## SCHEME OF TEACHING AND EXAMINATION

### VIII SEMESTER B Arch (Five Years Degree Course)

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Subject Code</th>
<th>Board of Studies</th>
<th>Subject</th>
<th>Periods per Week</th>
<th>Scheme of Examination</th>
<th>Total Marks</th>
<th>Credit [L+(T+P)/2]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
<td>P</td>
<td>ESE</td>
</tr>
<tr>
<td>01.</td>
<td>316821 (16)</td>
<td>Arch.</td>
<td>Professional Training</td>
<td>0</td>
<td>0</td>
<td>42</td>
<td>500</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td>---</td>
<td>---</td>
<td>42</td>
<td>500</td>
</tr>
</tbody>
</table>

L-Lecture, T- Tutorials, P-Practical (i.e. Studio work),
ESE- End Semester Examination, (Minimum Passing Marks: Theory-35%, Practical-50%)
CT- Class Test
TA- Teachers’ Assessment of the Sessional Assignments, (Minimum Pass Marks: Theory-60%, Practical- 50%)

**Note:**
1. ESE and TA (Both Theory and Practical) are required to be passed separately.
2. For a the subjects having Practical (i.e. Studio work) will be divided in sections at the rate of maximum 15 students per teacher, though studio of all the sections will be held simultaneously in the same studio hall.
Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.).

Semester: VII  
Branch: ARCHITECTURE  
Subject: PROFESSIONAL TRAINING  
Code: 316821 (16)  
Total Theory Periods: 420  
Total Tut Periods: NIL  
Total Marks in End Semester Exam: ---  
Minimum number of Class tests to be conducted: ---

The students will have to complete a practical training for a period of one semester (six months) so as to qualify for obtaining the final B. Arch degree. The candidate will have to submit to the department of architecture the practical training report (in stipulated format with drawings) along with the certificate by firm / office organization to the effect that he / she has completed training satisfactorily for a period of one semester. The student has to appear for the viva examination as per the exam as per schedule announced by the university. The works done in office will be evaluated by internal and external examiners at the end semester examination. For conduction of the Practical (viva-voce) examination one external and one internal examiner may be appointed for a group of 15-20 students.
### IX SEMESTER B Arch (Five Years Degree Course)

#### NINTH SEMESTER

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Subject Code</th>
<th>Board of Studies</th>
<th>Subject Code <em>Subject</em></th>
<th>Periods per Week</th>
<th>Scheme of Examination</th>
<th>Total Marks</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
<td>P</td>
<td>ESE</td>
</tr>
<tr>
<td>01.</td>
<td>316911 (16)</td>
<td>Arch.</td>
<td>Advanced Building Construction</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>02.</td>
<td>316912 (16)</td>
<td>Arch.</td>
<td>Building Economics and Sociology</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>03.</td>
<td>Refer Table - I</td>
<td>Elective-I</td>
<td></td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>04.</td>
<td>Refer Table - II</td>
<td>Elective-II</td>
<td></td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>05.</td>
<td>316913 (16)</td>
<td>Arch.</td>
<td>Design Project-IX</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>06.</td>
<td>316921 (16)</td>
<td>Arch.</td>
<td>Design Project –IX (Studio)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>50</td>
</tr>
<tr>
<td>07.</td>
<td>316922 (16)</td>
<td>Arch.</td>
<td>Advanced Building Construction (Studio)</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>08.</td>
<td>316923 (16)</td>
<td>Arch.</td>
<td>Dissertation on Thesis (Studio)</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>09.</td>
<td>316924(16)</td>
<td>Arch.</td>
<td>Elective-I (Studio)</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td></td>
<td>15</td>
<td>10</td>
<td>15</td>
<td>545</td>
</tr>
</tbody>
</table>

**Note:**

1. ESE and TA (Both Theory and Practical) are required to be passed separately.
2. For a the subjects having Practical (i.e. Studio work) will be divided in sections at the rate of maximum 15 students per teacher, though studio of all the sections will be held simultaneously in the same studio hall.

