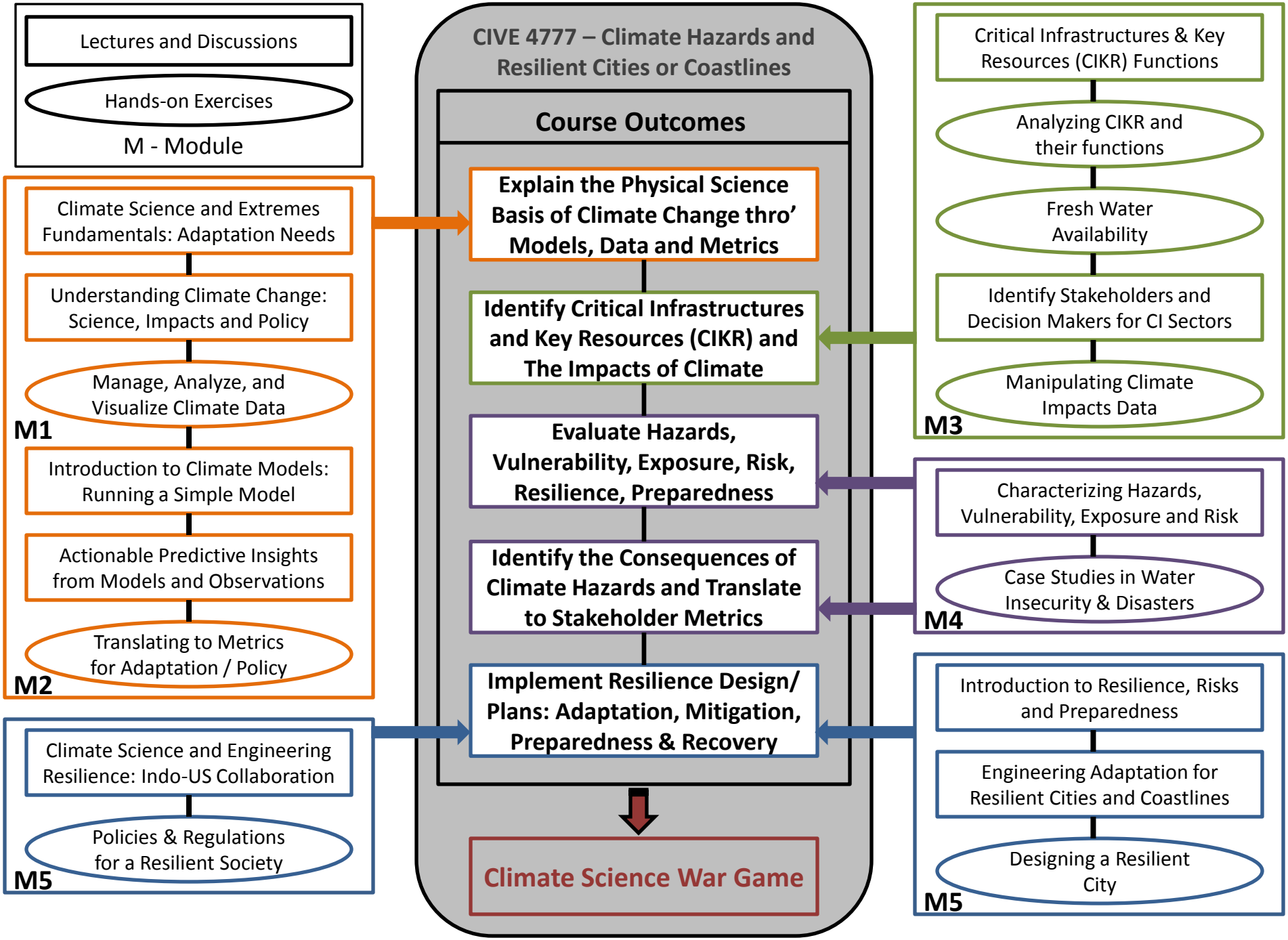
Lectures and Discussions
Hands-on Exercises
M - Module
CIVE 4777 – Climate Hazards and Resilient Cities or Coastlines
Course Outcomes
Climate Science and Extremes Fundamentals: Adaptation Needs
Understanding Climate Change: Science, Impacts and Policy
Manage, Analyze, and Visualize Climate Data
M1
Introduction to Climate Models: Running a Simple Model
Actionable Predictive Insights from Models and Observations
Translating to Metrics for Adaptation / Policy
M2
Climate Science and Engineering Resilience: Indo-US Collaboration
Policies & Regulations for a Resilient Society
M5
Explain the Physical Science Basis of Climate Change thro' Models, Data and Metrics
Identify Critical Infrastructures and Key Resources (CIKR) and The Impacts of Climate
Evaluate Hazards, Vulnerability, Exposure, Risk, Resilience, Preparedness
Identify the Consequences of Climate Hazards and Translate to Stakeholder Metrics
Implement Resilience Design/ Plans: Adaptation, Mitigation, Preparedness & Recovery
Climate Science War Game
Critical Infrastructures & Key Resources (CIKR) Functions
Analyzing CIKR and their functions
Fresh Water Availability
Identify Stakeholders and Decision Makers for CI Sectors
Manipulating Climate Impacts Data
M3
Characterizing Hazards, Vulnerability, Exposure and Risk
Case Studies in Water Insecurity & Disasters
M4
Introduction to Resilience, Risks and Preparedness
Engineering Adaptation for Resilient Cities and Coastlines
Designing a Resilient City
M5