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*North Maharashtra University, Jalgaon, (M.S.)
Faculty of Engineering
Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
First Year B.Arch – Term – I
Applicable from term 2007-2008*

Sl. No.	Subjects	Teaching Scheme			Scheme of Examination			
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Design Fundamentals in Architecture	3	1	--	4	50	50	100
2)	Structure - I	3	1	--	4	100	50	150
3)	English Communication Skills	2	1	--	3	--	50	50
4)	History of Architecture and human settlements - I	3	1	--	4	100	50	150
5)	Building Materials - I	3	1	--	4	100	50	150
6)	Arch. Drawing and graphics - I	--	--	8	8	100	100	200
7)	Visual Arts - I	--	--	4	4	--	100	100
8)	Basic Design	--	--	6	6	--	100	100
9)	Model Workshop - I	--	--	5	5	--	50	50
	Total	14	5	21	40	450	600	1050

*North Maharashtra University, Jalgaon, (M.S.)
Faculty of Engineering
Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
First Year B.Arch – Term – II*

Sl. No.	Subjects	Teaching Scheme			Scheme of Examination			
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Structure - II	3	1	--	4	100	50	150
2)	History of Architecture and human settlements - II	3	1	--	4	50	50	100
3)	Building Materials-II	3	1	--	4	100	50	150
4)	Social Science and history of culture I	2	1	--	3	50	50	100
5)	Introduction to Computing	2	1	--	3	--	50	50
6)	Architectural drawing and graphics - II	--	--	8	8	100	100	200
7)	Visual Arts - II	--	--	4	4	--	100	100
8)	Basic and Environmental design	--	--	6	6	--	50	150
9)	Model Workshop - II	--	--	5	5	--	50	50
	Total	14	5	21	40	450	650	1100

North Maharashtra University, Jalgaon, (M.S.)
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Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
Second Year B.Arch - Term - I

Sr. No	Subjects	Teaching Scheme			Scheme of Examination			
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	History of Architecture and Human settlements-III	3	1	--	4	100	50	150
2)	Structure - III	3	1	--	4	100	50	150
3)	Surveying and Levelling	2	1	--	3	--	50	50
4)	Climatology - I	3	1	--	4	50	50	100
5)	Building Materials-III	3	1	--	4	100	50	150
6)	Architectural Design-I	--	--	6	6	100	100	200
7)	Building construction-I	--	--	6	6	100	100	200
8)	Architectural drawing and graphics-III	--	--	6	6	100	100	200
9)	Anthropometrics	--	--	3	3	--	50	50
	Total	14	5	21	40	650	600	1250

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Second Year B.Arch - Term - II

Sr. No	Subjects	Teaching Scheme			Scheme of Examination			
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	History of Architecture and Human settlements - IV	3	1	--	4	100	50	150
2)	Structure - IV	3	1	--	4	100	50	150
3)	Building service - I	3	1	--	4	100	50	150
4)	Climatology - II	3	1	--	4	50	50	100
5)	Acoustics	2	1	--	3	--	50	50
6)	Architectural Design - II	--	--	6	6	100	100	200
7)	Building construction - II	--	--	6	6	100	100	200
8)	Photography	--	--	3	3	--	50	50
9)	Architectural drawing and graphics - IV	--	--	6	6	100	100	200
	Total	14	5	21	40	650	600	1250

North Maharashtra University, Jalgaon, (M.S.)
Faculty of Engineering
Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
Third Year B.Arch - Term - I

Sl No	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Building services-II	3	1	--	4	100	50	150
2)	Structure - V	3	1	--	4	100	50	150
3)	Specifications	3	1	--	4	100	50	150
4)	Air conditioning and ventilation.	2	1	--	3	--	50	50
5)	Landscape design	3	1	--	4	50	50	100
6)	Architectural design - III	--	--	9	9	100	200	300
7)	Building construction - III	--	--	6	6	100	150	250
8)	Working drawing - I	--	--	6	6	--	100	100
	Total	14	5	21	40	550	700	1250

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Third Year B.Arch - Term - II

Sl No	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Structure - VI	3	1	--	4	100	50	150
2)	Quantity surveying and estimating - I	3	1	--	4	100	50	150
3)	Introduction to Town Planning	3	1	--	4	50	50	150
4)	Building services - III	1	1	--	2	100	50	150
5)	Lecture - I	2	1	--	3	--	50	50
6)	Architectural Design - IV	--	--	9	9	100	200	300
7)	Building construction - IV	--	--	6	6	100	150	250
8)	Working drawing - II	--	--	6	6	--	100	100
	Total	14	5	21	40	550	700	1250

North Maharashtra University, Jalgaon, (M.S.)
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Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
Fourth Year B.Arch - Term - I

