



SHIVAJI UNIVERSITY, KOLHAPUR-416 004. MAHARASHTRA

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शिवाजी विद्यापीठ, कोल्हापूर – 416004.

दुरध्वनी (ईपीएबीएक्स) २६०९००० (अभ्यास मंडळे विभाग— २६०९०९४)

फॅक्स : ००९१-०२३१-२६९१५३३ व २६९२३३३. e-mail: bos@unishivaji.ac.in

SU/BOS/Sci & Tech/ No 4677E

Date : 30 MAY 2018

To,

Principal,  
All affiliated Architecture colleges,  
Shivaji University, Kolhapur.

**Subject:** Regarding syllabus of **Ph. D. Coursework of Architecture Engineering** under the Faculty of Science and Technology.

**Sir/Madam,**

With reference to the subject mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the syllabus of **Ph. D. Coursework of Architecture Engineering** under the Faculty of Science and Technology.

This syllabus will be implemented from the academic year 2018-19 i.e. from June 2018 onwards.

You are therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

**Yours faithfully,**

**Dy. Registrar**

**Copy to :-**

1.	I/c Dean, Faculty of Science & Technology	2.	Computer Centre/ IT Cell
3.	Chairman, BOS in Architecture	4.	Affiliation Section (U.G./P. G.)
5.	OE 4 Section	6.	P. G. Admission Section
7.	Eligibility Section	8.	P. G. Seminar Section
9.	Appointment Section	10.	P.G. Est.

## The Format for Syllabi of course work

1. Subject ..... Faculty .....
1. Title of the paper .. Paper No .....Compulsory/Optional Paper.....
2. Year of implementation from June .....onwards
3. Preamble of the syllabus
4. Total marks ..... or fractions if any .....
5. Units or Modules shall remain only four with 15 contact hours for each module or unit. The whole syllabus should be taught in 60 contact hours. In the case of practical/term paper/review/journal work, the fraction of marks and the nature of work should be defined.
6. References/Additional readings etc.
7. The scheme of teaching and examination should be given by the Departments as applicable to

Sr.No of the Module/Unit	Total No of lecture/Practical/Tutorials etc.			Examination containing Theory/Practical/review/term Paper/journal work etc.			
	Lectures	Practical/Tutorials	Total	Paper	Theory	Practical component	Total
1.			15	I	100	-	100
2.			15	II	100	-	100
3.			15	III	80	20	100
4.			15	Total	280	20	300

the course/paper concerned in the following format for each paper.

8. The field work, seminar, tutorials, GD, Review has to be defined properly.
9. While preparing the course curriculum, the concerned Departments should give equivalences to the old and new papers in the given format as under.

Sr.No	Title of old papers and paper No.	Title of new papers and paper No.

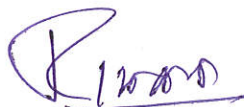
# Land and Regulations for Development (Land Development and Buildings).

## Objectives:

Acquittance with various prevailing Laws for development of land and buildings and their impact on quality of Architecture

## Syllabus:

- Introduction to laws, its need, Objectives etc.
- Classification of Laws (Category wise).
  - a) Town Planning Laws.
  - b) Environmental Laws.
  - c) Fire and Life Safety Laws.
  - d) Other Building Bylaws.
- Town Planning Laws
  1. Town and Country Planning Act.
  2. Zoning, Types of zones , use.
  3. F.A.R., Coverage, Height of building , open space, means of access etc.
  4. Regulations regarding Subdivision of Plot.
- Environmental Laws :
  1. Ministry of environment and forest.
  2. Environment Clearance.
  3. Coastal Regulation Zone laws (C.R.Z.).
  4. Energy Conservation
  5. Water conservation.
  6. Air pollution control.
  7. Site Planning .
  8. Pollution Control, water conservation during construction phase.



Dr. R. B. Koh

10/5/2018

9. Earthwork (cutting & filling).
10. Drainage & sewerages.
11. Solid Waste Management.

- **Fire and life safety Regulations :**

1. National Building Code.
2. Design of Building
3. Fire escape Staircase
4. Sprinklers
5. Smoke detectors.
6. Wet & Dry Risers.
7. Overhead and underground water tanks for fire extinguishing.
8. Smoke Extractors.
9. Pressurization of Staircase.
10. Manual call points.

- **Other Building Regulations**

1. Sizes of Rooms
2. Setbacks.
3. Light & ventilation.
4. Parking Requirement.
5. Electricity Supply, Water supply.
6. Sanitation.
7. Lifts etc .
8. Conservation
9. Heritage site.
10. Easements

## ARCHITECTURAL HERITAGE AND CONSERVATION

### **Objective:**

**To provide an overview of built heritage, its Conservation and Restoration**

### **OUTLINE:**

Human habitation in historical context.

History of Conservation Movement. Western Context vs. Eastern Context

Theory and philosophy of conservation.

World Heritage & UNESCO- World heritage list & World heritage sites.