---

**Table - I**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Board of Study</th>
<th>Subject Code</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Architecture</td>
<td>316931 (16)</td>
<td>Urban Design</td>
</tr>
<tr>
<td>2</td>
<td>Architecture</td>
<td>316932 (16)</td>
<td>Environmental Planning</td>
</tr>
<tr>
<td>3</td>
<td>Architecture</td>
<td>316933 (16)</td>
<td>Regional Planning</td>
</tr>
<tr>
<td>4</td>
<td>Architecture</td>
<td>316934 (16)</td>
<td>Housing</td>
</tr>
</tbody>
</table>

**Table - II**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Board of Study</th>
<th>Subject Code</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Architecture</td>
<td>316951 (16)</td>
<td>Intelligent Buildings</td>
</tr>
<tr>
<td>2</td>
<td>Architecture</td>
<td>316952 (16)</td>
<td>Industrialized Buildings</td>
</tr>
<tr>
<td>3</td>
<td>Architecture</td>
<td>316953 (16)</td>
<td>Low cost Buildings</td>
</tr>
</tbody>
</table>

**Note:**

These electives are related to post graduate courses and the students are offered the same with following conditions:

- The department may run an elective or not depending upon the availability of expertise or for any other reason.
- The students are required to opt for ANY ONE of them, but an elective will be run only when it is opted by minimum 10 students or 25% of the number of the students in the batch, whichever is less.
Design and drawing of constructional details of:

1. Shop fronts, including interior of shops for storing display.
2. Suspended ceilings & false flooring for services.
4. Wall paneling. Sound proof construction including various type materials and construction details. Various interior and exterior surface treatments such as cladding, lining, rendering etc.
5. Design details of different types of counters for various shops, banks, post offices, jewelers, general merchandise, bar counters etc.

Note: 1. There should be regular site visits to buildings under construction or constructed to explain the above topics. Use of audio-visuals should be stressed.
2. Minimum 8 sheets shall be prepared out of which two may be in sketch form (scaled).
3. In theory examination there will be a separate question from each unit with choice within the unit/question. All units/questions will be compulsory.
SECTION I: BUILDING ECONOMICS.

1. Introduction. Broad features of economics, Significance of economics in the development, Macro and Microeconomics, Their concepts and applications, money and Banking functions, Factors of production e.g. Land, labor, Capital, management, money, Marketing etc with reference to building industry.

2. Land economics: Land as limited resource, Land development and conservation, Public policies on land utilization and development, Theories of land values, Acts regarding land use, acquisition and development schemes.

3. Building economics: Increasing building efficiency and cost reduction through proper space organization, use of building components, use of new materials, and innovative construction etc, Rent control and other building acts, Economics of High-Rise buildings.

SECTION B: SOCIOLOGY.

4. Man and his social environment, Social groups, structure, and social changes with respect to ethnic, cultural and organizational aspects.

5. Trends and characteristics of Urbanization, Dynamics of Urban growth, expansion and development along with social changes, urban attitude, values and behavior, Study of above topics based on observations, surveys and published reports.

In theory examination there will be a separate question from each unit with choice within the unit/question. All units/questions will be compulsory.
Design studio program in this semester should focus on urban and metropolitan problems. The design problem may be of large scale, handling of a group of buildings or a cluster of buildings, preferably urban in nature to develop and understanding for problem associated with site planning, layout of roads and services, traffic pollution, land-use etc; a visual and functional study of urban space in use, urban activities, services and evolution of various spaces. A time problem of 24 hours duration shall be done.

Note: The Sessional should be in the form of drawings, models & audio-visuals. The evolution should be done in intermediate reviews consisting of internal external experts. The evaluation shall be done in intermediate reviews consisting of internal and external experts.
1. Definition of urban design, Scope of urban design on international level and in Indian context, Relation with the process of urban planning, growth and development.

2. Historical development in the field of urban design, spatial design, Space orders (Classical, functional, ornamental etc.)

3. Urban forms and its component elements, Visual order of the form, sequence, Scale, Visual space dynamics, various surveys required to document visual aspects of environment.

4. Urban Design concepts and theories of various urban designers having reputation at international and national level.

5. Rational interrelationship among urban structure, economic activities, public organization, communication systems etc., urban conservation and land use structure.

NOTE: Sessional assignment will be based on case studies of old and new townships, city centers, complexes etc. along with proposal for urban design scheme for the same other situations.
1. Factors and parameters of Environmental planning, Ecological considerations in planning including standards, Causes and effects of global environmental facets.

2. Evaluation of factors viz. pollution of Air, water, land and other natural situations.

3. Environmental consideration at planning stage, Environmental policies and legislation to safeguard the environment.

4. Advanced techniques and tools for predicting environmental constraints.

5. Importance and methods of Environmental impact assessment.

NOTE: Sessional assignments will be based on case studies with data collection, surveys and other observations and will be presented in form of seminars.
1. Role of regional planning at national level, Basic concepts of regional planning including incorporation of planning concepts for settlement ranging from metropolitan cities to villages.

