



# Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

## Shri Vaishnav Institute of Architecture/Planning

### M.Plan (Urban Planning)

#### SEMESTER - I

S. N. O.	Course Code	Course Area	Course Typology	Course Name	TEACHING SCHEME / WEEK			CREDITS	EXAMINATION SCHEME					TOTAL MARKS
					L	T	S		THEORY			STUDIO		
									Two Term Exam (20%) (MST)	Teachers Assessment (20%) (SS)	End Sem University Exam (60%) (ESUE)	Internal Assessment (50%) (IA)	External Viva (50%) (EV)	
1	GEMPLN 119	Urban Planning	Theory	Green Infrastructure	3	-	-	3	20	20	60	-	-	100

**Legends:** L - Lecture; T - Tutorial/Teacher Guided Student Activity; S – Studio; C - Credit;

\***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

#### Course Educational Objectives (CEOs):

To understand the importance of green infrastructure in urban and regional contexts

#### Course Outcomes (COs):

After completion of this course the students are expected to be able to demonstrate following knowledge, skills and attitudes. The students will be able to

- Assess the need of GI enhancement in varying contexts
- Calculate ecosystem values of green infrastructure networks
- Apply green infrastructure elements in development plans



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## Syllabus

### **Unit I: 10HRS**

#### **Introduction**

What is green infrastructure; Definitions and components; Evolution of theories; Scope of green infrastructure at urban regional and national scales; Advantages and limitations of GI

### **Unit II 9HRS**

#### **Principles of Green Infrastructure**

Land conservation in industrial age; The rise of green infrastructure as a strategic conservation tool; Green infrastructure principles; Contemporary Global approaches; Vertical farming; Carbon sequestration

### **Unit-III 8HRS**

#### **Techniques of Need Assessment and Analysis**

Introduction to SuDS Manual; Sustainable urban drainage systems (SuDS): Philosophy and approach; Applying the approach – SuDS design process; Suitability analysis for green infrastructure at urban and regional scales;

### **Unit-IV 7HRS**

#### **Green Infrastructure Network Design**

Basics of green infrastructure network design from exemplary global cases - Florida / Maryland approach; Worldwide Case studies, Potential tools for green infrastructure implementation; Ecosystem management; Watershed management; Adaptive management; Integrating green infrastructure into planning process

### **Unit-V 8HRS**

#### **Sectoral co- benefits of Green Infrastructure**

Green infrastructure and biodiversity; Environmental functions of forests, wetlands, and other open spaces; Flood mitigation; Urban forestry; Economic benefits; Economic value of natural systems; Making links to related efforts; Eco-system values of green infrastructure network;



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## Text Books:

1. Green infrastructure: linking landscapes and communities. Mark A., Benedict, Washington, DC Island Press, 2006
2. Green Infrastructure: A Landscape Approach. David C. Rouse, AICP and Ignacio F. Bunsterossa, American Planning Association, 2013
3. Green infrastructure: a landscape approach. Rouse, David C., Chicago APA Planners Press/Taylor & Fr, 2013

## References:

1. Revising green infrastructure: concepts between nature and design. Czechowski, Daniel, Boca Raton CRC Press/Taylor & Francis, 2015
2. Global green infrastructure: lessons for successful policy-making, investment and management. Mell, Ian., Oxon Routledge, 2016

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