



SANJAY GHODAWAT UNIVERSITY, KOLHAPUR

Sanjay Ghodawat University (SGU) is established in the Academic Year 2017-18, as a State Private University under Govt. of Maharashtra Act No. XL of 2017 dated 3rd May 2017, with the approval of the UGC and the state Government. "For the true measure of giving is giving without measure." Spread across 150 Acres, Sou. Sushila Danchand Ghodawat Charitable Trust's Sanjay Ghodawat University (SGU) is situated in serene atmosphere amidst idyllic hills and lush green meadows to study in harmony with Nature. The Institution aspires to run along the lines of best-in- the-world education and become a world-class institution where teaching-learning process gets a far deeper meaning. SGU always stands as the guiding star of brilliance, quality and deliverance beyond expectations. Innovativeness and Creativity are the hallmarks of a genius enterprise and SGU stands to be a stage where these qualities would be nurtured, encouraged and blossomed. The genius is incomplete without the sense of social responsibility and SGU's ultimate goal remains the development of an attitude of gratitude that freely gives back without expectations.

The Sanjay Ghodawat University stands as a beacon of light to guide the younger generation of the day on the right path to fulfilment in career and life. The USP of the University is its research based curriculum and academically oriented teaching staff. The world class ambience and infrastructure helps the students to easily accommodate themselves in an environment that is conducive to the teaching- learning process. Hands on experience, challenge based case studies, maximum participation of students in the classroom, use of modern digital technology, smart classrooms, solution oriented thinking promotion, stress on research and innovation, international tie ups, choice based credit system for flexibility in choosing areas of interest etc. are some of the features of the University.

The university will help students develop as a unique individual-to be educated as a whole person, intellectually, emotionally, socially, ethically, and spiritually. The educational program designs are worked out meticulously in line with best in class universities with special focus on:

- Flexible Choice Based Credit System
- OBE - Outcome Based Education System
- Experiential Learning
- Project Based Learning



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- Case Based Learning
- Training need analysis based on Performance Appraisal System
- Active Learning tools for effective delivery
- Mentoring / Proctorship
- On line learning /Self learning platforms
- Flipped Classroom concept
- Effective Student Feedback Mechanism

VISION

Internationally recognized university of excellence in creating and disseminating knowledge through value-based quality education leading to betterment of mankind.

MISSION

- To prepare students for life-long learning and leadership in a global academic culture
- To create intellectual manpower relevant to the industry and society at large
- To collaborate with institutions of international repute for academic excellence
- To promote research and development through conducive environment
- To encourage entrepreneurship and skill development programs

CORE VALUES

- Integrity
- Transparency
- Accountability
- Equality
- Empathy
- Stewardship

QUALITY POLICY

Sanjay Ghodawat University is committed to establish high standards in value-based quality education to enhance and nurture young minds to excel in their chosen profession and develop into socially responsible citizens through resourceful collaboration, innovation and research



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CHOICE BASED CREDIT SYSTEM (CBCS)

The credit based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice based credit system provides a 'cafeteria' type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

University Grants Commission has come up with the Choice Based Credit System (CBCS) programme in which the students have a choice to choose from the prescribed courses, which are referred as core, elective or minor or soft skill courses and they can learn at their own pace and the entire assessment is graded-based on a credit system. The basic idea is to look into the needs of the students so as to keep up-to-date with development of higher education in India and abroad. CBCS aims to redefine the curriculum keeping pace with the liberalization and globalization in education. CBCS allows students an easy mode of mobility to various educational institutions spread across the world along with the facility of transfer of credits earned by students.

Where the students can choose the prescribed courses, as the core, and elective or soft skill courses, from a range of options, rather than to simply consume what the curriculum offers. They can learn at their own pace and the assessments are graded based on a credit system. It provides an opportunity for students to have a choice of courses or subjects within a programmed resembling a buffet, against the mostly fixed set of subjects now being offered (except for the limited choice of electives in professional degrees and postgraduate programmes) with the flexibility to complete the programmed by earning the required number of credits at a pace decided by the students.

The UGC has always initiated measures to bring efficiency and excellence in the Higher Education System of India. The basic motive is to expand academic quality in all aspects, right from the curriculum to the learning-teaching process to examination and evaluation systems. However, so far multiple methods are followed by different universities across the country towards examination, evaluation and grading system. Considering this diversity, the implementation of the choice based credit system seems to be a good system in assessing the overall performance of a student in a universal way of a single grading system.



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OUTCOME BASED EDUCATION (OBE) MODEL

Sanjay Ghodawat University (SGU) has implemented OBE model of education, which is a learner centered approach. SGU has witnessed a sea change in the entire academic systems with implementation of all three components of OBE – Design, Delivery and Assessment. The SGU model of autonomy focuses on experiential learning which believes in learning by doing. This is achieved through hands on experience, industrial assignments, mini projects and live problem solving and collaboration with industries.

SGU is set in to dynamics of transformation and witnessing a shift in focus from teaching to learning and entire academic system of SGU is designed to provide multiple learning opportunities for students to acquire and demonstrate the Knowledge, Skills and Attitudes (KSA) for rewarding career.

The Vision and Mission of the Management, contribution from eminent BOG members and knowledgeable members of Academic Council and Board of Studies, the motivation and drive of the Director, the relentless efforts of the fellow Deans and Head of Departments and all teaching and non teaching staff along with commitment to learning of students made it possible to successfully transform the institute and stand out to carve a niche for itself as an Institute of repute.

OBE is an approach of curriculum design and teaching that focuses on what students should be able to do (attained) at the end of course/ program. Outcome based education (OBE) is student-centered instruction model that focuses on measuring student performance through outcomes. Outcomes include knowledge, skills and attitudes (KSA). Its focus remains on evaluation of outcomes of the program by stating the knowledge, skill and behavior a graduate is expected to attain upon completion of a program and after 4 – 5 years of graduation. In the OBE model, the required knowledge and skill sets for a particular degree is predetermined and the students are evaluated for all the required parameters (Outcomes) during the course of the program.

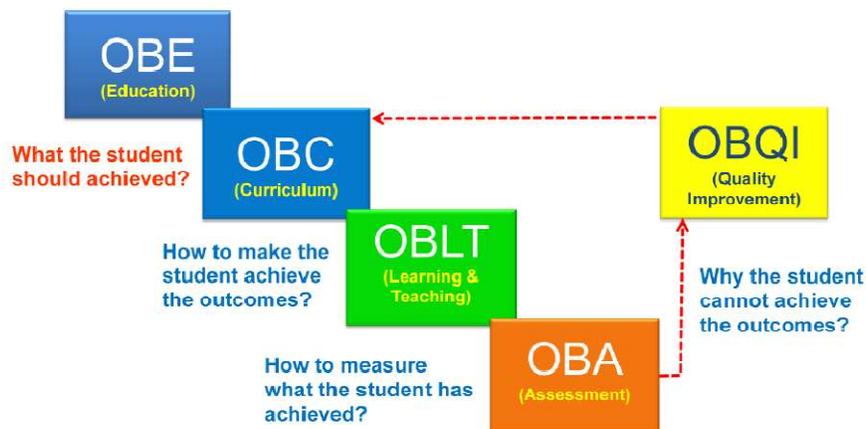
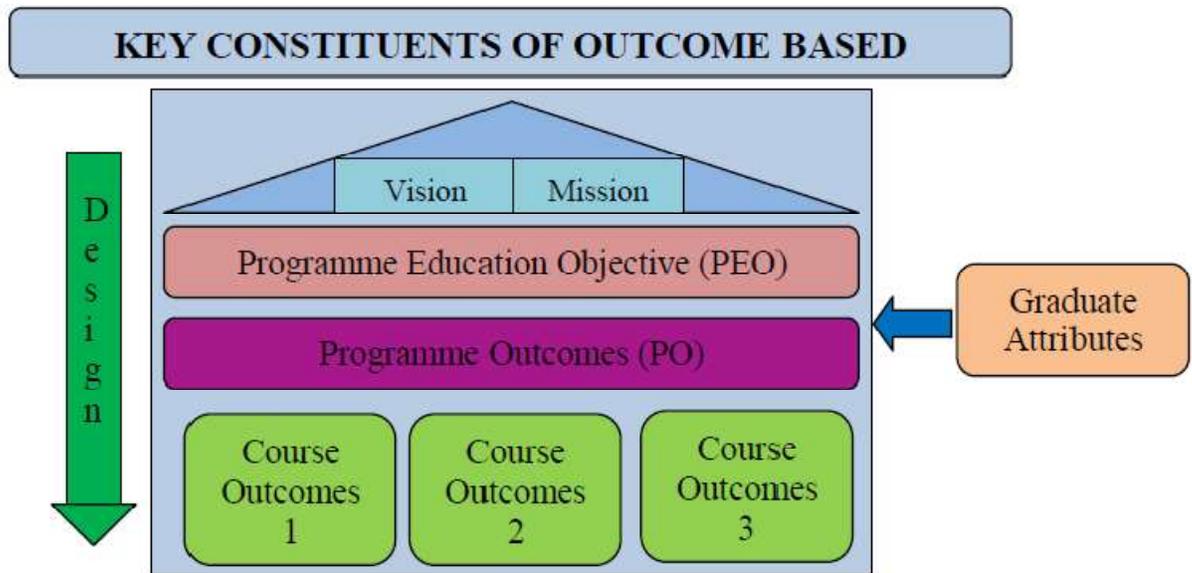


Figure 1: OBE flows and description



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The OBE model measures the progress of the graduate in three parameters, which are

- Program Educational Objectives (PEO)
- Program Outcomes (PO)
- Course Outcomes (CO)

Program Educational Objectives (PEO) are broad statements that describe the career and professional accomplishments that the program is preparing the graduates to achieve. PEO's are measured 4-5 years after graduation. Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. They must reflect the Graduate attributes. Course outcomes are the measurable parameters which evaluates each students performance for each course that the student undertakes in every semester.