2. Socio cultural and land use planning, general principles, Survey techniques, Utopian thoughts and models for planning and relevance in Indian context.

3. Planning norms and development norms for regional approaches (along with consideration to urban planning), Development of existing areas and renewal schemes, conservation and development.

4. Surveys and techniques for planning modes of transportation and its development.

5. Review of existing and proposed regional plans.

NOTE: Sessional assignment will be based on surveys, observations, making regional planning proposals and would be presented report.
1. Study of housing scenario in Indian context, National and state wise Housing policies.

2. Primary consideration for planning housing strategies, Surveys, analysis and inferences based on survey and data.

3. Study and analysis of infra-structural requirements, including re-evaluation of standards based on actual observation study of land use density, legislation and byelaws, framing housing policy for a proposed scheme with consideration to nature of development.

4. Environmental consideration for urban, sub-urban and rural housing including physical and psycho-sociological aspects, classification of users based on economic, occupational and socio-cultural aspects.

5. To study and analyze an example and proposed for the housing scheme for a given situation considering all the aspects studied above.

Note: Sessional assignment will be based on unit 5 and will be presented in form of seminars.

In theory examination there will be a separate question from each unit with choice within the unit/question. All units/questions will be compulsory.

2. Study of Concepts of Management of facilities, Effective Space, Business along with various models of Building Intelligence.

1. Technology Evolution and the IT marks place: present technological content. Exploration of user IT systems. Demands on building and services, Control systems, study of development of Computer Integrated Building, from single function systems to integrated solutions.


3. Importance and study of planning and operational techniques for facility management. Intelligent design and construction, Expectations of user, use of IT for effective communication of architectural concepts to user, Locating people and information, Introduction to building efficiency with respect to life cycle costs.

NOTE: The Sessional assignment will include collection of information from various sources including treatises in vernacular languages, case studies of important buildings and proposals in light of above study. The same will be presented in reports and seminars.
1. Introduction & origins of the Industrialised Concept: Definition of Industrialization. Study of historical background of industrialized building in other countries. The Indian experience. Study of CBRI & SERC works.

2. Use of Modular Coordination & Standardization. Introduction, standardization of building components in present technological context, design parameters.

3. Use of latest construction techniques: Tunnel form system, L&T form System, Triple S System, etc.


5. Scope & limitations on applicability Socio-economic situations, spatial requirements & Lifestyle. Group Housing.

NOTE: The Sessional assignment will include collection of information from various sources including treatises in vernacular languages, case studies of important buildings and proposals in light of above study. The same will be presented in reports and seminars.
Optimization of cost or affordable cost through various measures has become an important issue since prices escalate fast. The course aims to make aware about the issues/methods involved.

1. Introduction to the term low cost- its definition, concept, scope, importance, the need etc.

2. Cost factor and reduction measures through design appropriate technology management R & D applications.


4. Prefabrication modular co-ordination, pre-stressed components and use of such other systems.

5. Study of the effort done by other agencies in cost reduction measures.

NOTE: Sessional shall include assignments with report on case studies and design project work in housing/residential/public buildings incorporating the various measures.
The subject is a lab (studio) oriented subject and hence, the syllabus as specified in Design Project-IX [316915(16)] will be the same. The works done as sessionals will be evaluated by internal and external examiners at the end semester examination. For conduction of the practical (viva-voce) examination one external and one internal examiner may be appointed for a group of 15-20 students.
The subject is a lab (studio) oriented subject and hence, the syllabus as specified in Advanced Building Construction [316911(16)] will be the same. The works done as sessionals will be evaluated by internal and external examiners at the end semester examination. For conduction of the practical (viva-voce) examination one external and one internal examiner may be appointed for a group of 15-20 students.
The objective of introducing dissertation is to develop the research aptitude, skill of report writing and presentation in the form of seminar. The work shall be done on any topic, known theories, established practices etc. related to the field of architecture. The study, editing or collection of information or research may be purely theoretical one. The topic shall be selected by the student in consultation with the coordinator and the guide. It is advisable that the selected topic may have relevance with the proposed topic of thesis. The department may form a Thesis Evaluation Committee headed by a Thesis Coordinator for selection of the guides for various thesis topics.

