

CEE 6120A: Environmentally Conscious Design & Construction Course Schedule

WEEK	TUESDAY TOPICS	THURSDAY TOPICS	ASSIGNMENTS
1: August 22	Introduction and Course Overview: <ul style="list-style-type: none"> • Properties of the Built Environment • What is Sustainability? 	Sustainability and the Built Environment: <ul style="list-style-type: none"> • Systems Theory and Analysis • Thermodynamic Foundations 	
2: August 29	Structured Problem Solving: <ul style="list-style-type: none"> • Problem Framing and Scoping • Setting Objectives and Evaluation Criteria 	Built Environment Decision Making: <ul style="list-style-type: none"> • Cyclic Problem Solving Process • Stakeholder Impact Assessment • Expectation Theory 	
3: September 5	Designing an Analysis Strategy, Part I: <ul style="list-style-type: none"> • Qualitative Measurement and Scale Construction • Threats to Validity • Documentation and Recordkeeping • Data Collection Methods 	Designing an Analysis Strategy, Part II: <ul style="list-style-type: none"> • Interdisciplinary Teaming • Multimedia Documentation • Recap of Built Environment Sustainability and Systems Analysis • Impact Mapping and Assessment 	Project Showerwatch Assigned (Tues.); Facility Assessment Assigned (Thurs.)
4: September 12	Facility Assessment Methods: <ul style="list-style-type: none"> • Sampling and Demographics • Measurement Theory 	The LEED Building Rating System Guest Lecturer: Mike Barcek, Southface Energy Institute	LEED Critique Assigned (Thurs.)
5: September 19	Group Discussion – LEED Critique Ecosystem Impact Assessment: <ul style="list-style-type: none"> • Ecosystem Classification Methods • Site-related Strategies 	Resource Base Impact Assessment: <ul style="list-style-type: none"> • Mass Balance and Flow Analysis Methods • Recap of Problem Framing 	LEED Critique Due (Tues.); Material Comparison Assigned (Thurs.)
6: September 26	Component Assessment Methods: <ul style="list-style-type: none"> • Indicator Methods of Measurement • Structured Selection Processes 	Materials-related Strategies, Part I: <ul style="list-style-type: none"> • Alternative Material Substitution • Resources for Sustainable Materials 	Project Showerwatch Due (Thurs.)
7: October 3	Materials-related Strategies, Part II: <ul style="list-style-type: none"> • Pollution Prevention • Material Efficiency • Material Recovery, Reuse, Recycling 	Water-related Strategies, Part I: <ul style="list-style-type: none"> • Demand Management • Rainwater Harvesting • Regenerative Design 	
8: October 10 (Midterm)	Water-related Strategies, Part II: <ul style="list-style-type: none"> • Wastewater Management and Recovery • Stormwater Management 	Facility Assessment Presentations	Facility Assessment Due (Thurs.)

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9: October 17	Midterm Break – No Class	Sustainable Materials & Systems Expo	Material Comparison Due (Thurs.)
10: October 24	Energy-Related Strategies, Part I <ul style="list-style-type: none"> • Power Demand Management • Equipment Efficiency • Building Shell Improvements 	Energy-Related Strategies, Part II <ul style="list-style-type: none"> • Passive Design Strategies • Alternative and Renewable Energy Systems 	Sustainability Improvement Project Assigned (Tues.)
11: October 31	User-oriented Strategies, Part I: <ul style="list-style-type: none"> • Indoor Air Quality • EMF • Acoustics and Lighting 	User-oriented Strategies, Part II: <ul style="list-style-type: none"> • Design for Adaptability • Promoting Sustainable Behavior • Community Context 	
12: November 7	Implementation Planning: <ul style="list-style-type: none"> • Logistics • Assessing Organizational Resources and Requirements 	Strategy Integration: <ul style="list-style-type: none"> • Whole System Comparison and Evaluation • Lovins' Discontinuity Principle 	
13: November 14	Life Cycle Analysis, Part I <ul style="list-style-type: none"> • Evaluating Performance Criteria • Economic Cost-Benefit Analysis 	Life Cycle Analysis, Part II <ul style="list-style-type: none"> • Projecting Future System Behaviors • Qualitative Cost-Benefit Analysis 	
14: November 21	Communication and Delivery of Results: <ul style="list-style-type: none"> • Targeting the Appropriate Audience • Presenting Results and Supporting Recommendations 	Thanksgiving Holiday – No Class	
15: November 28	Becoming an Agent of Change: Surmounting Organizational Barriers Guest Lecturer to be announced	Environmental Enterprise in the Construction Industry Guest Lecturer to be announced	
16: December 5	Group Project Presentations	Group Project Presentations Wrap-up and Conclusions	Sustainability Improvement Project Due (Friday)
17: December 12	FINALS WEEK	Optional Take-home Final	Reward Dinner