abroad Berlin library:

- Banham, Reyner, *The Architecture of the Well-tempered Environment* (Second Edition, Chicago: University of Chicago Press, 1984).
- Beatley Timothy, ed., *Green Cities of Europe* (Washington DC: Island Press, 2012).
- Burdett, Ricky and Deyan Sudjic, eds., *The Endless City* (London: Phaidon, 2007).
- Colomina, Beatriz *X-Ray Architecture* (Zurich: Lars Müller, 2019).
- Davis, Mike, *Evil Paradises: Dreamworlds of Neoliberalism* (New York: The New Press, 2007).
- Davis, Mike, *Planet of Slums* (New York: Verso, 2006).
- Diamond, Jared, *Collapse: How Societies Choose to Fail or Succeed* (New York: Viking Press, 2005).
- Duany, Andres, Elizabeth Plater-Zyberk and Jeff Speck, *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* (New York: North Point Press, 2000).
- Dunham-Jones, Ellen and June Williamson, *Retrofitting Suburbia: Urban Design Solutions for Redesigning Suburbs* (New Jersey: John Wiley & Sons, 2009).
- Ferrier, Jacques, “The Sensual City: The Artificial Enabling the Sensual,” in the *Harvard Design Magazine*, Spring/Summer 2009, #30.
- Hegger, M. and M. Fuchs, T. Stark, M. Zeumer, *Energy Manual: Sustainable Architecture* (Berlin: Birkhäuser, Edition Detail, 2008).

- Larice, Michael and Elizabeth Macdonald, eds., *The Urban Design Reader: Second Edition* (New York: Routledge, 2013).
- Mostafavi, Mohsen ed., *Ecological Urbanism* (Baden: Harvard University GSD, Lars Müller Publishers, 2010).
- Newman, Peter and Timothy Beatley, Heather Boyer, *Resilient Cities: Responding to Peak Oil and Climate Change* (Washington DC: Island Press, 2009).
- Oswalt, Phillip ed., *Shrinking Cities Volume 1: International Research* (Ostfildern-Ruit, Germany: Hatje Cantz Verlag, 2005).
- Owen, David, *Green Metropolis* (New York: Riverhead Books, 2009).
- Snowden, Frank, *Epidemics and Society: From the Black Death to the Present* (New Haven: Yale University Press, 2019).
- Speck, Jeff, *Walkable Cities* (New York: Farrar, Straus and Giroux, 2012).