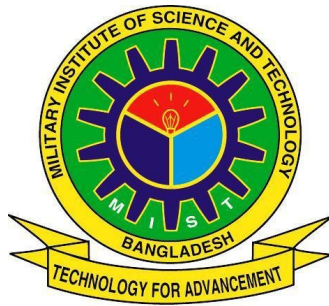# MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY

Department of Architecture

**COURSE CURRICULUM FOR
BACHELOR OF ARCHITECTURE (B. ARCH.) PROGRAM**

2024

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Committee of Courses

ARCH Department, MIST

The undergraduate course curriculum for the Department of Architecture (ARCH) of Military Institute of Science and Technology (MIST) has been reviewed by the committee as mentioned below.

President:	………………………………………………………… **Col Muhammad Sohail-Us-Samad** Head Department of Architecture (ARCH), MIST
Members (Internal):	………………………………………………………… **Col Nasir Uddin Ahmed** Dean Faculty of Civil Engineering , MIST
	………………………………………………………… **Mohammad Sazzad Hossain** Associate Professor Department of Architecture (ARCH), MIST
	………………………………………………………… **Dr.-Ing. Sudipti Biswas** Associate Professor Department of Architecture (ARCH), MIST
	………………………………………………………… **Dr. Syeda Jafrina Nancy** Assistant Professor Department of Architecture (ARCH), MIST
	………………………………………………………… **Capt Md. Raisul Mostafa Sajib** Instructor Department of Architecture (ARCH), MIST

Members (BUP):	.... **Brig Gen Md Mustafa Kamal, SGP** Dean Faculty of Science & Technology (FST), BUP
	.... **Brig Gen MD Mahbubur Rahman Siddiqui, ndc, afwc, psc, Mphil** Inspector of Colleges, BUP
Members (External):	.... **Dr. Md Ashikur Rahman Joarder** Professor Department of Architecture, BUET
Member Secretary:	.... **Maj Md. Manzur Morshed Khan** Program Coordinator Department of Architecture (ARCH), MIST

CHAPTER 1

1. GENERAL INFORMATION

1.1. <u>Introduction to MIST</u>

Military Institute of science and Technology (MIST), the pioneer Technical Institute of Armed Forces, started its journey from 19th April 1998. MIST is located at Mirpur Cantonment, which is on the northwest of Dhaka city. Mirpur Cantonment is well known to be as an Education Village of Bangladesh Armed Forces, a hub of knowledge for military and civil professionals. At present the institute has twelve degree-awarding departments (CE, CSE, EECE, ME, AE, NAME, ARCH, BME, NSE, EWCE, IPE and PME). MIST has launched the Bachelor of Architecture (B. Arch.) Degree Program from January 2015.

1.2. <u>Vision and Mission of MIST</u>

1.2.1. Vision
To be a centre of excellence for providing quality education in the field of science, engineering and technology and conduct research to meet the national and global challenges.

1.2.2. Mission
Provide comprehensive education and conduct research in diverse disciplines of science, engineering, technology, and engineering management.

Produce technologically advanced intellectual leaders and professionals with high moral and ethical values to meet the socio-economic development of Bangladesh and global needs.

Conduct collaborative research activities with national and international communities for continuous interaction with academia and industry.

Provide consultancy, advisory, testing, and other related services to government, non-government and autonomous organization including personal for widening practical knowledge and to contribute to sustainable development of the society.

1.3. <u>Motto and Values of MIST</u>

1.3.1. Motto
As an Institution without gender biasness, MIST is steadily upholding its motto — Technology for Advancement and remains committed to contributing to the wider spectrum of the national educational arena, play a significant role in the development of human resources, and gradually pursuing its goal to grow into a Centre of Excellence.

1.3.2. Values
a) Integrity and Respect-We embrace honesty, inclusivity, and equity in all that we do.

b) Honesty and Accountability-Our actions reflect our values, and we are accountable for both.

c) Dedication to Quality and Intellectual Rigor-We strive for excellence with energy, commitment, and passion.

d) The pursuit of Innovation-We cultivates creativity, adaptability, and flexibility in our students, faculties, and staffs.