The various assessment tools for measuring Course Outcomes include Tests and End Semester Examinations, Tutorials, Assignments, Project work, Labs, Presentations, Employer/Alumni Feedback etc,. These course outcomes are mapped to Graduate attributes and Program outcomes based on relevance. This evaluation pattern helps Institutions to measure the Program Outcome. The Program Educational Objective is measure through Employer satisfaction survey (Yearly), Alumni survey (Yearly), Placement records and higher education records.

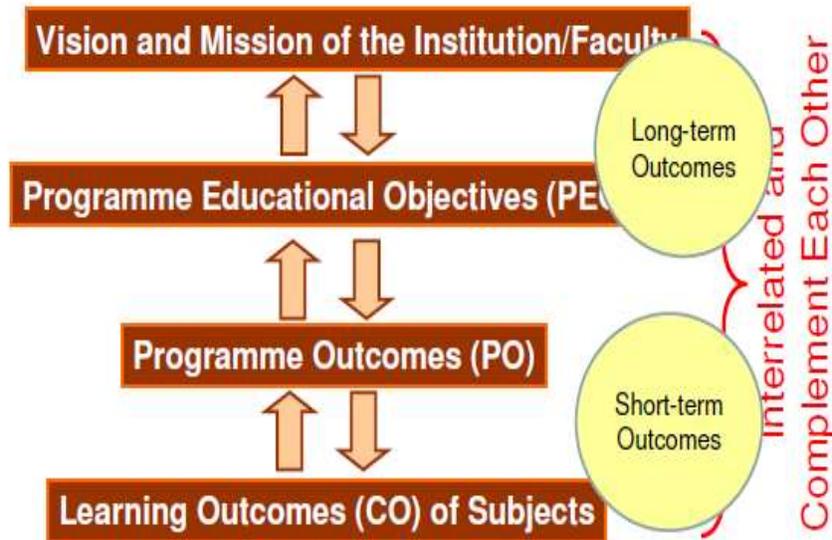


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Outcomes in OBE

A Model Hierarchy of Outcomes



Special Features of OBE

- OBE is an educational process that focuses on what students **can do** the **qualities** they should develop after they are taught.
- OBE involves the restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of high order learning and mastery rather than accumulation of course credits.
- Both structures and curricula are designed to achieve those **capabilities** or **qualities**.
- Discourages traditional education approaches based on direct instruction of facts and standard methods.
- It requires that the students demonstrate that they have learnt the required skills and content.



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School of Architecture

School of Architecture educates students who contribute to the global community through the design, construction and interpretation of the of built environment, aim to be globally acclaimed for academic excellence in theory and practice, empowering future design professionals with core values and critical thinking, intellectual curiosity, ethical behavior and learning to engage architecture in its civic, social and professionals realms for the benefit of the built and natural environment through innovative open exchange and dialogue between students and faculty. Preparing students for leadership roles in field of architecture.

Recognizing that architecture is a basic human need, we strive to play an essential and innovative, role in enhancing the human condition. We empower students to critically engage the complexities of society and the natural environment by installing the fundamental principles of design and inspiring a spirit of exploration and creative experimentation in shaping the built environment.

The aim of the school is to achieve excellence in architectural design that needs not only needs skillful creation of forms and aesthetics but also inspirations form and in depth bank of technical knowledge and practical know-how. The most preferred destination producing futuristic globally competent and socially responsive professional architects.

Challenging students to develop their abilities in problem solving creative positive thinking and decision making is a focus of our professional education. It enriches multi disciplinary teaching and research within the University and with other local and international universities.

SGU is offering various programs through schools such as School of Architecture, School of Technology, School of Commerce and Management, School of Sciences and School of Arts.

SGU has implemented the outcome based Education (OBE) system and Credit based Evaluation System in all the schools.

The rules and regulations mentioned in this document are applicable to School of Architecture program offered by the Sanjay Ghodawat University from the academic year 2018-19. The rules and regulations stated here under are subjected to revisions / refinements, updates and modifications and amendments by academic council (AC) from time to time and applicable to all batches including those already undergoing programs at different year and are binding on all stakeholders including students, faculty, parents and University authorities.

The academic programs of the University shall be governed by rules and regulations approved by the academic council from time to time. Academic council is the supreme and statutory academic body that governs all academic matters of the university and the decisions of the academic council are final and binding in the matters related to academics.

Definition of Terms

1. **University:** University means Sanjay Ghodawat University, Kolhapur
2. **Academic Year:** The period of the year during which students attend university for all academic activities, usually it starts from first of July and ends on 30th of June next year.
3. **Semester:** Academic Year is divided in to 2 parts called Semester, Odd Semester which starts from July and Even Semester which starts from January.



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4. **Duration of Semester:** Total duration of semester is usually 20 weeks per semester including instructions, examination and evaluation. Total instructional days are 90 per semester.
5. **Course:** It is a Subject that is in a semester. The course may consist of Theory/Sessional Internal/ Sessional Oral /Project during semester. Usually taught by instructor in a class. Usually taught in a class e.g. Design, Building Technology and Material, History of Architecture, Building Services, etc.
6. **Contact Hours:** Time of students in class/studio with instructor. Usually in the range of 26 to 30 Hrs./Week. For the purpose of uniformity one contact hour is measured as 60 minutes
7. **Academic Council (AC):** Means apex academic body governing the academic programs responsible for framing policy, rules and regulations.
8. **Board of Examination (BOE):** Central body responsible for framing policy, rules and regulations for Examination.
9. **Board of Studies (BOS):** Departmental academic body to govern the academics of programs (BOS) offered by department.

ELIGIBILITY FOR ADMISSION

Students seeking admission to First year of Bachelor's degree course in Architecture must fulfill the eligibility criteria laid down by Sanjay Ghodawat University, Kolhapur / Govt. of Maharashtra / Council of Architecture as applicable from time to time.

Curriculum (Syllabus):

Every program has a prescribed structure which, in general, is known as Curriculum. It prescribes courses to be studied in each semester. The booklet containing courses structure along with detail syllabus for each course of each program is updated periodically and made available on the website.

Semesters:

SGU implements a credit based semester system. The academic year is divided into two regular semesters. The semesters that begin in July are known as Odd semester and the semester that begin in January are known as Even semesters. Total duration of each semester is generally of 20 weeks including the period of examination, evaluation and grade declaration.

SCHEME OF ASSESSMENT.

A candidate to be eligible for the degree of Bachelor of Architecture will be required to appear for and pass examinations as under:

CREDIT POINTS

While calculating credits the following guide lines shall be adopted

- (i) 1 lecture period/ hour shall have 1 credit;
- (ii) 2 lab/workshop/ studio exercises/seminar periods/ hours shall have 1 credit and
- (iii) 1 design studio/construction studio/project/thesis period/ hour shall have 1.5 credits. (As per amendments in Nov.2017 by Council of Architecture)



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EXAMINATION CONSISTING OF STAGE I (Total credits of Stage I = 180)

1. I B.Arch. Semester I & II exams
2. II.B. Arch Semester III & IV exams
3. III.B. Arch. Semester V & VI exams

STAGE II (Total credits of Stage II = 92)

4. IV B.Arch. Semester VII & VIII exams
5. V B.Arch. Semester IX & X exams

Total Credits of the Course = Stage I + Stage II = 272

As per Council of Architecture norms

LATERAL ENTRY FOR B TECH PROGRAMS

- **No Lateral entry as per Council of Architecture Norms for Five Years B. Arch. Course**

Facilitation to Students:

Faculty Advisor:

1. On joining the institute, a student or a group of students shall be assigned to a faculty advisor who shall be mentor for a student throughout his/her tenure in the institute. A student shall be expected to consult the faculty advisor on any matter relating to his/her academic performance and the courses he/she may take in various semesters / summer term. A faculty advisor shall be the person to whom the parents/guardians should contact for performance related issues of their ward. The role of a faculty advisor is as outlined below:
2. The role of the Faculty Adviser is outlined below
 - Guide the students about the rules and regulations governing the courses of study for a particular degree.
 - Advise the students for registering courses as per curriculum given. For this purpose the Faculty Adviser has to discuss with the student his/her academic performance during the previous semester and then decide the number and nature of the courses for which s/he can register during the semester as per the curriculum.
 - Approve the registration of the students.
 - Advise students to overload/ drop one or more courses/activities based on her/his academic performance as per the prescribed rules.
 - At the end of the first semester/year, the Faculty Adviser may even advise a reduced load program for a poorly performing student.
 - Pay special attention to weak students and carefully monitor performance of students recommended for slow track option.



