NIRMA UNIVERSITY
NAAC ACCREDITED 'A' GRADE

NU/AC/AC-301121/8(A)/22- 154
Date: 25.01.2022

NOTIFICATION

Read:
1. **R-44 – Empowering the Academic Council to approve Teaching & Examination Scheme, Syllabi, etc published vide notification No. NU-442 dated 27.01.2004**
2. **Notification No. NU-80 dated 21.09.2021 - Revision in Teaching & Examination Scheme and Syllabi of Semester-I and II of B.Arch. programme in suppression of existing curricula**
3. **Notification No. NU-81 dated 21.09.2021 - Revision in Teaching & Examination Scheme and Syllabi of Semester-III and V of B.Arch. programme by way of replacing with new courses and revision in the existing courses**
4. **Resolution No. 3(i)(a) – Faculty of Architecture & Planning meeting – 27.10.2021**
5. **Resolution No. 8(A) – Academic Council meeting – 30.11.2021**
6. **Approval of Director General on note-dated 23.12.2021**

Sub: **Revision in curricula of Semester-IV and VI of B.Arch. programme in supersession of existing curricula**

It is hereby notified for information of all concerned that the Academic Council in its meeting held on 30.11.2021 under resolution No. 8(A) in exercise of powers referred at serial 1 above and taking into consideration the recommendations of the Faculty of Architecture & Planning, has resolved to approve the revision in the curricula of Semester-IV and VI of **B.Arch.** programme by way of introduction of following new courses along with revision in the Syllabi of the existing courses in supersession of existing curricula as per new guidelines of Council of Architecture, to be made effective for the students to be registered in the respective semesters in academic year 2021-22 onwards:

Semester-IV

Introduction as Core course:
i. Building Information Modelling

Revision in syllabi:
i. Architectural Design Studio – IV
ii. History & Theory – IV
iii. Building Construction & Technology – IV
iv. Structure – IV
v. Environmental Science & Services–II
vi. Introduction to Housing

Semester-VI

Introduction of new courses:
i. Environmental Design and GIS Application
ii. Development Control Regulation

Revision in syllabi:
i. Architectural Design Studio – VI
ii. History & Theory – VI
iii. Building Construction & Services

It is further notified that the Director General was authorized to approve the revised document incorporating the suggestions made by the Academic Council and the final document as approved by the Director General is attached herewith as ***Appendix-A***.

Executive Registrar

Encl.: Appendix-A [Pages 1 to 59]

To,
1. Dean, Faculty of Architecture & Planning
2. Academic Coordinator
3. Dy. Registrar (Exam)

Copy to,
1. Exam Sec.
2. OS
3. Library
4. P.A. to ER

c.f.w.cs to: Director General

NIRMA UNIVERSITY
INSTITUTE OF ARCHITECTURE and PLANNING

TEACHING AND EXAMINATION SCHEME FOR SEMESTER V - B.ARCH.
Name of the Programme: Bachelor of Architecture
SEMESTER VI

Course Code	Name of the Course	Teaching Scheme					Scheme of Examination		
		Hours/ Week			Credit	Hours	Component Weightage		
		L	W	S	C	SEE	SEE	CE	LPW
CORE COURSES									
2AR661	Architectural Design Studio - VI	-	-	12	12	-	-	0.5	0.5
2AR662	History & Theory - VI	2	-	-	2	3	0.3	0.5	0.2
2AR663	Building Construction & Services	2	2	-	4	3	0.3	0.5	0.2
2AR664	Environmental Design and GIS Application	-	2	-	2	-	-	0.5	0.5
2AR665	Development Control Regulation	1	2	-	3	3	0.3	0.5	0.2
2AR666#	Related Study Programme – V #	-	-	-	4#	-	-	-	1
2AR667#	Field Studio#	-	-	-	5#	-	-	-	1
Institute Elective courses as per Annexure-I									
Yet to be decided	Elective	1	1	-	2	-	-	0.5	0.5
Yet to be decided	Elective	1	1	-	2	-	-	0.5	0.5
SUPPLEMENTARY COURSES/ VALUE ADDED COURSES									
Yet to be decided	Value Added Courses*	-	2	-	-	-	-	-	1
Total		**7**	**10**	**12**	**27/ 31$/ 33$**				

