



URBDP 549 Hazard Mitigation

WINTER 2021

Lecture: Tuesdays and Thursday | 5:30-7:00 pm

Instructor : Bob Freitag - lead instructor | Amanda Siok - co-instructor | Jesse Reynolds AICP, CFM, North Bend Planning Department (North Bend community representative) | Mike Jensen (Wildland fire expert)

Course Introduction

This is an introduction to Hazards Mitigation. Learning for this course occur through applying hazards mitigation concepts to a case study community. For this offering, the case study will be North Bend Washington. At the end of this course you will have gained practice in developing hazards mitigation strategies within the context of the Washington Growth Management Act and Comprehensive Planning.

Syllabus Outline:

1. Each class will be 90 Minutes beginning at 5:30p
2. Each session will generally have two classes on Tuesdays and Thursdays. Tuesday classes will generally involve lectures and Thursday sessions will be devoted to discussion concepts presented. We will assume that you have read the material before these discussion periods.
3. Most sessions include a class assignment that will be due on Sunday evening and will be discussed the following Thursday.
4. The course will include:
 1. Three modules,
 2. Ten weeks of sessions,
 3. Ten assignments. Four completed as individuals and six as teams
5. Generally, each class assignment will layer on the previous assignments resulting in a suggested community strategies.
6. The course will result in three products with each focusing on the blending of hazards mitigation planning within the context of comprehensive planning.
7. The course products will include:

Wildland Fire Strategies
Earthquake Strategies
GMA/HMP Guidance

Course Objectives:

By the end of the class, students will be able to:

1. Describe approaches and tools to reduce the need for disaster preparedness, response or recovery measures through hazards mitigation.
2. Discuss how the Federal Emergency Management Agency (FEMA) addresses hazards mitigation.
3. Understand hazards mechanics, mitigation approaches and tools sufficiently to develop risk reduction strategies for specific hazards – wildland fire, earthquake and possibly weather and climate.
4. Describe the Growth Management Act, comprehensive planning and the Critical Areas Ordinance (CAO)
5. Suggest mitigation approaches that can be implemented through the comprehensive planning and the Growth Management Act. (GMA)
6. Offer guidance on how mitigation planning can make better use of the GMA.
7. Suggest specific mitigation strategies for a case study community that may be implemented through an updated comprehensive plan – through an updated hazards mitigation plan. (North Bend, WA)

Completion Requirements:

To successfully complete this course, you must do the following:

Read this course introduction and the assigned sections of the texts;

Complete and submit all written assignments;

Participate in specified team activities; and

Actively contribute to each lesson's online discussion forum as specified in each lesson.
Readings:

There are no specific texts for this course. Readings are from on-line courses and are cited at the end of each session.

Reading Resources:

1. Introduction to the Mitigation Framework
(<https://www.fema.gov/national-mitigation-framework>)
2. FEMA Local Mitigation Planning Handbook
(<https://www.fema.gov/media-library/assets/documents/31598>) .
3. FEMA Local Plan Review Guide (Read pages 19-31)
(https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-plan-review-guide_09_30_2011.pdf)
(https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-plan-review-guide_09_30_2011.pdf/download?download_frd=1)

4. APA/FEMA Integrating Hazards into Planning
(<https://www.planning.org/publications/report/9026884/>)
5. State Hazards Mitigation Plan(Links to an external site.) (<http://mil.wa.gov/other-links/enhanced-hazard-mitigation-plan>) :
6. King County Hazard Mitigation Plan
(<https://canvas.uw.edu/courses/1433031/files/69670376/download?wrap=1>)
7. Flood Hazards Mitigation Plan
(<https://canvas.uw.edu/courses/1433031/files/69670377/download?wrap=1>)
8. North Bend Comprehensive Plan
(<https://canvas.uw.edu/courses/1433031/files/69670433/download?wrap=1>)
9. HM Best Practices
(<https://canvas.uw.edu/courses/1124576/files/44702918/download?wrap=1>)
10. Climate Risk Assessment
(https://www.cityoftacoma.org/government/city_departments/environmentalservices/office_of_environmental_policy_and_sustainability/climate_risk_assessment)

Course Organization:

The course is organized around three modules. Your activities will involve both team and individual work.

Module A – Basic GMA and HMP Concepts – Case Study Introduction

1. What is Hazard Mitigation? 1/5
2. FEMA – Hazards Mitigation Planning/Grants and FEMA Programs -1/12
3. GMA Overview 1/19
4. Case Study /Comprehensive Plan 1/26 – North Bend

Module B – Case Studies - Hazards and Risks

5. Wildland Introduction 2/2
6. Wildland Fire - case study analysis / strategy development 2/9
7. Earthquake introduction: – 2/16
8. Earthquake/Ground shaking – 2/23

Module C – Finalize Products:

Wildland Fire Strategies
 Earthquake Strategies
 Comprehensive Planning MP Guidance

9. Product Refinement 3/2

10. Open 3/9 (Finalize Products)

Grading:

Grades will be based on weekly assignments:

Module A – Basic GMA and HMP Concepts – Case Study Introduction Module

Individual Assignment 1 -- EM Phase
Individual Assignment 2 -- Matching Programs
Individual Assignment 3 -- Mitigation Strategy

Module B – Case Studies - Hazards and Risks Module

Team Assignment 1 – Wildland Fire Risks
Team Assignment 2 -- Wildland Fire Values
Team Assignment 3 -- Wildland Fire Strategies
Team Assignment 4 – Earthquake Risks to Values
Team Assignment 5 – Earthquake Strategies

Module C – Finalize Products: Module

Team Assignment 6 -- Final Team Product
Individual Assignment 4 - Final Paper

Bob Freitag (Lead Instructor):

Robert Freitag is Research Faculty and Director of the Institute for Hazards Mitigation Planning and Research (IHMP) at the University of Washington. He is the past Executive Director of the Cascadia Region Earthquake Workgroup and past member of the Association of State Floodplain Managers' Board of Directors. Bob is also a Certified Floodplain Manager. He has published many articles and written courses for FEMA and others concerning hazards mitigation and floodplain management, and was lead author of "Floodplain Management: a new approach for a new era" (Island Press 2009).

Before coming to the University, he had a 25-year career with the Federal Emergency Management Agency (FEMA) serving as Federal Coordinating Officer (FCO); Public Assistance, Mitigation and Education Officer. Prior to FEMA he was employed by several private architectural and engineering consultant firms in Hawaii and Australia, and taught science as a Peace Corps Volunteer in the Philippines. Freitag received his Master of Urban Planning degree from the University of Washington.

Amanda Siok (Co-instructor):

Amanda Siok is the self-proclaimed Leslie Knope of Earthquakes and a former MUP(2010). Passionate about urban design, planning, and geologic sense of place, she strives to integrate disaster resilience into the built environment. Amanda has worked for FEMA Region 10 (Alaska, Idaho, Oregon, and Washington) for ten years and currently serves as the Earthquake and Tsunami Program Manager. In her time at FEMA, Amanda has supported several disasters, including the 2011 Tohoku Tsunami, Hurricane Sandy, the Oso Mudflow, and the 2018 Anchorage, AK and 2020 Magna, UT earthquakes.