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- Advise students for Course Adjustment / Dropping of courses during the Semester within the stipulated time frame given in the Academic calendar.
- Advise students seeking semester drop either during the ongoing semester or before the commencement of the semester. FA has to ensure strict compliance of rules and regulations laid down for this purpose. Recommend the cases to the appropriate authorities for consideration.
- Make revised plan of study for weak/bright students based on their semester wise performance.
- Suggest modalities for course/credit requirements for the students recommended for exchange program.
- Guidance and liaison with parents of students for their performance.
- To ensure that students are not permitted to reregister for courses, which they have already passed.
- Inform students that any academic activity (course / Sessional Internal /Sesional Oral / seminar / project / noncredit requirement etc.) undergone without proper registration will not be counted towards the requirements of his/her degree.
- Strictly warn students that if she/he fails to register during any semester without prior approval, his/her studentship is liable to be cancelled.
- Keep the students updated about the Academic Administration of the University.

Helping Weaker Students:

A student with backlog/s should continuously seek help from his/her faculty advisor, Head of the Department and the Dean of respective schools. Additionally he/she must also be in constant touch with his/her parents/local guardians for keeping them informed about academic performance. The university also shall communicate to the parents/guardians of such student at least once during each semester regarding his/her performance in in-in various tests and examination and also about his/her attendance. It shall be expected that the parents/guardians too keep constant touch with the concerned faculty advisor or Head of the Department, and if necessary - the Dean of the respective school.

Discipline and Conduct:

- Every student shall be required to observe discipline and decorous behavior both inside and outside the campus and not to indulge in any activity, which shall tend to bring down the prestige of the university.
- Any act of indiscipline of a student reported to the Dean, Student Development, shall be discussed in a Disciplinary Action Committee of the institute. The Committee shall enquire into the charges and recommend suitable punishment if the charges are substantiated.
- If a student while studying in the university is found indulging in anti-national activities contrary to the provisions of acts and laws enforced by Government he/she shall be liable to be expelled from the institute without any notice.



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- If a student is involved in any kind of ragging, the student shall be liable for strict action as per provisions in the Maharashtra anti-ragging act.
- If any statement/information supplied by the student in connection with his/her admission is found to be false/ incorrect at any time, his/ her admission shall be cancelled and he/she shall be expelled from the university and fees paid shall be forfeited.
- If a student is found guilty of malpractice in examinations then he/she shall be punished as per the recommendations of the Grievance Redressed Committee (CRC) constituted by Board of Examinations.
- Every admitted student shall be issued photo identification (ID) card which must be retained by the student while he/she is registered at Sanjay Ghodawat University Kolhapur. The student must have valid ID card with him/her while in the University Campus.
- Any student who alters or intentionally mutilates an ID card or who uses the ID card of another student or allows his/her ID card to be used by another, student shall be subjected to disciplinary action.
- The valid ID card must be presented for identification purpose as and when demanded by authorities. Any student refusing to provide an ID card shall be subjected to disciplinary action. Students should switch off the Mobiles during the Instructional hours and in the academic areas of university Building, Library, Reading room etc. Strict action will be taken if students do not adhere to this.
- During the conduct of any Tests and Examination students must not bring their mobiles. A student in possession of the mobile whether in use or switched off condition will face disciplinary action and will be debarred from appearing for the Test / Examination.

Academic Calendar

The academic activities of the institute are regulated by Academic Calendar and is made available to the students/ faculty members and all other concerned in electronic form or hard copy. It shall be mandatory for students / faculty to strictly adhere to the academic calendar for completion of academic activities

GRANTING OF THE TERM

Each Academic Year shall consist of two semesters of 90 teaching days each. Sessional work (Internal) completed by the students shall be continuously assessed internally during the term and Sessional work (Oral) will be assessed at the end of the academic term jointly by the internal and external examiners. The candidate will be permitted to appear for examination **only if** he/she produces testimonials from the Principal of the College for



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ATTENDANCE:

A) 1 Regular 100% attendance is expected from all students for every registered course in Sanjay Ghodawat University Kolhapur

2 A Maximum of 25% absence for the attendance may be permitted only on valid grounds such as illness, death in family of blood relations (Father, Mother, Sister, and Brother) and any other emergency reason which is beyond the control of the student and shall be approved by the authorities in respective departments.

3 If a student fails to put up 75% attendance individually in each course, the student will be put under X grade category and student will be debarred from attending the End Semester Examination (ESE) and Re-Exam for that semester in that course. However, student has an option to re-register for the course whenever it is offered next time or he can appear for 100% examination for which he will be awarded two grade penalties. Student's Sessional Internal, sessional oral, Mid Semester and marks are treated as null and void.

4 The maximum number of days of absence for students participating in Co-curricular activities /Sports/ Cultural events during a semester shall not exceed 10. Any waiver in this context shall be on the approval of the Academic council only after the recommendation by Dean Academics of the university The Principal, School of Architecture shall report and recommend to Academic council the cases of students not having 75% attendance as per the records of course instructor. After rigorously analyzing these cases AC may take a decision to debar such student from End-Semester Examination (ESE) for that course. Such a student shall re-register for that course as and when it is offered next. ISE and MSE evaluations of such a student for this course during regular semester shall be treated as null & void.

5 A student remaining absent during ESE of a course either on medical ground (Accident and/or hospitalization of a student) or any other emergency circumstances (death of immediate close relative i.e. father, mother, brother and sister) or due to representing University at university/state level in sports/co-curricular activities shall be treated as per the rules of Sec 12.6.2 and 11.1.2 The critical cases of absenteeism which are not covered by any of the above clauses shall be reported by concerned Head of Department to Academic dean and all such cases the decision of Academic council is final.

B) Satisfactory completion of the sessional work prescribed for each subject and securing minimum 45% marks in the Internal assessment for the same.

C) Good Conduct

COURSE REGISTRATION

(PREREQUISITES FOR ADMISSION TO HIGHER CLASSES)

A student shall be promoted to higher class only if he/she has scored minimum 50 % marks in each Sessional Internal (SI) and minimum 45 % marks in each theory / Sessional Oral (SO) head and minimum 50% aggregate marks in End Semester Examination.



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FOR ADMISSION TO STAGE II OF THE COURSE:

1. Candidates admitted to the course shall complete the first stage within five years of admission to the course.
2. The aggregate marks of F.Y, S.Y., and T.Y. at the end of Stage I should not be less than 50%.

RULES OF PASSING

- 1 To pass sessional (Internal) the student has to earn minimum 50% marks in each head and to pass Sessional oral the student has to earn minimum 45% marks in respective head.
- 2 To pass the theory subject head the student has to earn minimum of 45% marks in the End semester exam and minimum 45% average marks (Mid semester +End semester).
- 3 The failing student (Sessional Internal, Sessional Oral and Theory) can repeat the end semester exam to pass the head in any semester and the Mid semester exam marks will be retained as it is. Or the failing student can repeat for end semester exam as well as Mid semester exam for the head of even semester in the even semester only and for the head of odd semester in the odd semester only for the theory head.
- 4 The student fail in theory subject is eligible to apply for re-examination as per Sanjay Ghodawat University Norms but Sessional Internal marks will be retained as it is.
- 5 To earn credits of a course (paper/sessional (Internal) /Sessional oral) student must pass the course with minimum passing marks / grade.
- 6 Student can apply only for the revaluation / photocopying / verification of answer sheets of End semester exam only.

RULES OF A.T.K.T.

1. A student can be admitted for the third semester if he/she earns minimum 50% credits of the total of first and second semester.
2. A student can be admitted for the fifth semester if he/she earns minimum 50% credits of the total of third and fourth semester and all the credits (100%) of the first and second semester and passing grade of aggregate for first year.
3. A student can be admitted for the seventh semester if he/she earns minimum 50% credits of the total of the fifth and sixth semesters and all the credits (100%) of the third and fourth semesters and passing grade of aggregate for second year.
4. Fourth Year and Final Year are considered as integrated Stage II of the course and hence students will be allowed to take admission to Fifth year irrespective of the credits earned by the student in seventh and eighth semesters.



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5. A student would be awarded B.Arch. only if he/she earns (100%) credits and clears all the courses specified in the syllabus and gets passing grade of aggregate.

ASSESSMENT AND GRADE POINT AVERAGE

1 A grade assigned to each head based upon marks obtained by the student in examination of the course.

Table 1-GRADING SYSTEM FOR PASSING HEADS (theory/sessional(Internal)/sessional Oral)

Grade	Grade Points	% of Marks Obtained	Remarks
O	10	90-100	Outstanding
A+	9	80-89	Very good
A	8	70-79	Good
B +	7	60-69	Fair
B	6	50-59	Average
C	5	45-49	Below average
F	0	Below 45	Fail
x	0	0	Detained (Failed)

Table 2--GRADING SYSTEM FOR AGGREGATE

Grade	Grade Points	% of Marks Obtained	Remarks
O	10	90-100	Outstanding
A+	9	80-89	Very good
A	8	70-79	Good
B +	7	60-69	Fair
B	6	50-59	Average
C	5	45-49	Below average
F	0	Below 45	Fail
x	0	0	Detained (Failed)

2 Passing grades for various heads: The grades O, A+, A, B+, B, & C are passing grades for various heads (paper / sessional / sessional Oral). A candidate acquiring any one of these grades in a course shall be declared as pass only in that particular subject head. And student shall earn the credits for a course only if the student gets passing grade in that course (which includes paper and/or Sessional Internal and/ or sessional oral).