Sr. No	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Structure - VII	3	1	--	4	100	50	150
2)	Housing	3	1	--	4	100	50	150
3)	Rural Architecture	3	1	--	4	50	50	100
4)	Project and Evaluation management	2	1	--	3	--	50	50
5)	Quantity surveying and estimating - II	3	1	--	4	100	50	150
6)	Architectural design - V	--	--	9	9	100	200	300
7)	Building construction - V	--	--	6	6	100	150	250
8)	Interior Design	--	--	3	3	--	100	100
9)	Computer applications	--	--	3	3	--	50	50
Total		14	5	21	40	530	750	1300

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Fourth Year B.Arch - Term - II

Sr. No	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Appropriate technology	3	1	--	4	100	50	150
2)	Professional practice - I	3	1	--	4	100	50	150
3)	Contract documents and building by laws	2	1	--	3	50	50	100
4)	Building economics	2	1	--	3	50	50	100
5)	Etchase - II	2	1	--	3	--	50	50
6)	Architectural design - VI	--	--	9	9	100	200	300
7)	Building construction - VI	--	--	6	6	100	150	250
8)	Architectural conservation project	--	--	5	5	--	150	150
9)	Computer application	--	--	3	3	--	50	50
Total		12	5	23	40	500	800	1300

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Revised Syllabus
Five Year Degree Course in Architecture B.Arch.
Fifth Year B.Arch - Term - I

Sl. No.	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Practical training	-	-	-	100 10 weeks	-	200	200
	Total	-	-	-	100 10 weeks	-	200	200

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Fifth Year B.Arch - Term - II

Sr. No.	Subjects	Teaching Scheme				Scheme of Examination		
		Lectures	Tutorials	Studio	Total	Paper	Sessional	Total
1)	Professional practice - II	3	1	-	4	100	50	150
2)	Elective - III	2	1	-	3	-	50	50
3)	Dissertation project work	2	6	-	8	-	300	300
	Total	7	8	-	15	100	400	500

Details Syllabus - First Year B.Arch.

TERM - I

10 Design Fundamentals in Architecture

Paper - 2 Hrs

Marks - 50

Sessional - 50

Lecture Hrs. - 4/Week

- 1.1 Understanding and concepts of shelter as architecture. Factors influencing architecture such as region, climate, socio-cultural, economical and technological factors.
- 1.2 Various disciplines needed to be learnt by an architect.
- 1.3 Role and responsibilities of an architect in society and in the role of a leader of the planning team, architecture as profession.
- 1.4 Styles in architecture as an outcome of philosophy, religion and contribution of architect as a philosopher.
- 1.5 Understanding of classical, contemporary and modern architecture.
- 1.6 Brief outline of contribution of architects in Indian Context.

10 Structure - I

Paper - 3 Hrs

Marks - 100

Sessional - 50

Lecture Hrs. - 4/Week

- 2.1 Statics - Basic principles of statics, forces, units, types of force system, conditions of force equilibrium of force system. Resultant of concurrent and parallel forces, analytical and graphical method. Parallel force and couples.
- 2.2 Centroid of simple and complex geometrical areas.
- 2.3 Reactions in the beam.
- 2.4 Basic ideas about structure in the design of architecture, various structural system concepts for buildings.

10 English / Communication Skill

Sessional - 50

Lecture Hrs. - 3/Week

- 3.1 Essentials of business correspondence, business letters, applications to various agencies.
- 3.2 Essential structure of report writing.
- 3.3 Art of verbal communication, art of public speaking, art of group discussion.
- 3.4 Art of expression, knowledge of body language.

10 History of Architecture and Human Settlements

Paper - 3 Hrs

Sessional - 50 Marks

Marks - 100

Lecture Hrs. - 4/Week

- 4.1 The emphasis of this subject should be on solution and development of constructional and architectural problems relating to available building material, techniques of construction and resultant architectural space and form. Cross reference of time and places.
- 4.2 Egyptians, West Asiatic, Greek, Roman and Byzantine architecture.

5.4 Building Materials – I

Paper – 3 Hrs.

Marks – 100

Sessional – 50

Lecture Hrs – 4/Week

- 5.1 Introduction to building materials as mean and element of building construction, aesthetics of exteriors and interiors and a major tool for the designer.
- 5.2 Natural clay and clay products-bricks, terracotta, roofing materials.
- 5.3 Types and origin of building stone, quarrying, dressing, properties, preservatives and applications.
- 5.4 Timber and timber derivatives; natural timber, seasoning process, defects, preservation, veneers and plywood, properties and applications.
- 5.5 Lime cements – their ingredients, types of lime and cement, properties, applications in building industry.
- 5.6 Sand and aggregates, type and properties, use, concrete mix for different purpose.
- 5.7 Choes and adhesives.

