

## STS 325-H04: Science, Technology, and Urban Transformation

### Syllabus

**Instructor:** Emily Tancredi-Brice Agbenyega

**Office:** Honors Hall 229

**Office Hours:** Tuesdays 1-3PM and by appointment

**Email:** et279@njit.edu

**Class meeting times:** MW 1-3 PM

### Course Description

This course will explore the transformative role of STEAM in urban environments, with a focus on Newark, NJ. Students will learn how these disciplines can address urban challenges and contribute to sustainable urban development. Specifically, students will engage with local community partners to develop and implement STEAM-based solutions in an urban setting. Students will earn 30 service hours (internal/external combined) through their participation in course projects.

### Course Objectives

- Identify and discuss fundamental social theories related to urban spaces, including the founding theorists, the history of the theory, and the corresponding methods of social scientific inquiry
- Understand the principles of urban transformation.
- Analyze the impact of STEAM on urban development
- Analyze current urban issues within a social science-based theoretical framework
- Collaborate with Newark-based community organizations to develop and implement a project to address an urban issue

**Prerequisites:** ENGL 102 with a grade of C or higher, and one History and Humanities GER 200 level course with a grade of C or higher.

### Course Materials

- Books (Students will read selected chapters from each text):
  - Benjamin, R. (Ed.). (2019). *Captivating technology: race, carceral technoscience, and liberatory imagination in everyday life*. Duke University Press. <https://doi.org/10.1515/9781478004493>
  - Carter, M. (2022). *Reclaiming Your Community: You Don't Have to Move Out of Your Neighborhood to Live in a Better One*. Berrett-Kohler.

- Martin, R. (2016). *The Urban Apparatus: Mediapolitics and The City*. University of Minnesota Press.
- Mumford, K. J. (2007). *Newark : a history of race, rights, and riots in America* (1st ed.). New York University Press.  
<https://doi.org/10.18574/nyu/9780814761151>
- Independent Research Materials
  - Students will research materials (i.e. books, articles, films etc.) related to their Project Sites
- Films:
  - Revolution '67
  - The Sacrifice Zone
- Organizations:
  - [Newark Science and Sustainability](#) (SaS)
  - [Urban League of Essex County Tech House](#) (ULEC - Tech House)
  - [GlassRoots](#)
  - [Branch Brook Park Alliance](#)

### Course Activities

- Lectures and readings on urbanization
- Case Studies: Exploring mission-driven organizations in Newark and their technical, design, and environmental needs
- Practicum: Collaborative development and implementation of projects

### Final Course Grade Calculation Summary

- Class participation (attendance and discussion) - 15%
- Reading response (written assignment) - 10%
- Final Project (practicum, research, written, and oral assignments) - 75%
  - Practicum (Weeks 6-13 - time spent at selected organization including volunteering and research; service-learning contract submission; 15 hours\* minimum total - in *addition* to allotted classtime) - 30%
  - Weekly fieldnotes - 10%
  - 8-10 pg. research essay on project site and its role in the community - 15%
  - Poster presentation on fieldsite experience - 10%
  - Group reflection - 5%
  - Individual reflection - 5%

**Late Assignment Submissions:** All late assignments will be accepted only if an extension is requested *prior* to the due date. Assignments will not be accepted more than 1 week late.

**Paper Formatting:** All papers should be written in APA style, including the following criteria: typed, double-spaced, 12 pt standard font (Times, Helvetica, Arial, etc), 1” margins. For digital submission, only the following file types are accepted: pdf, doc, docx.

**Grading Scale (for assignments only, course grades will not include: A+, A-, B-, C-, D+):**

<b>96-100</b>	<b>A+</b>
<b>93-95</b>	<b>A</b>
<b>89-92</b>	<b>A-</b>
<b>86-88</b>	<b>B+</b>
<b>83-85</b>	<b>B</b>
<b>79-82</b>	<b>B-</b>
<b>76-78</b>	<b>C+</b>
<b>73-75</b>	<b>C</b>
<b>69-72</b>	<b>C-</b>
<b>66-68</b>	<b>D+</b>
<b>60-65</b>	<b>D</b>
<b>0-60</b>	<b>F</b>

**Academic Integrity:**

Students are expected to follow the University Code on Academic Integrity. Plagiarism will not be tolerated. All cases of suspected plagiarism/cheating will be reported for investigation. For details, see: <http://www.njit.edu/academics/integrity.php>

**Generative AI Use**

Student use of artificial intelligence (AI) is permitted in this course for certain assignments and activities at the instructor’s discretion. If and when students use AI in this course, the AI must be cited as is shown within the [NJIT Library AI citation page](#) for AI. If you have any questions or concerns about AI technology use in this class, please reach out to your instructor prior to submitting any assignments.

**Laptops and other technology rules:**

Students may use laptops, tablets, cell phones, or other technology in this course for class-related activities only. Texting, using Twitter, playing games, etc. interrupts the flow of discussion, distracts other students, and will inevitably embarrass you when I have to call you out. Students are prohibited from using headphones. Be present and prepared when you are here. If you would rather text or surf the internet, please do not come to class.

**Students with Disabilities or Special Needs:**

Students who have disabilities or special needs should contact NJIT's Student Disability Services to help procure accommodations in completing coursework. The center can be found at <http://www.njit.edu/counseling/services/disabilities.php>.

**Land Acknowledgement**

I acknowledge and honor that I am teaching on the ancestral homeland and territory of the Munsee Lenape peoples, communities, and nation and recognize the longstanding significance of these lands for these nations past and present.

**Outline of Course Topics & Sources**

Week	Topic	Content
1	Introduction to the Course	<ul style="list-style-type: none"> <li>● Carter, M. (2022). <i>Reclaiming Your Community: You Don't Have to Move Out of Your Neighborhood to Live in a Better One</i>. Berrett-Kohler.</li> </ul>
2	Urban Theory	<ul style="list-style-type: none"> <li>● Martin, R. (2016). <i>The Urban Apparatus: Mediapolitics and The City</i>. University of Minnesota Press.</li> </ul>
	Urbanization & STEAM	<ul style="list-style-type: none"> <li>● Benjamin, R. (Ed.). (2019). <i>Captivating technology : race, carceral technoscience, and liberatory imagination in everyday life</i>. Duke University Press. https://doi.org/10.1515/9781478004493</li> <li>● Coutard, O., &amp; Guy, S. (2007). <i>STS and the City: Politics and Practices of Hope</i>. <i>Science, Technology, &amp; Human Values</i>, 32(6), 713-734.</li> <li>● Fariás, I. &amp; Criado, T.S. (2024). Cities: Stories of urban STS. In A. Irwin &amp; U. Felt (Eds.) <i>Elgar Encyclopedia of Science and Technology Studies</i> (pp. 533-542).</li> <li>● Hommels, A. (2020). STS and the City: Techno-politics, Obduracy and Globalisation. <i>Science as Culture</i>, 29(3), 410–416.</li> </ul>
3	Newark .101	<ul style="list-style-type: none"> <li>● <u>Revolution '67</u></li> <li>● <u>The Sacrifice Zone</u></li> <li>● Mumford, K. J. (2007). <i>Newark: a history of race, rights, and riots in America</i>. New York University Press.</li> </ul>
4	Site Introductions & Visits	Project-related research
5	Project Preparation	Project-related research
6-13	Projects in Progress	Project-related research
14-15	Project Presentation & Reflection	Poster Presentation (Organization & NJIT)

See [Here](#) for Course Schedule