The dissertation work will be evaluated a stages and a final report shall be submitted with photographs, sketches etc. given at appropriate places. The final presentation will be in the form of seminar/review.

The end semester examination will be evaluated by the respective guides of the students along with one external examiner. For conduction of the practical (viva-voce) examination one external may be appointed for a group of 15-20 students, and the respective guides will act as internal examiners.
Semester: NINTH  
Subject: ELECTIVE -I (STUDIO)  
Total Practical Periods: 60  
Total Marks in End Semester Exam: 50  
Minimum number of Class tests to be conducted: --

The subject is a lab (studio) oriented subject and hence, the syllabus as specified in Elective-I [316913(16)] will be the same. The works done as sessionals will be evaluated by internal and external examiners at the end semester examination. For conduction of the practical (viva-voce) examination one external and one internal examiner may be appointed for a group of 15-20 students.
# Chhattisgarh Swami Vivekanand Technical University, Bhilai

## SCHEME OF TEACHING AND EXAMINATION

### X SEMESTER B Arch (Five Years Degree Course)

### TENTH SEMESTER

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Subject Code</th>
<th>Board of Studies</th>
<th>Subject</th>
<th>Periods per Week</th>
<th>Scheme of Examination</th>
<th>Total Marks</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
<td>P</td>
<td>ESE</td>
</tr>
<tr>
<td>01.</td>
<td>316011(16)</td>
<td>Arch.</td>
<td>Construction Management</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>02.</td>
<td>316012(16)</td>
<td>Arch.</td>
<td>Valuation</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>80</td>
</tr>
<tr>
<td>03.</td>
<td></td>
<td></td>
<td>Elective III</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>04.</td>
<td>316013 (16)</td>
<td>Arch.</td>
<td>Thesis Project</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>---</td>
</tr>
<tr>
<td>05.</td>
<td>316021 (16)</td>
<td>Arch.</td>
<td>Thesis Project (Studio)</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>150</td>
</tr>
<tr>
<td>06.</td>
<td>316022(16)</td>
<td>Arch.</td>
<td>Elective III (Studio)</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14</td>
<td>4</td>
<td>22</td>
<td>335</td>
</tr>
</tbody>
</table>

### Note:

1. ESE and TA (Both Theory and Practical) are required to be passed separately.
2. For a the subjects having Practical (i.e. Studio work) will be divided in sections at the rate of maximum 15 students per teacher, though studio of all the sections will be held simultaneously in the same studio hall.

---

### Table - III

<table>
<thead>
<tr>
<th>Elective - III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S.NO.</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

### Note:

These electives are related to contemporary trends in the field and the students are offered the same with following conditions:
- The department may run an elective or not depending upon the availability of expertise or for any other reason.
- The students are required to opt for ANY ONE of them, but an elective will be run only when it is opted by minimum 10 students or 25% of the number of the students in the batch, which ever is less.
1. Introduction: Introduction to project management concepts, objectives, goals and different aspects of management. Traditional management system. Gantt’s approach, bar charts, project programming, time estimates etc.

3. Project programming, resource balancing, phasing of activities, program scheduling, project control, reviewing, updating and monitoring, modern management concepts.

4. Project Assessment & project cost jobs size, divisions of responsibilities, liaison with owners and their representatives, feasibility study, project report, construction-financing facilities etc.

5. Construction Management: Conditions of contract, their application, quality and quantity controls, time and cash contract, recording, checking and certifying with coordination of all building activities.

6. Project monitoring: C.P.M. P.E.R.T. & other one-dimensional techniques for project planning scheduling and control.

In theory examination there will be a separate question from each unit with choice within the unit/question. All units/questions will be compulsory.
1. Basic purpose and principles of valuation including study of terminology:

2. Various methods of valuation:
   a) Rental method.
   b) Land and building method.
   c) Profit method.

3. Other methods, use of valuation tables.

4. Legislation: Land acquisition act, rent control acts etc.

5. Requirements for getting license of valuer, Role of valuer with various agencies for loans, mortgage, property disputes in court of law etc.

In theory examination there will be a separate question from each unit with choice within the unit/question. All units/questions will be compulsory.
As the name of the subject suggests that it is shastra (Science) of VASTU (BUILDING) and precisely this has given the identity to our ancient Architecture. This shastra embodies the cosmic, metaphysical and astrological, astronomical, mystic & physical characteristics. The subject is only introductory to teach the very basis of Vastushastra and its application to contemporary architecture.