 # Students can register either for 2AR667 (Related Study Programme – IV) or 2AR668 (Field Studio) in this semester, as per the following condition –

- **3 RSP and 1 Field Studio is to be completed during the entire duration of B.Arch programme out of which 2 RSP is to be completed upto Semester VII and remaining 1 RSP up to Semester X. And 1 Field Studio needs to be completed between Semester-V to X**

$ Credit of RSP or Field Studio will be given to students based on their registration in the respective semester
*** Value Added courses offered in respective semester as offered by the Dean, FoAP,IAP,NU (As per attached Annexure-C)**
Institute Elective courses as per Annexure-A

L: Lecture, W: Workshop, S: Studio, C: Credit
CE: Continuous Evaluation, LPW: Lab/Project/Studio Work, SEE: Semester End Examination

Name of Programme:	**Bachelor of Architecture**
Course Code:	**2AR664**
Course Title:	**Environmental Design and GIS Application**
Course Type:	**Core**
Year of introduction:	**2021-22**

Credit Scheme

L	T	Practical component				C
		LPW	PW	W	S	
2	-	-	-		-	2

Course Learning Outcomes (CLO):

At the end of the course, students will be able to:

- Identify the role and importance of climate and culture in built environment.
- Apply climatic, cultural context and sustainability principles in spatial planning and design of public spaces
- Know fundamentals of GIS and work with database on GIS

Syllabus: 15 weeks (2 hours/week) **Total Teaching hours: 30 Hrs**

Unit	Syllabus	Teaching hours
Unit-I	Introduction to climate, culture and built environment – • Elements of climate, Tropics and its Climatic zones • Different agro-climatic zones in India • Importance of Earth's orbit, and Sun path in determining the climatic and weather conditions	4 hours
Unit-II	Sustainability at various scales of urban form • Elements and scales of urban form • Issues of sustainability at various scales of urban form • Urban landscape and ecology, biodiversity • Site planning and layout • Emerging climatic challenges	10 hours

Unit-III Social life and the urban built environment 10 hours

- Urban public spaces - place, people and activities
- Relationship between built and un-built elements to create experiences of the built environment
- Pattern language at various scales

Unit-IV GIS Application for Site Planning 6 hours

- Concept and Definition, Components and Functions of GIS
- ArcMap, Exploring Graphical User Interface (GUI), Identifying the toolbar and its tools
- Understanding Maps and Layers
- Understanding Vector and Raster datasets
- Application in site planning and layout specific to contexts

Suggested Readings/ References:

1. Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Shlomo, A. (1977). A pattern language: Towns, buildings, construction.
2. Alexander, C, Neis, Hajo; Anninou, Artemis; King, Ingrid (1985) New Theory of Urban Design. Center for Environmental Structure Series.
3. Cullen, Gordon, *The Concise Townscape*, Architectural Press, 1961
4. David J Maguire et al, "*GIS, Spatial Analysis, and Modelling*", ESRI Press
5. Dekay, Mark (2014) "Sun, Wind and Light: Architectural Design Strategies" USA: John and Wiley Sons Inc.
6. Gehl, Jan, *Life between Buildings*, Island Press, 1971.
7. Lynch, Kevin and Hack, Gary, *Site Planning*, The MIT Press, 1984
8. Mesfin T Bekalo et al, "*Landuse Change Detection using GIS, Remote Sensing and Spatial Matrices*", Lap Lambert Academic Publications
9. Olgyay, Victor (1963) "Design With Climate – Bio-Climatic Approach to Architectural Regionalism" New Jersey: Princeton University Press
10. PA Longley et al, "*Geographic Information Systems and Science*", John Wiley and Sons Ltd.
11. Vastu Shilpa Foundation for Studies and Research in Environmental Design. (1990). *Towards: A Humane Habitat: Directions for a Code of Planning and Design Practices*. Ahmedabad Vastu-Shilpa Foundation.
12. Whyte, William H, *The Social Life of Small Urban Spaces*, Project for Public Spaces, 1980