1.4. Eligibility of Students for Admission in MIST (Subject to review each year)

The students must fulfil the following requirements:

a. **Bangladeshi Students:** Minimum qualifications to take part in the admission test are as follows:

(1) **SSC and HSC (or equivalent examination):** The applicant must have passed SSC or equivalent examination from Board of Intermediate and Secondary Education/ Madrasa Education Board/ Technical Education Board in Science Group obtaining a minimum GPA 4.00 (without a fourth subject) on a scale of 5.00 and in HSC or Equivalent examination from Board of Intermediate and Secondary Education/ Madrasa Education Board/ Technical Education Board in Science group obtaining a minimum total Grade Point 17 in four subjects (Mathematics, Physics, Chemistry, and English.

(2) **GCE ('O' and 'A' Levels) or Equivalent:** The applicant must have qualified in minimum five subjects including Mathematics, Physics, Chemistry and English with minimum 'B' grade or equivalent [i.e., A=5, B=4, C=3, D=2 & E=1, minimum required grade point=20] in GCE 'O' Level and in GCE 'A' level with minimum two 'B' grades or equivalent and one 'C' grade or equivalent in Mathematics, Physics and Chemistry.

(3) Sex: Male and Female.

b. **Foreign Students.** Maximum 3% of overall vacancies available will be kept reserved for the foreign students and will be offered to foreign countries through AFD of the Government of the People's Republic of Bangladesh. Applicants must fulfil the following requirements:

(1) Educational qualifications as applicable for Bangladeshi civil students or equivalent.

(2) Must have security clearance from the respective Embassy/High Commission in Bangladesh.

(3) Sex: Male and Female.

In the event of the non-availability of foreign students, Bangladeshi civil candidates will fill up the vacancies.

1.5. <u>Admission Procedure</u>

1.5.1. Admission Test

The entrance examination encompasses an array of subjects, aligning with the syllabi of Mathematics, Physics, Chemistry, and English (covering comprehension and functional aspects) from the HSC examinations across all boards of secondary and higher secondary school certificates. Furthermore, an additional aptitude assessment delves into freehand drawing, composition, 3D perception, basic technical drawing, and analytical acumen. The total evaluation is marked out of 400, with the allocation distributed as follows:

Ser.	Unit	Subject	Marks
a.	Unit A (Engineering and Architecture)	Mathematics	90
b.		Physics	70
c.		Chemistry	30
d.		English	10
		Total	200
e.	Unit B (Architecture)	Drawing and Architecture related topics	200
Total			**400**

Note: Subject to review regularly

1.5.2. Final Selection

Students will be selected based on the results of the admission test. The individual choice for selection of departments will be given preference as far as possible.

1.5.3. Medical Check-up

Civil candidates selected through the admission test will go for medical check-ups in MIST medical centre. If the medical authority considers any candidate unfit for study in MIST due to critical/contagious/mental diseases as shown in the medical policy of MIST will be declared unsuitable for admission.

1.6. <u>Students Withdrawal Policy</u>

1.6.1. General Policy of Withdrawal

The undergraduate Architecture (B.Arch.) programme is planned for 05 regular levels, comprising of 10 regular terms. It is expected that all students will earn a degree by clearing all the offered courses in the stipulated time. In case of failure the following policies will be adopted:

a) Students failing in any course/subject will have to clear/pass the said course/subject by appearing in referred examination as per examination policy. In the case of students completing level-5 (for B.Arch.), a maximum of three courses/subjects will be allowed in the referred examination (which is to be cleared within 7 years of registration).

b) The referred examination will be conducted at this institution before the commencement of the next level.

c) Maximum grading for supplementary/self-study examination etc. of failed subjects will be B+ as per examination policy.

d) One student can retake/reappear in a failed subject/course only twice. However, with the Permission of the Academic Council of MIST, a student may be allowed for the fourth time as the last chance.

e) In case of sickness, which leads to missing more than 40% of classes or miss term final examination (supported by requisite medical documents), students may be allowed to withdraw temporarily from that term and repeat the whole level with the regular level in the next academic session, subject to the approval of Academic Council, MIST. However, he/she has to complete the whole undergraduate program within 07 (seven) academic years for Architecture (B.Arch.) programme from the date of his/her registration.

f) The minimum credit for the award of a Bachelor's degree in Architecture (B Arch) will be decided by the respective department as per existing rules. However, the minimum CGPA requirement for obtaining a Bachelor's degree in Architecture is 2.20.

g) Whatever may be the cases, students have to complete the whole undergraduate program within 07 (seven) academic years for Architecture (B Arch.) program from the date of registration.

h) All other terms and conditions of the MIST Examination Policy remain valid.