1. Review of ancient wisdom, introduction to vastushastra its relevance and importance.

2. Fundamental cannons:
   - Ding Nimaya (Orientation).
   - Vastu-pada Vinyasa (Space organization/ Placement of Units.)
   - Mana (Scale and dimensioning.)
   - Ayadi sadvarga (Harmonization with cosmic environment.)
   - Patakadi shat chhanda. (Aesthetical consideration.)

3. Covering elements of villages/towns, road, beautification and application in today context.


5. Application of vastushastra for present day usages such as individual house/ flats/ industries/ offices/ temples etc.

Note: Sessional assignment shall be in form of an exemplary project and will be presented in seminars.
The subject is introduced to create awareness in student regarding development in harmony with eco-systems so as to make it sustainable.

1. Study of eco-systems at cosmic and micro level.

2. Interrelationship of man-made development with eco-processes as regards to positive and negative impacts both ways at Macro and micro level.

3. Eco friendly materials, eco-friendly energy system and eco-friendly execution of development schemes including architectural and settlement development at micro and macro level.

4. The importance and need of sustainable (including self-sustainable) development along-with the study of measures, and methods to active the same.

5. Survey and study of existing development analysis the same for its eco-friendliness and proposing the schemes for eco-friendly development.

Note: Sessional assignment shall be in form of an exemplary project and will be presented in seminars.
Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.).

Semester: TENTH
Subject: ARCHITECTURAL CONSERVATION
Total Theory Periods: 40
Total Marks in End Semester Exam: ---
Minimum number of Class tests to be conducted: ---

Branch: ARCHITECTURE
Code: 316073 (16)
Total Tut Periods: 12

The subject has been introduced to inculcate in students importance and need of maintenance of continuation in development with due respect to the development in the past.

1. Definition and various aspects of conservation of natural and man made environment including importance & need of their conservation.

2. Survey & search of architectural heritage along with historical cultural and archeological significance.

3. Measures of conservation i.e. protection, maintenance, restoration, reconstruction, adoption and adaptation.

4. Methods and technology for protection, maintenance, restoration & reconstruction of buildings and environments.

5. Architectural thought, procedure & concept regarding adoption and adoption with or without change in mode of utilization for exemplary buildings & environments based on assignments.

Note: Sessional assignment will be based on selection of a conservation project & presentation of proposal in seminars.
Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.).

Semester: **TENTH**
Subject: **THESIS PROJECT**
Total Theory Periods: **40**
Total Marks in End Semester Exam: **00**
Minimum number of Class tests to be conducted: **---**

**Branch:** ARCHITECTURE
**Code:** 316013 16)
**Total Tut Periods:** **24**

**OBJECTIVES**
All the four years of learning architectural design and allied subjects culminate in design thesis project to motivate a student in investigative attitude with individual methodology, thus to train the students in handing projects independently.

**PROJECT**
Each student will select a subject of an architectural interest in consultation with the committee appointed by the Head / Principal of the Dept. / Institution. This committee should be headed by a Thesis Coordinator selected amongst the staff members.

The subject will have to be approved at the beginning of the eighth semester. The evolution of the thesis project will be continuous and the student will have to give at least four seminars / reviews /submission. The thesis work will be periodically evaluated by the guides of respective students along with one external examiner for a group of 15-20 students. The students may be allowed to go for case studies out of the city with the permission of the Thesis coordinator/guide. The thesis project shall be submitted in the form of bound report, drawings, models etc. in a manner as stipulated in THESIS MANUAL on the date prescribed by the University.
This is in continuation of Thesis Project [316X14(16)]. The allotted periods of practical may be utilized by the students for conduction of site visits/ case studies/ data collection/ preparation of project etc.

The thesis project shall be submitted in the form of bound report, drawings, models etc. in a manner as stipulated in THESIS MANUAL on the date prescribed by the University. The end semester examination will be evaluated by the guide, minimum two external examiners and any other member of the Thesis Evaluation Committee as appointed by the Thesis Coordinator in the form of Final seminar/presentation.
Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.).

Semester: TENTH
Subject: ELECTIVE-III (STUDIO)
Total Marks in End Semester Exam: 25
Minimum number of Class tests to be conducted: ---

The subject is a lab (studio) oriented subject and hence, the syllabus as specified in Elective-III [316X13(16)] will be the same. The works done as sessionals will be evaluated by internal and external examiners at the end semester examination. For conduction of the practical (viva-voce) examination one external and one internal examiner may be appointed for a group of 15-20 students.