5.6 Architectural Drawing and Graphics – I

Paper – 3 Hrs.

Marks – 100

Sessional – 100

Studio Hrs – 8/Week

Course content unchanged as per existing syllabus

7.0

Visual Arts – I

Paper- Nil

Marks-

Sessional – 100

Studio Hrs. — 4/ week

- 7.1 Understanding of Arts, fine arts, performing arts and visual arts. Sculpture and architecture. Architecture as a piece of visual arts.
- 7.2 Study of fundamentals of visual arts – point, line, planes, solids, voids, mass and volume with its simple visual relationships.
- 7.3 Introduction to color theory and its visual appreciation, psychological impacts on visual perceptions.
- 7.4 Textiles as means of visual and physical perceptions.
- 7.5 Use of values of lines for various expressions as a tool for drawing. Simple methods of presentation and introduction to rendering skills.

8.0 Basic Design

Marks –

Sessional – 100

Studio Hrs – 4/Week

- 8.1 Understanding difference of faculties of arts, science, commerce, engineering and architecture and personality as an architect.
- 8.2 Design and execution and generated equipments of the faculty of designing.
- 8.3 Elements of design – point, line, plane, solids, voids.
- 8.4 Principles of composition – balance, rhythm, contrast, harmony, symmetry, continuity, proportions, repetition, distortion.
- 8.5 Space, environment, enclosures as solids and voids.
- 8.6 Progression of two dimensional shapes into three dimensions and creations of solid and void balance in compositions.
- 8.7 Concepts of designing of functional space and aesthetical relations.
- 8.8 Theory and philosophy of aesthetics and perceptions.

9.0 Model Workshop - I

Paper - Nil

Sessional - 50

Studio Hrs. - 3/Week

- 9.1 Instructions in use of specific materials and tools for making models, model making techniques
- 9.2 Model making in paper, paper board, plastic, plaster of paris and clay.

Reference Books

1. Design fundamentals in architecture
architecture : Design fundamentals in architecture -
Form space order
V.S.Pramar
2. Structure - I : Applied mechanics and strength of materials
Khurmi R. S.
Text book of applied mechanics Khurmi R.
S. Text book of applied mechanics
Ramanurtham
3. History of Architecture and : History of world Architecture Sir Banister
Human Settlements
Necture.
4. Building Materials - I : Engineering Materials - Chaudhury
Building Materials - Rangwala.
Engineering Materials - Suresh Kumar.
5. Architectural Drawing and : Principles of building drawing - Shah and
Graphics
Kale.
Engineering drawing - N D Bhatt.
Engineering drawing - R. K. Dhuwan
6. Visual Arts /Basic Design : Principles of building design by
manfred
Fundamental in architecture -
form space order
- V.S.Pramar
7. Model Workshop : New ongan arts
Model buildings.

Details Syllabus - First Year B.Arch.

Term - II

1.0 Structure - II

- 1.1 Elasticity of materials - stresses and strains, Rank's law, stress / strain diagram, elastic constants, working stress and factor of safety, lateral strain and Poisson's ratio, relation between elastic constants, temperature stresses (Simple)
- 1.2 Principal planes and principal stresses.
- 1.3 Neutral axis - action, modulus and moment of resistance.
- 1.4 Distribution of shear stress in various cross sections.

Lecture hrs. - 4/Week

2.0 History of Architecture and Human Settlement - II

- 2.1 Continuation of the European styles - Romanesque, Gothic, Renaissance and baroque periods, its impact on some of the contemporary masters.
- 2.2 Understanding of space form through the study of Indus valley civilization, vedic settlements
- 2.3 Rise of Buddhism and architectural characters
- 2.4 Rise of Hinduism - development of temple architecture, Mandir, Gurnam and Indo Aryan temple architecture
- 2.5 Architecture characters of Jain architecture

Lecture hrs. - 4/Week

3.0 Building Materials - II

- 3.1 Laminated boards, fibre boards and high weight board, acoustic boards its properties, uses and preservation
- 3.2 Iron and steel composition of various grades and types, structural forms preservatives
- 3.3 Non ferrous metals and alloys - Aluminium, copper, brass, lead - its commercial forms and applications
- 3.4 Plastics, synthetic, Plaster, Polyethylene enamel, liquid and cement based paints, surface preparation, methods of application, properties, and limitations and specific uses in industry

Lecture hrs. - 3/Week

4.0 Social Science and History of Culture

- 4.1 Concept of group in group as settlement, society, groups and sub groups, formation of groups and group dynamics
- 4.2 Elements of culture, cultural system and impact on architecture, impact of religion on architecture
- 4.3 Institution social, political, economic, religious and its impact on architecture.
- 4.4 Social policies and planning