1.6.2. Withdrawal on Disciplinary Ground

i) Unfair Means. Adoption of unfair means may result in the expulsion of a student from the program and so from the Institution. The Academic Council will authorize such expulsion based on the recommendation of the Disciplinary Committee, MIST, and as per the policy approved by the affiliating university. Following would be considered as unfair means adopted during examinations and other contexts:

  1) Communicating with fellow students for obtaining help in the examination hall.

  2) Copying from another student's script/ report /paper.

  3) Copying from desk or palm of a hand or other incrimination documents.

  4) Possession of any incriminating document whether used or not.

j) Influencing Grades. Academic Council may expel/withdraw any student for approaching directly or indirectly in any form to influence a teacher or MIST authority for enhancing his/her Grades.

k) Other Indiscipline Behaviours. Academic Council may withdraw/expel any student on the disciplinary ground if any form of indiscipline or unruly

behaviour is seen in him/her which may disrupt the academic environment or is considered detrimental to the image of MIST.

l) **Immediate Action by the Disciplinary Committee of MIST.** The Disciplinary Committee, MIST may take immediate disciplinary action against any student of the Institution. In case of withdrawal/expulsion, the matter will be referred to the Academic Council, MIST for post-facto approval.

1.6.3. Withdrawal on Own Accord

a. Permanent Withdrawal

A student who has already completed some courses and has not performed satisfactorily may apply for a withdrawal from the program.

b. Temporary Withdrawal

A student, if he/she applies, may be allowed to withdraw temporarily from the program, subject to approval of Academic Council of MIST, he will be allowed to apply fresh in future batch. If approved from the date of his/her registration.

CHAPTER 2

2. RULES AND REGULATIONS FOR B. ARCH PROGRAM AT MIST

2.1. Introduction

MIST has introduced a course system for undergraduate studies from the academic session 2017-18. The rules and regulations mentioned herein will apply to students for administering the undergraduate curriculum through the Course System. This will be introduced to create a continuous, even, and consistent workload throughout the term for the students.

2.2. The Course System

The salient features of the Course System are as follows:

a) The number of theory courses will be generally 5 in each term. However, with the recommendation of the course coordinator and Head of the Department, Commandant MIST may allow relaxation in this regard. This relaxation is to be reported to the Academic Council of MIST.

b) Students will not face any level repeat for failing.

c) Students will get the scope to improve their grading.

d) Introduction of more optional courses to enable the students to select courses according to their individual needs and preferences.

e) Continuous evaluation of students' performance.

f) Promotion of student-teacher interaction and contact.

Besides the professional courses, about each discipline, the undergraduate curriculum gives a emphasis on acquiring thorough knowledge in the basic sciences, humanities and social sciences.

2.3. Number of Terms in a Year

There will be two regular terms – Spring Term and Fall Term in an academic year.

2.4. Duration of Terms

The duration of each regular term will be a maximum of 22 weeks with the following breakups:

Ser.	Events	Durations
1.	Classes before Mid Term	7 weeks
2.	Mid Term Vacation	1 week
3.	Classes after Mid Term	7 weeks
4.	Makeup Classes and Preparatory leave	2/3 weeks
5.	Term Final Examination	2/3 weeks
6.	Term End Vacation	1/2 week

2.5. Course Pattern and Credit Structure

The undergraduate program is covered by a set of theoretical courses along with a set of sessional courses to support them.

2.6. Course Designation System

Each course is designated by a maximum of four-alphabetic code identifying the department offering the course followed by a four-digit number having the following interpretation:

a) The first digit represents the year/level

b) The second digit represents the respective term.

c) The third digit represents the specialized division / area / stream of study. 0 for design studios, 1 for design communication studios, 2 for general education, 3 for history, 4 for human behaviour and environment, 5 for technical systems, 6 for practice, 7 for not defined courses.

d) The fourth digit if odd number corresponds with theory courses and if even number, represents sessional courses.

The course designation system is illustrated as follows:

ARCH 1234:

ARCH	1	2	3	4
Department	Year / Level	Term	Division	Course Number

2.7. Types of Courses

The types of courses included in the undergraduate curricula are divided into the following groups:

a) Core Courses: In each discipline, several courses are identified as core courses, which form the nucleus of the respective bachelor's degree program. A student has to complete the entire designated core courses of his/her discipline.

b) Prerequisite Courses: Some of the core courses are identified as prerequisite courses for a specific subject.

c) Elective Courses: Apart from the core courses, the students can choose from a set of optional courses. A required number of optional courses from a specified group have to be chosen.

d) Additional Elective Courses (open credit): Apart from the required courses for the degree of Bachelor of Architecture (B.Arch.), the students can choose from a set of Additional Elective courses on the basis of proposed courses by the semester as open credit courses. These courses will help the students for future higher education background.

