



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

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|--|---|---|-------------|--|---|--------------------------------|---|------------|---|
| Course Title | | Rain Gardens in Urban Green Infrastructure Systems | | | | | | | |
| Course Code | | ZPM526 | | Course Level | | Second Cycle (Master's Degree) | | | |
| ECTS Credit | 8 | Workload | 200 (Hours) | Theory | 3 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | | The purposes of this course are to teach the students the definition, function, benefits and components of green infrastructure systems and the planning stages of the green infrastructure system with examples and to teach the definitions, types, functions, and benefits of rain gardens in urban green infrastructure system, and to show design stages of the rain gardens together with examples. | | | | | | | |
| Course Content | | The contents of this course are the concept, definition, benefits, components, and planning stages of green infrastructure system and the definition, functions, benefits, and design stages of rain gardens. | | | | | | | |
| Work Placement | | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | | Explanation (Presentation), Discussion, Case Study, Individual Study | | | | | |
| Name of Lecturer(s) | | Lec. Abdullah AKPINAR | | | | | | | |

Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1 | 30 |
| Final Examination | 1 | 40 |
| Assignment | 2 | 30 |

Recommended or Required Reading

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| 1 | Benedict, B. A. & McMahon, E. D. (Unknown) Green Infrastructure: Smart Conservation for the 21st Century, Sprawl Watch Clearing House Monograph Series |
| 2 | Anonim (2015) Demystifying Green Infrastructure, UK Green Building Council, Report. |
| 3 | European Commission (2013) Building a Green Infrastructure for Europe, Report, Belgium. |
| 4 | European Environment Agency (2011) Green infrastructure and territorial cohesion: The concept of green infrastructure and its integration into policies using monitoring systems, No: 18, European Environment Agency. |
| 5 | Forest Research (2010). Benefits of green infrastructure. Report to Defra and CLG. Forest Research, Farnham. |
| 6 | Clemson University Public Service Activities (2008) Rain Gardens: A rain garden manual for South Carolina. |
| 7 | Bannerman, R. and Considine, E. (2003) Rain gardens: A how to manual for homeowners. Wisconsin Department of Natural Resources |
| 8 | Tuna, R. (2016) Green Roof, Green Wall and More: Green Infrastructure, 387, pp. 12-15, Architecture |
| 9 | Hepcan, Ç. C., & Hepcan, S. Urban green infrastructure analysis: Bornova example. Mediterranean Agricultural Sciences, 31 (1), 1-1 |
| 10 | Demir, D. (2012). Comparison of Conventional Rainwater Management Systems and Sustainable Rainwater Management Systems: İTÜ Ayazağa Campus Sample (Doctoral Dissertation, Institute of Natural and Applied Sciences). |
| 11 | Müftüoğlu, V., & Perçin, H. (2015). Rain Garden in the Context of Sustainable Urban Rain Water Management. Inonu University Art and Design Magazine, 5 (11), 27-37. |

| Week | Weekly Detailed Course Contents | |
|------|---------------------------------|---|
| 1 | Theoretical | Introduction to course: content, reason, importance, process method and needs |
| 2 | Theoretical | Green infrastructure concept: Definition, terminology and function |
| 3 | Theoretical | Benefits of green infrastructure: economic, social, environmental, hydrological, and ecological |
| 4 | Theoretical | Green infrastructure components and systems |
| 5 | Theoretical | Green infrastructure planning stages |
| 6 | Theoretical | Examination of green infrastructure case studies |
| 7 | Theoretical | Rain gardens in green infrastructure systems: Definition, types, functions, and benefits |
| 8 | Theoretical | Rain gardens in green infrastructure systems: Definition, types, functions, and benefits |
| 9 | Theoretical | Rain gardens design: Determine the locations, size, and depth of the rain gardens. |
| 10 | Theoretical | Selection of plants for rain gardens |
| 11 | Theoretical | Examination of case studies of rain garden design |
| 12 | Theoretical | Students' presentation for the case studies of rain gardens |
| 13 | Theoretical | Students' rain garden design |



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|----|-------------|------------------------------|
| 14 | Theoretical | Students` rain garden design |
| 15 | Theoretical | Students` rain garden design |
| 16 | Theoretical | Final exam |

Workload Calculation

| Activity | Quantity | Preparation | Duration | Total Workload |
|--|----------|-------------|----------|----------------|
| Lecture - Theory | 14 | 10 | 2 | 168 |
| Assignment | 2 | 4 | 1 | 10 |
| Midterm Examination | 1 | 9 | 1 | 10 |
| Final Examination | 1 | 11 | 1 | 12 |
| Total Workload (Hours) | | | | 200 |
| [Total Workload (Hours) / 25*] = ECTS | | | | 8 |
| *25 hour workload is accepted as 1 ECTS | | | | |

Learning Outcomes

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|---|--|
| 1 | Learning the definition, function and benefits of green infrastructure systems |
| 2 | Learning the components and the planning stages of the green infrastructure system |
| 3 | Learning the definition, types, functions and benefits of rain gardens |
| 4 | Learning how to design rain gardens |
| 5 | Learning how to design rain gardens. |

Programme Outcomes (Landscape Architecture Master)

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|---|---|
| 1 | e |
| 2 | e |
| 3 | e |
| 4 | e |
| 5 | e |

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

| | L1 | L2 | L3 | L4 | L5 |
|----|----|----|----|----|----|
| P2 | 5 | | 4 | 5 | 5 |
| P4 | | 4 | | | |