Introduction to various charters- International & National.

Heritage Legislations- Indian Context Contribution of ASI, Contribution of INTACH

Basic Principles of Conservation.

Ethics of Conservation,

Conservation Interventions, Degrees of Interventions.

Concepts of grading heritage structure,


Archaeological Approaches

Heritage in historic town

Morphology of a traditional habitat, Housing typology, concepts.

Conservation Management & Management fundamentals

Structural conservation retrofitting and strengthening, regeneration renewal, reconstruction and redevelopment.

  
Dr K B Kishore  
10/5/18

## Ph. D Course Work, 2017-18

Adaptive reuse.

Emerging concepts – Living Heritage, Cultural Landscape.

Heritage risk assessment and mitigation

Documentation Methods –Modern Trends & Digital Technologies

# Environmental Architecture & Planning.

Course : A general awareness for the preservation and protection of the environment, in the planning and construction of their building / development projects.

## Detail of Syllabus

### 1. Introduction, Structure and Function:

Introduction to ecology, its meaning and growing importance in daily life. Basic terms used in ecology and their meanings. Fundamental concepts of ecology. Ecology – Environment relationship. Concept of spaceship earth. Structure and function of ecosystem. Major biomes of the world. Bio-geo-chemical cycles: Energy flows in ecosystem. Species diversity, dominance, natural selection, habitat, niche, evolution etc. Eco-system equilibrium. Importance of micro organisms. Succession and community development limiting factors and other concepts. Ecological cybernetics.

### 2. Relationship with Nature:

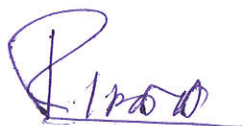
Man's relationship with nature in the past: Food-collecting, hunting, fishing, farming and other developmental stages in human civilization. Man's relationship with nature in the present: Industrial activities, urbanization, de-forestation, mining and similar incursions on nature for technological progress. Environmental impacts of these activities. The ecological crisis. Relevant case studies from abroad and India.

### 3. Importance of Ecology & Environment :

Relevance and growing importance of ecology in a highly urbanized and technological world with reference to dwindling resources, increasing demands and advancing technology. Adaptation of life-styles, and adoption of alternate technologies to harmonize with the natural environment. Discussion on alternatives available. Guiding environmental principles.

### 4. Environmental applications to Architecture and Planning :

Environmental applications to Architecture and Planning. Preserving and improving the human settlement in harmony with nature. Conservation of natural resource for improving the quality of life on earth and attempting to ensure its continuity for the future of humanity. Eco cities, eco-communities and eco buildings: Archeology. Designing



Dr R B Iyer 10/5/2019

settlements and other man-made eco-systems. Ecological and environmental cities for sustainable future.



**Paper - I**  
**RESEARCH METHODOLOGY**  
(Common for Engineering / Technology / Pharmacy)

**Teaching Scheme:**

Theory: 4 hrs/week

**Examination Scheme:**

Theory Examination: 100 Marks

**Objectives:**

- To get introduced to research philosophy and processes in general.
- To be able to formulate the problem statement and prepare research plan for the problem under investigation.
- To be able to apply various numerical /quantitative techniques for data analysis.
- To be able to communicate the research findings effectively.

**Unit 1: Introduction**

Concepts of Research, Meaning and Objectives of Research, Research Process, Types of Research, Criteria of Good Research, Research Problem – Identifying and Defining, Research Proposals – Types, contents, Sponsoring agency's requirements, Ethical aspects, IPR issues like patenting, copyrights etc.

**Unit 2: Research Design**

Meaning, Need and Types of research design, Literature Survey and Review, Research Design Process, Measurement and scaling techniques, Data Collection – concept, types and methods, Processing and analysis of data, Design of Experiments.

**Unit 3: Quantitative Techniques**


Sampling fundamentals, Testing of hypothesis using various tests like ANOVA, Chi square test, Multivariate analysis, Applications of various statistical softwares.

**Unit 4: Computer Applications**

Pre-writing considerations, Principles of Thesis Writing, Formats of Report Writing & Publication in Research Journals, Documentation and presentation tools – LATEX, Microsoft Office with basic presentations skills, Use of Internet and advanced search techniques,

**Reference Books:**

1. 'Research Methodology: An Introduction for Science & Engineering Students', by Stuart Melville and Wayne Goddard
2. 'Research Methodology: An Introduction' by Wayne Goddard and Stuart Melville
3. 'Research Methodology: A Step by Step Guide for Beginners', by Ranjit Kumar, 2nd Edition
4. 'Research Methodology: Methods and Techniques', by Dr. C. R. Kothari, New Age International Publisher
5. Research Methodology, G.C. Ramamurthy, Dream Tech Press, New Delhi
6. 'Management Research Methodology' by K. N. Krishnaswamy, Appa Iyer Sivakumar & M. Mathirajan, Person Education.

  
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10/5/18