3 Passing grades for Aggregate : The grades O, A+, A, B+, & B are passing grades in the aggregate.

4 F grade for various heads: The grade F is a failure grade. The student with F grade will have to pass the concerned course by reappearing for the examination.

5 F grade for aggregate: The grade F is a failure grade for aggregate. The student with F grade will have to appear for paper &/ or sessional (Internal) & /or session Oral for improvement of aggregate.



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EXAMINATIONS.

i. Paper and/ or

ii. Sessional(Internal) / Sessional Oral based on sessional work,as prescribed in the subjects will be treated as **separate heads of passing**.

Structure of Theory Paper Examinations

The theory Examination shall be conducted in two phases for the subjects as indicated in the structure viz.: Mid Semester Examination and End Semester examination. The structure detailing the time, mode of syllabus coverage, maximum marks etc is given below. This structure of examinations shall be followed by the regular candidates:

Phase of examination	Time	Mode	Syllabus Coverage	Duration	Max. Marks
Mid semester	7thweek	Written	Unit I & II	60 minutes	20
End Semester	End of Semester	Written	All Units	180 minutes	80

The detail examination schedule shall be declared at the beginning of the semester By Sanjay Ghodawat University

CONDUCT OF EXAMINATIONS AND ASSESMENT

All the examinations Mid semester, End Semester, Sessional (Internal) and Sessional Oral will be conducted at University level.

Mid Semester and End-Semester Examination Assessment will be done at the CAP Eenter by the Expert(s) appointed as the examiner for the subject by Sanjay Ghodawat University

SESSIONAL WORK ASSESSMENT.

- The sessional (Internal) and /or Sessional oral examinations is to be conducted and assessed jointly by external and internal examiner approved by the Sanjay Ghodawat University.
- In respect of Sessional work internal at F.Y. B.Arch., S.Y. B.Arch., T.Y. B.Arch. Fourth Yr. B.Arch and Fifth Year B.Arch. Sessional internal and Sessional Oral dates shall be fixed for the completion of each assignment and the same shall be competed and collected on the fixed target date. All assignments shall be continuously assessed by the teacher during semester.



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- Performance of Sessional(Internal) / Sessional Oral Examination shall be assessed on the basis of understanding of the principles involved and not on the basis of mere correctness or results and ornamental or colourful presentation.
- Drawings and reports / notes shall be manually prepared. Students may use computers for sessional work under the guidance of the teachers where nature of work is individual and stress is on content rather than skill. The work done by the students has to be authenticated for its originality by the concerned Subject teachers.
- At all the examinations **except** for the SEMESTER X : ARCHITECTURAL PROJECT and Electives, external assessment shall be carried out by External Examiner , means only by the non teaching professionals.
- Internal Examiner: Internal Examiner is one who is teaching that particular subject in the Sanjay Ghodawat University.

CALCULATION OF PERFORMANCE INDICES:

Semester Grade Point Average (SGPA)

The performance of a student in a one specific semester is indicated by SGPA. SGPA is a weighted average of the grade points obtained in all courses registered by the students during the semester. SGPA can be calculated by following equation.

$$SGPA = S_i = \frac{\sum_{i=1}^n C_i P_i}{\sum_{i=1}^n C_i}$$

Where, $i = 1,2,3,\dots,n$ are number of courses during semesters. C = No of credits associated with that course and P = Grade point earned in that course. SGPA will be rounded off to two decimal places.

Cumulative Grade Point Average (CGPA)

The total cumulative performance of a student at the end of specific semester is indicated by CGPA. An up-to-date assessment of the overall performance of a student for the courses from the first semester onwards till completion of the program shall be obtained by calculating Cumulative Grade Point Average (CGPA).

CGPA is a weighted average of the SGPA obtained in all semesters by the students during the semesters. CGPA can be calculated by following equation.



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$$CGPA = \frac{\sum_{j=1}^n C_j S_j}{\sum_{j=1}^n C_j}$$

Where, $j = 1, 2, 3, \dots, n$ are number of semester during program. C = Total No of credits in the semester for which CGPA is to be calculated.

CGPA will be rounded off to two decimal places.

Conversion of CGPA to percentage marks for $CGPA \geq 4.5$ can be obtained using equations.

Percentage marks = $(CGPA \times 10) - 7.5$.

For the students acquiring "I" grade (which is only a temporary grade) in any of the courses, SGPA, CGPA shall be calculated only after make-up examination.

RESULT

Based on the performance of the student in the semester examinations, the Sanjay Ghodawat University will declare the results and issue the Semester grade sheets. The class shall be awarded to a student on the CGPA calculated in as per rule. The award of the class shall be as per the table below.

Sr.No.	CGPA	Class of the degree awarded
1	7.75 or more than 7.75	First class with distinction
2	6.75 or more but less than 7.75	First class
3	6.25 or more but less than 6.75 Higher	second class
4	5.5 or more but less than 6.25	Second class
5	5.0 or more but less than 5.5	Pass Class

OTHER RULES

Sanjay Ghodawat University may frame additional rules and regulations or modify these regulations if needed and once approved by the University they would be binding on the students.



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FIRST YEAR B.ARCH.

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC101 (PC SAR) Version: 1.0	Architectural Design I	1	7	11.5	S (200)	SI	100	Min 90	45
						SO	100		
18ARC103 (PC SAR) Version: 1.0	Building Construction and Materials I	2	4	8	Th (100)	MSE	20	Min 45	45
						ESE	80		
					S (100)	SI	50	Min 45	45
						SO	50		
18ARC105 (PC ST) Version: 1.0	Theory of Structures I	3	-	3	Th (100)	MSE	20	Min 45	45
						ESE	80		
18ARC107 (PC SAR) Version: 1.0	Arch Drawing & Graphics I	-	3	1.5	Th & S (150)	SI	50	Min 68	45
						MSE	20		
						ESE	80		
18ARC109 (PC SAR) Version: 1.0	Human Settlements and History of civilization	2	-	2	Th & S (100)	SI	20	Min 45	45
						ESE	80		
18ARC111 (PC SAR) Version: 1.0	Aesthetics and visual Arts -I	-	3	1.5	S (50)	SI	50	Min 25	50
18ARC113 (PC SAR) Version: 1.0	Workshop - I	-	3	1.5	S (50)	SI	50	Min 25	50
18ARC115 (PC SA) Version: 1.0	Communication Skill	2	-	2	S (50)	SI	50	Min 25	50
Total		9	21	31	Total Hrs: 30, Total Credits: 31				

L: Lecture, S: Studio, C: Credits, WT: Weightage

SI – Sessional Internal, SO- Sessional Oral, T – Theory, MSE- Mid Semester Examination,

ESE- End semester Examination,

PC: Program Core,

SAR- School of Architecture, ST: School of Technology, SA: School of Arts



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FIRST YEAR B.ARCH.

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC102 (PC SAR) Version: 1.0	Architectural Design II	1	7	11.5	S (200)	SI	100	Min 90	45
						SO	100		
18ARC104 (PC SAR) Version: 1.0	Building Construction and Materials II	2	4	8	Th (100)	MSE	20	Min 45	45
						ESE	80		
					S (100)	SI	50	Min 45	45
						SO	50		
18ARC106 (PC ST) Version: 1.0	Theory of Structures II	3	-	3	Th (100)	MSE	20	Min 45	45
						ESE	80		
18ARC108 (PC SAR) Version: 1.0	Arch Drawing & Graphics II	-	3	1.5	Th & S (150)	SI	50	Min 68	45
						MSE	20		
						ESE	80		
18ARC110 (PC SAR) Version: 1.0	History of Architecture – I (Ancient Western and Asian)	2	-	2	Th & S (100)	SI	20	Min 45	45
						ESE	80		
18ARC112 (PC SAR) Version: 1.0	Aesthetics and visual Arts -II	-	3	1.5	S (50)	SI	50	Min 25	50
18ARC114 (PC SAR) Version: 1.0	Workshop - II	-	3	1.5	S (50)	SI	50	Min 25	50
18ARC116 (PC SAR) Version: 1.0	Climatology and Architecture	2	-	2	S (50)	SI	50	Min 25	50
Total		9	21	31	Total Hrs: 30, Total Credits: 31				

L: Lecture, S: Studio, C: Credits, WT: Weightage

SI – Sessional Internal, SO- Sessional Oral, Th – Theory, MSE- Mid Semester Examination,

ESE- End semester Examination,

PC: Program Core,

SAR- School of Architecture, ST: School of Technology, SA: School of Arts



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DETAILED SYLLABUS FOR FIRST YEAR B.ARCH.

SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC101 (PC SAR) Version: 1.0	Architectural Design I	1	7	11.5	S (200)	SI	100	Min 90	45
						SO	100		

Course Objective

- To introduce and grasp the student the fundamentals of Design as a basic creative activity.
- To help the students learn about the basic elements of design.

Course Outcome

- To introduce the students to the fundamentals of Design
- To apply principles of Design to Architectural Design
- To help to the students learn the basic elements of design and to apply these elements in Architectural Design process
- To help and increase creativity of the student
- The student should be able to comprehend the fundamental of design as a creative process and to develop and manual skills to cope with the design problems and to develop various skills.

Course Outline

Unit 1 -Basic elements of Design

Introduction to elements of basic design like point, line and plane and their visual qualities. Forms- Composition of two dimensional forms.

Unit 2 - Basic Principles of Composition

Elements of Composition: Study of Point, Lines, Planes, Shapes, Material and Texture, Colour, Light etc.