Lecture hrs. - 4/Week

5.0 Introduction to Computing

Paper – Nil

Marks –

Sessional – 50

Lecture Hrs. – 4/Week

5.1 Introduction to system, peripherals, hardware, software, RAM, ROM input and output devices

5.2 M. S. Word

5.3 Auto CAD/D – 2D, 3D

5.4 Introduction to internet applications

5.5 M. S. Excel

6.0 Architectural Drawing and Graphics – II

Paper – 3 Hrs

Marks – 50

Sessional – 100

Studio Hrs. – 8/Week

Same as existing syllabus

7.0 Visual Arts – II

Paper – Nil

Sessional – 100

Studio Hrs. – 6/Week

7.1 Simple compositional approaches in two dimensional and three dimensional designs, three dimensional curvilinear forms, massing.

7.2 Compositional approaches in designs using colours and textures.

7.3 Seminar presentation on aesthetical values of above compositional exercises.

8.0 Basic and Architectural Design

Paper – Nil

Sessional – 150

Studio Hrs. – 6/Week

8.1 Comprehensive understanding of skills of organization of elements design, their correlation, linkages, circulation and movements, proportion, scale, discipline and order.

8.2 Understanding the sense of space, arrival, destination, holding, privacy, proximity, fear, exhilaration, inviting, occult and their distinctions.

8.3 Basic design principals related to built forms, positive – negative spaces, mass, visual mass and its perceptual linkage. Volumetric analysis.

8.4 Design of two dimensional surfaces and three dimensional outcome.

9.0 Model Workshop – II

Paper – Nil

Sessional – 50

Studio Hrs. – 3/Week

9.1 Simple carpentry skills and joints.

9.2 Skill of modeling in plastic and acrylic, ply and timber

9.3 Developing skills for creation of different textures

9.4 Models of architectural elements and characters

Reference Books

1. Structure – II

A text book of applied mechanics
Ramanurtham A text book of applied
mechanics Khurmi. RCC by Ramanurtham
By Khurmi.

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|--|---|
| 2. History of Architecture and Human Settlements | History of world Architecture Sir Banister Fletcher, History of Architecture - Vol. - 1 Hindu and Buddhist Period. Percy Brown. Indian History of Architecture Satish Grover. |
| 3. Building Materials | Engineer Materials - Rangawala
Engineer Materials - Kumar. |
| 4. Social Science and History of Culture | . |
| 5. Arch. Drawing and Graphics | Principles of building drawing -- Shah and Kale
Engineering drawing - N.D. Bhatt
Engineering drawing—R.K. Dhanwan |
| 6. Visual Arts - II Basic and Architectural Design | Principals of building design maier Manfred.
Fundamentals in Architecture V. S. Pramar
Form Space order. Time space order. |
| 7. Model Workshop | New origami arts
Model building |

Electives – Subjects

Elective – I

- 1) Modular coordination and modular theory of planning
- 2) Geometry of forms
- 3) Behaviour of architectural spaces
- 4) Ergonomics in architectural design
- 5) Ergonomics of furniture
- 6) Furniture for physically handicapped
- 7) Geometry – form and aesthetics

Elective – II

- 8) Industrial Structures
- 9) Long Span Structures
- 10) Maintenance of Structures
- 11) Hospital Architecture
- 12) Product Design
- 13) Psychological spaces in architecture
- 14) Energy conscious architecture

Elective – III

- 15) G.S.I. applications in architecture
- 16) Cost effective architecture
- 17) Application of non conventional energy in architecture
- 18) Barrier free architecture
- 19) Hotel architecture
- 20) Architectural conservation
- 21) Non conventional building materials and techniques of construction
- 22) Traffic and transportation

Revision in the Regulations :

1. 31 Scheme of Examinations – 3 (d)
The term – I and term – II Examination of Fourth Year B.Arch together will be called The Fourth Year Examination in Architecture.
2. 3 (e)
The term – I and term – II Examination of Final Year Architecture together will be called Final Year Examination for the degree of bachelor of Architecture
The term – I Examination of Final Year Architecture shall be vivavoce to test the candidate in the practical experience a student has gained during the period of training in the term – I.

Sessional Assessment :

1. The sessional work in the following subjects only, shall be assessed by the external examiners alongwith internal examiner.
 - i. Basic design.
 - ii. Basic and Architectural Design.
 - iii. Architectural Design
 - iv. Building Construction.
 - v. Dissertation / Project Work
2. For the assessment of sessional work in above subjects, the internal assessment by internal examiner will be 50% of total marks and the remaining 50% by the external examiner.
3. This examination will be jointly conducted by the internal and external examiners, for the allotment of sessional assessment marks.
4. For the rest of the subjects, where sessional assessment is to be made, will be made by the internal examiner only.
5. Computer work / computer help in design at final year Term-II dissertation is permitted