



URBAN RESILIENCE TO FLOODING I

Instructors

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Course Meeting Time – Thursdays 11:20pm - 14:20pm – Rm. 111 and CRP PIT Lab, McCord Hall

This is an interdisciplinary class, framed within a research project, investigating the theme of urban resilience in relation to surface water-related issues, especially flash flooding.

Objectives – To develop a critical understanding of the fundamentals of urban resilience, community resilience, as well as extreme rainfall and runoff events, and to learn practical tools and methods for evaluating urban communities' resilience, with special reference to flash flooding.

Students – Graduate-level students from City and Regional Planning, Civil Engineering, and Earth Sciences

Methods – The course combines elements of traditional lecture classes, with planning studios/laboratory exercises.

Requirements – MSc students will be required to show proficiency in the subject matter through active class participation, fieldwork, participation in planned community events, completion of assignments, and a final presentation. PhD students will also review a paper from the recent literature.

Grading Policy

	Master Students	PhD students
• Attendance	10%	5%
• Active Participation (classes & field work)	15%	15%
• Active participation in community events	15%	10%
• Periodical Assignments	25%	20%
• Final Assignment	35%	30%
• Paper review	NA	20%

Students with Disabilities - The University encourages the full participation of students with disabilities. We invite students with disabilities to meet individually with the instructors, to discuss any accommodations that may be needed for successful participation in this course.

Inclement Weather - In the event that inclement weather requires the cancellation of classes at the University of Memphis, local radio and television media will be immediately notified. Additionally, the University of Memphis has established an inclement Weather Hotline at 678-0888.

Course Outline

<u>Week</u>	<u>Date</u>	<u>Topic</u>
1	8/31	Introductory class (Lead instructor: All) <i>Introductions / Class objectives and the connection with the RIF Team Initiation Grant “Community-Based Strategies for Urban Resilience to Extreme Rainfall Events” / Urban resilience for geographers, engineers and planners: An encounter of perspectives / A “special” class structure / Skillsets diagnostic / The Memphis 3.0 Strategic Planning Process</i>
2	9/7	Weather and climate basics (Lead instructor: D. Burnette) Readings and class discussion on what is an extreme rainfall event / Historic climatology and archival research / Assignment #1: past flash flooding events & archival research – Handout
3	9/14	Concepts of flood hydrology and storm water management (Lead: C. Meier)

4	9/21	Community planning basics (Lead: L. Saija) <i>What is a comprehensive planning process and details on the Memphis 3.0 planning process / Urban resilience from a planning perspective: readings, discussion, and lecture</i>
5	9/28	Assignment # 1 desk review Historic flash flooding in Memphis: identification of study areas (In-class workshop led by D. Burnette)
6	10/5	Mapping Urban Resilience part I (Lead instructors: D. Burnette & C. Meier) Assignment #2 – Urban Watersheds, surface types, and connectivity - Handout
	10/12	(TAPA - ACSP conference) students independent working session
8	10/19	Mapping Urban Resilience part II (Lead instructor: L. Saija) Assignment #3: Urban vacancy, real estate values – handout Assignment #2 – Desk Review
9	10/26	Qualitative Research basics (Lead Instructor: L. Saija) The role of qualitative research in environmental planning / How to conduct a door-to-door survey Assignment #4 the North Memphis door-to-door survey - handout
10	11/2	Assignment #3: Desk Review
	TBA	Memphis 3.0 North Memphis District Planning process - kickoff meeting <i>(students' posters and/or presentations)</i>
11	11/9	Assignment #4 - desk review
12	11/16	Sustainable urban drainage solutions (Lead instructor: C. Meier) Final assignment: Impacts of flash flooding on urban communities in the North Memphis District - handout
	11/23	Thanksgiving, no class
13	11/30	Final Assignment – desk review
	TBA	Memphis 3.0 North Memphis District Planning Process – 2nd meeting <i>(students' posters and/or presentations)</i>