Unit 3 -Scale Properties and anthropometry

Understanding human dimensions in space and the movement of human body while doing different activities in a space.

Unit 4 - Activation spaces

Positive and negative spaces activation spaces through stables and mobiles



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Unit 5 -Form and space

Attributes of Form and Space, Forms in Nature, Platonic Forms, Derivative forms and transformation. Principles of Organization of Form & Space.

Unit 6 -Design a single activity spaces and study end analysis

Sessional Work:

- Minimum 6 tasks based upon elements and principles of composition on A3 sheets and/or models.
- Minimum one simple spatial design exercise such as seating area in public spaces, demonstrating the application of the design principles and communicated effectively through two and three-dimensional hand drawn drawings, proportionate sketches and models.

Mode of Examination

Sessional Internal and sessional oral

Reference Books

1. Elements of Space Making -YatinPandya
2. Design fundamentals in Architecture – Pramur V. S.
3. Form Space and Order. -Ching Francis D. K
4. A Visual Dictionary of Architecture.-Ching Francis D. K.
5. Basic Design and Anthropometry – ShirishVasantBapat
6. Living Areas (Internal Spaces) – ShirishVasantBapat
7. Seven lamps in Architecture - John Ruskin
8. Total Architecture - Walter Gropius
9. Indian Anthropometric Dimensions – NID Ahmadabad



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Structure for Bachelor of Architecture Program (2018-19) R0

FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC103 (PC SAR) Version: 1.0	Building Construction and Materials I	2	4	8	Th (100)	MSE	20	Min 45	45
						ESE	80		
					S (100)	SI	50	Min 45	45
						SO	50		

Course Objective:

- To help students understand the basic building elements, their function and behavior under various conditions with specific reference to load bearing construction.
- To help students to develop a clear understanding of the basic principles of construction and materials suitable for load bearing construction.
- To help students develop an analytical and logical sequence in thinking about structural aspects of architecture.
- To encourage a mix of classroom and field learning.

Course Outcome:

- To explain basic building elements and their function and behavior.
- To distinguish the types of masonry in load bearing construction and demonstrate its building technology.
- To be aware of the properties and applications of various materials
- To understand and distinguish between various types of structures.

Course Outline

Unit 1: Elements of a Building

Introduction to various elements of building from foundation to roof.

Unit 2: Principles of Load Bearing and Frame structure

All Principles of Load Bearing and Frame construction



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Introduction to various building materials which are commonly used in load bearing and Frame construction with reference to their characteristics, market forms, applications and common quality tests for the materials like stone, different types of bricks, sand, lime.

Unit 3: Soils and foundation

- Different types of soils and bearing capacity, concept of bulb of pressure.
- Foundations suitable for load bearing structures in stone and brick
- Plinth formation, DPC.
- Introduction to various tools and equipment commonly used for excavation.

Unit 4: Masonry Construction

- Load bearing masonry construction using various masonry materials like stone and brick. Brick Masonry- All types of Bond, Brick piers, Stone Masonry-All types, Composite Masonry

Unit 5: Arches and Lintels

- Different types of arches and lintels, principles and terminology of arch construction, spanning of openings using brick and stone arches and lintels.

Sessional Work

- Hand drawn drawings on Units 3,4 and 5; Assignments on units 1, 2

Mode of Examination

- Sessional Internal and sessional oral and Theory Paper Mid Semester Paper 1 Hour and end Semester of 3hour duration

Reference Books

1. Elements of Structure - Morgan
2. Structure in Architecture - Salvadori
3. Building Construction-Mackay W. B., Vol. 1 – 4
4. Building Construction-Barry, Vol. 1 – 5
5. Construction Technology - Chudley, Vol. 1 – 6
6. Building construction Illustrated - Ching Francis D. K.
7. Elementary Building Construction - Michell
8. Engineering Materials -Chaudhary
9. Building Construction Materials - M. V. Naik
10. Civil Engineers Handbook – Khanna
11. Civil Engineers Handbook – M. K. Gupta
12. National Building Code and I.S.I. Specifications
13. A to Z Building Materials in Architecture - Mantri Publication
14. Engg.Materials – K.S.Rangwala.
15. Engg.Materials – B.K.Agarwal



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC105 (PC ST) Version: 1.0	Theory of Structures I	3	-	3	Th (100)	MSE	20	Min 45	45
						ESE	80		

Course Objectives:

- To Introduce Applied Mechanics as an important Subject for Architecture.
- To Understand Different Systems of Forces and their Equilibrium and that a Building is a System of Forces in Equilibrium.
- To Introduce and Understand Concepts of Support, Support Reactions, Beams, Loads, Bending and Shear.

Course Outcome:

- To understand the basic structural system in a type of construction.
- To distinguish the different types of forces acting in different structural members and their joints.

Course Outline:

Unit 1: Forces.

- Applied Mechanics, Statics and Dynamics. Importance of Study.
- Forces, Definition, Effects, Different Systems, Principle of Transmissibility and Superimposition of Forces. Resolution and Composition of Forces.
- Equilibrium of Concurrent Forces. Parallelogram, Polygonal & Triangular Law of Forces. Lami's Theorem. Analytical and Graphical Solution of Forces. Resultant and Equilibrant of a System of Concurrent Forces.
- Equilibrium of Non Concurrent Forces. Varignon's Principle. Resultant of a system of noncurrent forces as in a beam.

Unit 2: Centre of Gravity.

- Definition of Centre of Gravity and Centroid. C.G of Regular Shapes. Computing of C.G of complex Shapes limited to Standard Steel Sections like C, T, L, I and Compound Sections.



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Unit 3: Moment of Inertia

Definition of Moment of Inertia and M.I of Standard Shapes. Parallel Axis Theorem, perpendicular Axis Theorem, Radius of Gyration. Computing M.I of Complex Shapes Limited to C, T.L, I and Compound Sections using these Shapes.

Unit 4: Supports and Loads

- Supports, Definition, Reactions offered by Simple, Fixed, Hinged and Roller Support.
- Statically Indeterminate and Determinate Structures and Degree of Indeterminacy. Beams classified as Simply Supported, Cantilever, Over Hanging, Propped Cantilever, Fixed and Continuous.
- Loads Classified as U.D.L, Point Load & Varying Load.
- Loads Classified as Dead, Live, Wind, Snow, Seismic. Introduction to Densities of Material and Calculation of Dead loads on a Beam from slab, Brick work above to act as U.D.L and from a abutting beam as a Point Load
- Support Reactions. For Simply Supported Beams and Cantilevered Beams only. Loading limited to Point Loads and U.D.L only.

Unit 5: Frames and Trusses.-1

- Introduction of Trusses as a Building Element and Why Important.
- Perfect and Imperfect Frames. Redundant Members.
- Analytical Solutions. – Method of Joints, Method of Sections

Unit 6. Frames and Trusses.-2

1. Graphical Solution of Frames.

Mode of Examination

- Theory Paper - Mid Semester Paper of 1 Hour and End Semester of 3hour duration

Reference Books:

1. Design of steel structures-Vazirani – Rathwani.
2. Design of steel structures- L.S. Negi.
3. R.C.C. Design – Khurmi, Punmia, Sushilkumar.
4. Elements of Structures – Morgan.
5. Structure in Architecture – Salvadon and Heller.
6. Structure Decisions – F. Rosenthal.



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC10 (PC SAR) Version: 1.0	Arch Drawing & Graphics I	-	3	1.5	Th & S (150)	SI	50	Min 68	45
						MSE	20		
						ESE	80		

Course Objectives:

- To develop students to understand Graphic Language for Communication.
- To develop student's language of graphics, its vocabulary and grammar such as scale, annotations, labeling and dimensioning.
- To develop students in acquiring skills to express more complex objects through graphic presentation.

Course Outcome:

- The students will get acquainted with architectural drawing techniques and the language of graphics
- The Students shall get well versed with graphical language vocabulary and grammar such as scale, annotations, labeling and dimensioning.
- The Students shall learn to express simple three dimensional objects and building components through Technical Drawings, using various graphic projection systems such as orthography, Isometric and Axonometric projections.
- The Students shall learn techniques of sketching for recording, studying and communicating objects, buildings and building components.

Course Content:

Unit 1 Introduction to various drawing instruments and methods of employing them for technical drawing and sketching.

Unit 2 Graphic language and its components:

- Line types: meaning and application
- Architectural Lettering and dimensioning techniques
- Architectural annotations and conventions including representation of various building materials and building components
- Graphic scales and their application



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- Architectural Metric scale. Introduction of various proportions of scales, necessity of scaled drawing, selection of proportions of scales while preparing architectural drawing. Method of construction of Graphics Scale by dividing a given length of line into equal parts.

Unit 3 Plane and Solid geometry:

- Introduction to Graphical Construction of various plane geometrical shapes
- Introduction to various projection systems used in Architectural drawing; such as Orthographic, Isometric and Axonometric projections to draw and represent various three dimensional geometrical objects/forms including Section/s.

Unit 4 :Scale Drawing

- Scale drawing (plan/s section/s and elevation/s) of a simple building of sufficient size to demonstrate use of various metric scales, conventions and standard annotations.

Unit 5: Sketching:

- Introduction to architectural sketching using various mediums such as graphite pencil, charcoal, pens, markers etc.
- Principles of free hand sketching such as proportions, light and shade; with primary thrust on sketching of building elements and built environment.

Unit 6: Introduction of computer for Architectural drawing and graphics

Introduction of computer and various applications required for architecture

Sessional Work

- Hand drawn drawings on Units 2, 3, and 4
- 2 Exercise based on Unit 5

Mode of Examination

- Sessional Internal and Theory Paper Mid Semester Paper of 1 Hour and End Semester of 3hour duration

Reference Books

- Engineering Graphics – N. D. Bhat
- Architectural Graphics - Ching Francis D.K.:
- Geometrical & Building Drawing - Kelsey W. E.



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC109 (PC SAR) Version: 1.0	Human Settlements and History of civilization	2	-	2	Th & S (100)	SI	20	Min 45	45
						ESE	80		

Course Objective:

To introduce the students to the study of humanities and its importance in understanding of human settlements and architecture.

Course Outcome:

- To recognize importance of architecture and design through time and across cultures.
- To comprehend what have been the major issues in the development of architectural design in socio- cultural context.

Course Content:

Unit 1: Introduction

Introduction to humanities and its relation with architecture.

Unit 2: Evolution of universe and human

Introduction of various stages in the evolution process

Unit 3: Civilizations and culture, factors and aspects of human settlement

Study of Evolution of civilization and development of culture

Various factors which are essential for human settlement

Different aspects to be considered for human settlement

Unit 4: Different types of western ancient civilizations

Study of different western civilizations, different types of river valley settlement like Egyptian, Mesopotamium, Greek and Roman

Unit 5: Different types of Indian ancient civilization

Study of different Indian civilizations like Vedic and Indus Valley civilization

Unit 6: Introduction to Middle Ages and Industrial Revolution and its Effects

Introduction to the civilization of Middle Ages

Effects of Industrial revolution on civilization and settlement



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Sessional Work

The sessional work shall comprise of minimum one tutorial and two assignments.

Mode of Examination

- Sessional Internal and End Semester Theory Paper of 2 hour duration

Reference Books:

1. History of World Civilizations by J.E. Swain.
2. A Short History of the World – H.G.Wells
3. The Ascent of Man – J. Bronowski
4. short History of mankind - H.G.Wells



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC111 (PC SAR) Version: 1.0	Aesthetics and visual Arts -I	-	3	1.5	S (50)	SI	50	Min 25	50

Course Objective:

- To familiarize the student with visual grammar, methods of visual composition and various mediums
- To develop skills in manual presentation techniques

Course Outcome:

- Develop principles of 2 dimensional and 3 dimensional composition
- Develop manual presentation techniques
- Use of colours in design

Course outline:

Unit1: Relationships

- Relationship of Surface, Form, Masses.
- Relationship of Point, Line, Motion, Light, Shade.

Unit 2: Colour Theory

- Explore the use of colour in design in context to emotional quotient and context

Unit 3: Fundamentals of design

- Fundamental principles of design, Creativity tools like Synectics, Balance, Harmony, Rhythm, Contrast, Symmetry, Scale, proportions, colours, tones, textures etc

Unit 4: Sketching

- Sketching using Pencil (Black and White) and Colour Pencil
- Sketching using Pen, Watercolour and any other suitable medium

Unit 5: Compositions

- 2D Compositions

Unit 6: Calligraphy

Introduction and exercise based on calligraphy



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Sessional Work

Exercises on unit 1 to 6 min 3 assignments on A3 size

Mode of Examination

- Sessional Internal

REFERENCE BOOKS:

- Form Space and Order. - Ching Francis D. K.
- A Visual Dictionary of Architecture. - Ching Francis D. K.
- Elements of Space Making -Yatin Pandya
- Pattern Language - Christopher Alexander
- Patterns in Nature. - Peter Streens
- Design fundamentals in Architecture - Pramer



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC113 (PC SAR) Version: 1.0	Workshop - I	-	3	1.5	S (50)	SI	50	Min 25	50

Course Objective:

- Introducing students to various materials and techniques used in making Architectural models
- Enabling Students to make Architectural models for study and presentation

Course Outcome:

- The students get an interface with various materials that can be used for model making and representation
- The students achieve skills in Model Making that are useful for three dimensional demonstration of their concepts of designing they also learn Structural concepts easily since the models are linked with other subjects that they are simultaneously undertaking

Course Outline

Unit 1: Introduction to basic tools, materials and cutting techniques

- Introduction to tools and materials.
- Introduction to cutting techniques.
- Introduction to Papers of various thicknesses and qualities and cutting and folding techniques
- Various materials and applications of Tinted Sheets, card boards, cork board sheet, File card sheet and wood

Unit 2: Fine Cutting and Proportionate Modeling

- Introduction to generation composition of forms with development of Paper Method
- Origami
- Fine Cutting and Pattern Making

Unit 3: Carving

- Carving On Soft Materials Like Florists Foam And Soap

Unit 4:

- Clay Work.
- Metalwork: Any Material of Choice.



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Unit 5: Woodwork

- Scaled Drawing on Soft wood and Making Blocks.
- Wooden joinery Shaping of Wood and Fine work; nailing etc.

Unit 6

- Scaled Block Model of a Small Building Unit in any material

Sessional Work

Sufficient number of assignments to cover the topics given below

- Three dimensional objects 1 to 2 Assignments
- Models based on Design projects 1 to 2 Assignments
- Based on building technology topics 2 to 3 Assignments
- Based on history of architecture and theory of structure 1 to 2 Assignment

Mode of Examination

- Sessional Internal

Reference books:

1. Model Building For Architects And Engineers -John Taylor,
2. Architectural Models. - Rolf Janke
3. Beginning Google Sketch Up -Sandeep Singh,



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FIRST YEAR B.ARCH.SEM. I

Semester I									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam.	WT %	Pass	
								Marks	%
18ARC115 (PC SA) Version: 1.0	Communication Skill	2	-	2	S (50)	SI	50	Min 25	50

Course Objectives:

- To equip the students to communicate effectively using various modes of communication such as graphical, textual, oral and help them to develop various soft skills.

Course Content

Unit 1: Communication Skills

- Definition of communication; Process of communication (Defining context, Knowing audience, Designing message, Encoding, Selecting proper channel, Transmitting, Receiving, Decoding and Feedback)
- Elements of communication (Sender, Receiver, Message, Channel, Feedback & Context)
- Principles of communication (Definition, Purpose, 7Cs, Effective messaging, etc)
- Knowing & overcoming barriers to effective communication
- Types of communication (Formal, Informal); Forms of communication (Verbal, Non-Verbal & Written); Direction of communication (Lateral, Vertical [upward/downward], Diagonal); Different media of communication (Audio, Video, Graphic, Written, Print, Electronic etc)

Unit 2: Voice Culture & Body language

- Introduction to voice culture (Designing messages, preparation, practice and presentation of written and graphic contents); International phonetic script
- Vocalic (aspects of speech such as tone, emphasis, pitch, volume, pauses, undulations, timbre etc); Presentation skills for an individual and in a group
- Codes of communication (Body language, Chronemics & Artefacts)
- Body language (Kinesics- eye contact, gesture, posture, body movements & facial expression); Proxemics - (Using space, Physical Appearance); Haptics - (touch); Chronemics (managing time). Artifacts (environment & objects)
- Using combination of non-verbal and verbal communication Using & interpreting visuals - tables, graphs, charts, etc

Unit3: Presentation Skills

- Designing message outline - Organizing ideas, determining the general and specific purpose of communication, analyzing the receiver of written messages, context, scope etc. Ways of writing topic sentences, paragraphs, function paragraphs, summary, information text etc. Forms of written messages



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- Business Writing: Business letter writing: parts of business letters, standards of these, letter of application, inquiry, reply to inquiry, complaint, reply to complaint, persuasive, apology etc types in relation to the profession of interior designing. Use of effective and grammatically correct language
- Drafting reports: short reports, concept and contents of long reports, effective sentence construction, punctuation and presentation of the text
- Analytical writing, Language of specification writing, Technical writing, literary writing Reports generation including graphs, pie charts, Bar charts, comparatives, etc.

Unit 4: Debate, Groups & Discussions

- Groups (Introduction, formation, thought, pitfalls, dynamics); Teams (Types, team building, problem of resistance, stuck teams, difference between team and group, team member); Group communication and meetings (cooperation & collaboration); Leadership (Society, Structure, changes in society & interpersonal relations.)

Unit 5: Time Management and Success Mantra

- Punctuality, Self Discipline, Delegation of work, Precision, Maintenance of Database, Prioritisation, Systemization and Standardization; SWOT analysis (Concept & process)

Sessional Work

- Minimum 10 assignments to cover all the aspects of the course content mentioned above.

Mode of Examination

- Sessional Internal

Reference Book:

1. K K Nelson, F Dubors - Learning to learn - Allyn& Bacon
2. E. H. McGrath - Basic Managerial Skills for all - Prentice hall of India
3. P D Kulkarni& B B Sharma - Independent Study Techniques - TTTI, Chandigarh
4. Elizabeth Hierney - 101 Ways to Better Communication - Kogan Page
5. Wren & Martin - English Grammar - Chand Books
6. Burgoon Michael - Human Communication - London: Sage Pub.
7. G Leech & Jan Svartvik - A Communicative grammar of English - ELBS
8. Thomas Huckin& Leslie Olson - Technical writing and Professional communication - London William Collins & Sons Co.
9. Lyn Clark & Zimmer Business English & Communication New York: Mcgraw Hill
10. John Thill&Courtland Excellence in Business communication New York: Mcgraw Hill
11. R K Bansal& J B Harrison Spoken English for India New York: Mcgraw Hill
12. J D O'Conner Better English Pronunciation N Delhi: Orient Longman
13. Fred Luthans Organizational BehaviourMcGraw Hills
14. E H Megram Basic Managerial Skills for all Prentice Hall of India



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FIRST YEAR B.ARCH. - SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC102 (PC SAR) Version: 1.0	Architectural Design II	1	7	11.5	S (200)	SI	100	Min 90	45
						SO	100		

Course Objective:

- To help the students grasp the fundamentals of Architectural aesthetics.
- To help the students learn about the basic elements of visual aesthetics through exercises aimed at experimentation.
- To improve creativity through practicing certain established methods & exercises in creativity
- To draw inspiration from and establish analogies between other creative arts and architecture.
- To introduce the students to the iterative design process and various channels of creativity.
- To apply principals of basic design and visual art in architectural design

Course Outcome:

- The student should be able to comprehend the fundamentals of architectural aesthetics.
- The student should be able to create and articulate two and three dimensional spatial compositions in different media using principles of design.
- The student should be able to develop skills in free hand drawing and rendering
- To transform the human behavioral needs into architectural program requirements.

Course Outline

Unit 1: Organization of Forms and space

Types of organizations of form and space such as linear, circular, radial, grid, clustered etc.

Unit 2: Techniques of improving creativity

Brainstorming, tree of possibilities, use of manipulative verbs, random combinations etc.



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Unit 3: Sources of inspiration for architectural creativity (Product Design)

Material, geometry, association with other arts, nature and climate etc.

Unit 4: Relationship Diagrams

Activity & Spatial Relationship in terms of size, shape and volume of space; Concept of circulation and activity relationship diagrams.

Unit 5: Design process

Design process using various methods Case study with Questionnaire to extract design requirements, identifying and deriving spaces, Design and Planning of activity spaces

Unit 6: Detail design

Design of Simple activity spaces upto 100-120 sq.m.

Unit 7: Study tour report and design

Study of a nearby rural, semi urban settlement / community for study, analysis and documentation of its built elements, open spaces and associated architectural character.

Sessional Work:

- Minimum 4 number of assignments to cover the study of forms and spaces and principles of organization, scale and experience, etc.
- Graphic documentation and analysis of the settlement study with sufficient individual work contribution.
- One spatial/ building design projects with single use spaces approximately 100-120 sq.m. preferably in the context. Of settlement/community study carried out and communicated effectively through graphical drawings, two and three-dimensional sketches, models and narratives.

Mode of Examination

Sessional Internal and Sessional oral

Reference Books

1. Elements of Space Making -YatinPandya
2. Design fundamentals in Architecture – Prammar V. S.
3. Form Space and Order. -Ching Francis D. K
4. A Visual Dictionary of Architecture.-Ching Francis D. K.
5. Basic Design and Anthropometry – ShirishVasantBapat
6. Living Areas (Internal Spaces) – ShirishVasantBapat
7. Seven lamps in Architecture - John Ruskin
8. Total Architecture - Walter Gropius
9. Indian Anthropometric Dimensions – NID Ahmadabad



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC104 (PC SAR) Version: 1.0	Building Construction and Materials II	2	4	8	Th (100)	MSE	20	Min 45	45
						ESE	80		
					S (100)	SI	50	Min 45	45
						SO	50		

Course Objective:

- To help students understand the basic building elements, their function and behaviour under various conditions with specific reference to timber construction.
- To help students to develop a clear understanding of the basic principles of construction and materials suitable for load bearing construction.
- To help students develop an analytical and logical sequence in thinking about structural aspects of architecture.

Course Outcome:

- To explain basic building elements and their function and behaviour in timber construction.
- To design different types of timber doors and windows.
- To distinguish different types of trusses.

Course Outline

Unit 1: Construction of reinforced masonry walls, pillars and lintels

Unit 2: Study of building materials like bamboo, timber, timber derivatives, roofing materials for small span sloping roofs including Mangalore tiles with reference to their characteristics, market forms, applications and preservation, etc.

Unit 3: Doors and windows

- Various types of timber ledged and battened doors, types of panelled and flush doors
- Various types of timber windows
- Hardware and carpentry tools used for timber fashioning, especially for doors and windows



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Unit 4: Staircase

- Introduction to staircase, types of staircases and timber staircase

Unit 5: Roof trusses

- Construction of various types of roofs for spans up to 4 m
- Introduction to timber roof truss, king post and queen post trusses, built-up trusses, forces in truss members (Introduction and not for examination)
- Masonry vaults and domes.

Sessional Work

- Hand drawn drawings on Units 3, 4 and 5; Assignments on units 1, 2, 3, 4 and 5.

Mode of Examination

- Sessional Internal and sessional oral and Theory Paper -Mid Semester Paper of 1 Hour and End Semester of 3 hour duration

Reference Books

- Elements of Structure - Morgan Structure in Architecture - Salvadori
- Building Construction-Mackay W. B., Vol. 1 – 4
- Building Construction-Barry, Vol. 1 – 5
- Construction Technology - Chudley, Vol. 1 – 6
- Building construction Illustrated - Ching Francis D. K.
- Elementary Building Construction - Michell
- Engineering Materials -Chaudhary
- Building Construction Materials - M. V. Naik
- Civil Engineers Handbook – Khanna
- Civil Engineers Handbook – M. K. Gupta
- National Building Code and I.S.I. Specifications
- A to Z Building Materials in Architecture - Mantri Publication
- Engg.Materials – K.S.Rangwala.
- Engg.Materials – B.K.Agarwal
- Building Materials – S.K.Duggal.
- Building Construction –Sushil Kumar.



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC106 (PC ST) Version: 1.0	Theory of Structures II	3	-	3	Th (100)	MSE	20	Min 45	45
						ESE	80		

Course Objectives:

- To analyze the forces in a Frame.
- To Study and analyze the stresses in various Building Elements like Columns and Beams.
- To Study the deflection effect of loads on Beams.
- To Study Combined Stresses on Eccentrically Loaded Columns and Apply the Same to the Design of Foundations of Load Bearing Walls.

Course Outcome:

- To analyze the stresses in various building elements.
- To evaluate the different types of stresses acting in different structural members.

Course Outline.

Unit 1. Simple Stresses and Strains

- Linear Stresses and Strains. Hooke's Law. Stress Strain Diagram for Various Materials. Lateral Strain, Poisson's Ratio, and . Elongation of Long Rods , Volumetric Strain,. Shear Stress. Relationship between various Modulli. Composite Materials, Modulus Ratio and Equivalent Area e.g. R.C.C Column with Concrete and Steel.

Unit 2.Elastic constant

- Elastic, Plastic, Brittle and Ductile Materials. Yield Stress, Bulk Modulus, Modulus of Rigidity, Factor of Safety and Working or Permissible or Safe Stress.

Unit 3: S.F.D and B.M.D -

- Shear Force and S. F. Diagram & B.M.D and B. M. Diagram for: Simple Support with an U.D.L., Simple Support with a Central Point Load, Simple Support with an eccentric point Load, Cantilever with a full U.D.L, and Cantilever with a Point Load.
- S.F.D and B.M.D of a Simple Supported Beam and Over Hanging Beams with U.D.L and Point Loads. Point of Zero Shear, Point Of Max S.F and B.M max. Point of Contra flexure.
- Relationship between S.F.D and B.M.D.



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Unit 4: Bending Stresses

- Bending Stresses. Theory of Simple Bending. Assumptions, Flexural Formula, Stress Distribution across a Section and across the span of the Beam. Modulus of Resistance. Section Modulus and how M.R is proportional to square of depth.

Unit 5: Shear Stresses

- Shear Stresses. Formula, Shear Stress Distribution across a Rectangular, Circular, T, C, L, I Section.

Unit 6: Combined Stresses

- Compressive Members Subjected to Eccentric Loading. Stresses developed at four corners.
- Middle third Rule, Kernel of a Column. Application of Middle Third Rule in Foundations.
- Application of the theory to Chimneys.

Mode of Examination

- Theory Paper - Mid Semester Paper of 1 Hour and End Semester of 3hour duration

RECOMMENDED READING

1. Design of steel structures-Vazirani – Rathwani.
2. Design of steel structures- L.S. Negi.
3. R.C.C. Design – Khurmi, Punmia, Sushilkumar.
4. Elements of Structures – Morgan.
5. Structure in Architecture – Salvadon and Heller.
6. Structure Decisions – F. Rosenthal.
7. Strength of Materials by Amol Dongre



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC108 (PC SAR) Version: 1.0	Arch Drawing & Graphics II	-	3	1.5	Th & S (150)	SI	50	Min 68	45
						MSE	20		
						ESE	80		

Course Objectives:

- To enable the students to understand and express Composite three-Dimensional objects and buildings formed by additive and interpenetrated solids using various graphical projection systems including sections.
- To help the students understand the technique of graphical documentation of a built structure/environment through measured drawing/s.
- To enable the students to express their design ideas through various sketching techniques.

Course outcome:

- The students after undergoing this curriculum shall be able to understand and graphically express composite three-dimensional objects formed by additive and interpenetrated solids using various graphical projection systems including sections.
- The students shall be able to understand and represent through the technique of graphical documentation of a built structure/environment through measured drawing/s.
- The students shall be able to express their design ideas through various sketching techniques.

Course Outline:

Unit 1 Solid Geometry:

- Understanding and drawing of composite and complex three dimensional objects formed by addition and/or interpenetration of various objects in various planes.
- Surface Development of various three dimensional objects.
- Orthographic projections of true shapes of sectional planes.

Unit 2 Measured drawing/ Scale Drawing:

- Measured drawing (Plan/s Section/s Elevation/s and isometric/ axonometric view), drawn to appropriate scale, of a simple two storeyed building including a stairway and/or toilet.



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Unit 3: Sketching:

- Free hand sketching to communicate design/concept sketches, Building construction details etc.

Unit 4: CAD

- Computer Aided Drawing with basic commands for Drawing, Modifications, Text and Annotations (dimensions) sufficient to construct simple geometrical shapes.

Sessional Work

- Hand drawn drawings min 12 on Units 1, 2,
- Measure drawing building.
- 5 Exercise based on Unit 3

Mode of Examination

- Sessional Internal and Theory Paper - Mid Semester Paper of 1 Hour and End Semester of 3hour duration

Reference Books

- Engineering Graphics – N. D. Bhat
- Architectural Graphics - Ching Francis D.K.:
- Geometrical & Building Drawing - Kelsey W. E.



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC110 (PC SAR) Version: 1.0	History of Architecture – I (Ancient Western and Asian)	2	-	2	Th & S (100)	SI	20	Min 45	45
						ESE	80		

Course Objective:

- To understand growth of early settlements and civilizations through the ages.
- To appreciate architecture as an outcome of various social, economic and mythical values of society.
- It is not only the study of building but also the effect of climate, religious, social and political conditions, technological development, material selection and aesthetical influence on the building design through various periods.

Course Outcome:

- To understand different patterns of human settlements and their relevance to architecture
- To generate an understanding about the evolution of prehistoric civilizations and culture
- To appreciate the context – social, economic, political, mythical therein.

Course outline:

Unit 1: Human history and Pre-historic architecture(Introduction)

- Brief overview of human history from Palaeolithic to Neo-lithic times. The influence of different factors like geography, climate and religion in shaping the early civilizations.
- Pre-historic shelters like caves, huts etc.
- Menhirs (Standing Stone), dolmens (megalithic tomb), tombs, Stonehenge, community structures, etc.

Unit 2: Architecture of Ancient Period

- Egyptian Period
- Mesopotamian,

Unit 3: Ancient Indian Period

- Indus Valley
- Vedic Architecture



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Unit 4: Ancient Architecture of Eastern Asia(Introduction)

- Ancient Chinese Architecture
- Ancient Japanese Architecture
- Ancient Indonesia Architecture

Unit 5: Greek Architecture

- Aegean, Mycenaean and Greece in dark Age
- Classical Order – Doric, Ionic, Corinthian,
- Salient features of important buildings, Temple types on basis of column layout
- Discussion of Hellenic Temple (Parthenon, Athens) versus Hellenistic Temple (Athena Polias, Priene)Public Buildings and Square – Agora, Stoa, Prytaneum, Bouleuterion, Tholos, Gymnasium, Theatre

Unit 6: Roman Architecture

- Roman Architecture,
- Contribution in new materials and new construction/structural systems
- Masonry, Arch, Vault, Dome, Salient features of important buildings
- Forums of Rome, Aqueduct, Theatres, Baths, Basilicas

Unit 7 :Buddhist Architecture of India

- Cave Architecture,
- Free standing pillars, stupas

Sessional Work

Hand drawn sketches from Unit 1 to 7 on A3 sheets

Mode of Examination

Sessional Internal and Theory Paper - End Semester of 3hour duration

Reference Books:

1. History of Architecture (Buddhist and Hindu Period) – Satish Grover
2. History of Architecture (Islamic Period) – Satish Grover
3. Indian Architecture (Vol. I & II) by Percy Brown.
4. The Essential World History – William J. Duiker, Jackson J. Spielvogel
- 5.A Global History of Architecture – Francis D.K. Ching, Mark Jarzombek, VikramadityaPrakash
6. History of Architecture by Sir Bannister Fletcher.



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC1 12 (PC SAR) Version: 1.0	Aesthetics and visual Arts -II	-	3	1.5	S (50)	SI	50	Min 25	50

Course Objective

- To familiarize the student with visual grammar, methods of visual composition and various mediums
- To develop skills in manual presentation techniques,

Course Outcome

- Develop principles of 2 dimensional and 3 dimensional composition
- Develop manual presentation techniques
- Use of colours in design

Course Outline

Unit 1: Sketching

- Sketching using Pencil (Black and White) and Colour Pencil
- Sketching using Pen, Watercolour and any other suitable medium
- Free Hand presentations and rendering techniques

Unit 2: Photography

- History of photography
- Different types of Cameras and lenses.
- Art of photography - indoor and Outdoor

Unit 3 : Presentation techniques

Presentation techniques with different materials and mediums

Unit 4: Compositions

- 3D Compositions
- Study of solids & voids to evolve forms & spaces

Unit 5: Textures

- Study of various textures and their applications in architectural design



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Sessional Work

Exercises on unit 1 to 5 min 3 assignments on A3 size

Mode of Examination

Sessional Internal

REFERENCE BOOKS:

- Form Space and Order. - Ching Francis D. K.,
- A Visual Dictionary of Architecture. - Ching Francis D. K.,
- Elements of Space Making -YatinPandya
- Pattern Language - Christopher Alexander
- Patterns in Nature. - Peter Streens
- Design fundamentals in Architecture - Pramer



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC114 (PC SAR) Version: 1.0	Workshop - II	-	3	1.5	S (50)	SI	50	Min 25	50

Course Objective:

- Introducing students to various materials and techniques used in making Architectural models
- Enabling Students to make Architectural models for study and presentation

Course Outcome:

- The students get an interface with various materials that can be used for model making and representation
The students achieve skills in Model Making that are useful for three dimensional demonstration of their concepts of designing they also learn Structural concepts easily since the models are linked with other subjects that they are simultaneously undertaking

Course Outline:

Unit: 1

Introduction to materials such as mount board, card sheet, file board, wood, and the techniques to make Architectural Models that should preferably be co-ordinated with subjects like 'Architectural Design', 'Building Technology and Materials' and 'Aesthetics and visual arts' etc.

Unit 2:

Introduction to scaled 3D models of Interior space; Generating scaled models of Architectural Design', 'Building Technology and Materials' and 'Aesthetics and visual arts' projects

Unit 3: Generating the scaled Model of a given contoured site

Sessional Work

Exercises based on unit 1 to 3

Mode of Examination

Sessional Internal

Reference Books:

1. Model Building For Architects And Engineers -John Taylor,
2. Architectural Models. - Rolf Janke
3. Beginning Google Sketch Up -Sandeep Singh,



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FIRST YEAR B.ARCH. SEM. II

Semester II									
Course Code	Course Title	L	S	C	Evaluation Scheme for (L Th S)				
					Component	Exam	WT %	Pass	
								Marks	%
18ARC1 16 (PC SAR) Version: 1.0	Climatology and Architecture	2	-	2	S (50)	SI	50	Min 25	50

Course Objective

- To obtain knowledge required for understanding the influence of climate on architecture.
- To familiarize students with the design and settings for buildings for daylight and factors that influence temperature.
- The students are exposed to the various design strategies for building in different types of climatic zones.
- To be dealt with reference to Architectural Design Studio

Course Outcome:

- List the different elements of climate
- Classify the factors of comfort
- Infer the impact of climatic forces on built structures
- Examine through mathematical formulae the thermal comforts levels of built form
- Assess the effects of site, sun and wind in building response
- Design of shelters in different climatic conditions.

Course Content:

Unit 1: Introduction and Climate and Weather

- Elements of Climate
- Classification of tropical climates
- Climate balanced Architecture

Unit2: Bio-Climatic Approach

- Human Comfort- definitions and concepts
- Thermal Comfort Factors
- Bioclimatic Requirements
- Relation of climatic elements to comfort
- The Bio - Metric Chart



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Unit 3: Environment and Building Forms

- Impact of External forces on Building
- Building configuration and climate response.

Unit 4: Site & Building Design

- Site Selection, Site Planning
- Building Orientation and Placement
- Effect of Landscaping

Unit 5: Sun & Building Design

- Basic Principles of Heat Transfer
- Numerical based on heat transfer in buildings
- Day lighting & Solar Control
- Thermal Insulation

Unit 6: Wind & Building Design

- Wind effect and Air Flow Pattern
- Ventilation Techniques
- Air movement around the buildings
- Stack Effect and Thermally induced air currents

Unit 7: Architectural Application

- Shelter for warm-humid climates
- Shelter for hot-dry climates
- Shelter for composite climate
- Shelter for cold –cloudy and cold- sunny climates.

Sessional Work:

- Suitable exercises on all units
- Suitable Case studies to be conducted

Mode of Examination

Sessional Internal

Reference Books

- An Introduction To Building Physics by Narashimhan
- Manual Of Tropical Housing And Building – Part I – Climatic Design by O.H. Koenigsberger
- Housing Climate & Comfort by M.Evans
- Man, Climate And Architecture, Applied Science, Banking Essex by B. Givoni
- Climatic Design by Donald Watson