2.8. Course Offering and Instruction

The courses to be offered in a particular term are announced and published in the Course Catalog along with the tentative Term Schedule before the end of the previous term. The courses to be offered in any term will be decided by the Board of Undergraduate Studies (BUGS) of the respective department.

Each course is conducted by one or two course teachers who are responsible for maintaining the expected standard of the course and for the assessment of student's performance. Depending on the strength of registered students (i.e. on the number of students) enrolled for the course, the teacher concerned might have course associates and Teaching Assistants (TA) to aid in teaching and assessment.

2.9. Teacher Student Interaction

The new course system encourages students to come in close contact with the teachers. For the promotion of a high level of teacher-student interaction, each student is assigned to an adviser and the student is free to discuss all academic matters with his/her adviser. Students are also encouraged to meet any time with other teachers for help and guidance in academic matters. However, students are not allowed to interact with teachers after the moderation of questions.

2.10. Student Adviser

One adviser is normally appointed for a group of students by the BUGS of the concerned department. The adviser advises each student about the courses to be taken in each term by discussing the academic program of that particular term with the student.

However, it is also the student's responsibility to keep regular contact with his/her adviser who will review and eventually approve the student's specific plan of study and monitor the subsequent progress of the student.

For a student of second and subsequent terms, the number and nature of courses for which he/she can register are decided based on academic performance during

the previous term. The adviser may permit the student to drop one or more courses based on previous academic performance.

2.11. <u>Course Registration</u>

Any student who uses classroom, laboratory facilities, or, faculty-time is required to register formally. Upon admission to the MIST, students are assigned to advisers. These advisers guide the students in choosing and registering for courses.

2.11.1. Registration Procedure

At the commencement of each term, each student has to register for courses in consultation with and under the guidance of his/her adviser. The date, time, and venue of registration are announced in advance by the Registrar's Office. Counseling and advising are accomplished at this time. It is essential that all the students be present for registration at the specified time.

2.11.2. Pre-conditions for Registration

a) For first-year students, department-wise enrolment/admission is mandatory prior to registration. At the beginning of the first term, an orientation program will be conducted for them where they are handed over with the registration package on submission of the enrolment slip.

b) Any student, other than the new batch, with outstanding dues to the MIST or, a hall of residence, is not permitted to register. Each student must clear their dues and obtain a clearance certificate, upon production of which, he/she will be given necessary Course Registration Forms to perform course registration.

c) A student is allowed to register in a particular course subject to the class capacity constraints and satisfaction of pre-requisite courses. However, even if a student fails in a pre-requisite course in any term, the concerned department (BUGS) may allow him/her to register for a course that depends upon the pre-requisite course provided that his/her attendance and performance in the continuous assessment of the mentioned pre-requisite course is found to be satisfactory.

2.11.3. Registration Deadline

Each student must register for the courses to be taken before the commencement of each term. Late registration is permitted only during the first week of classes. Late registration after this date will not be accepted unless the student submits a written application to the registrar through the concerned Head of the department explaining the reasons for the delay. Acceptable reasons may be medical problems with supporting documents from the Medical Officer of MIST or, some other academic commitments that prohibit enrolment before the last date of registration.

2.11.4. Penalty for Late Registration

Students who fail to register during the designated dates for registration are charged a late registration fee of Tk. 100.00 (One hundred only) per credit hours. Penalty for late registration will not be waived.

2.12. <u>Limits on the Credit Hours to be taken</u>

a) A student should be enrolled for at least 15 credit hours and is allowed to take a maximum of 24 credit hours. Relaxation on minimum credit hours may be allowed. A student must enrol for the sessional courses prescribed in a particular term within the allowable credit hour limits.

b) In special cases where it is not possible to allot the minimum required 15 credit hours to a student, the concerned department (BUGS) may permit with the approval of the Commandant, a lesser number of credit hours to suit individual requirements. Only graduating students may be allowed to register less than 15 Cr. Hr. without the approval of the Commandant. A list of all such cases to be forwarded to Register Office, ICT Dept., and Controller of Exam Office by the respective Department.

2.13. <u>Course Add/Drop</u>

A student has some limited options to add or, drop courses from the registration list. The addition of courses is allowed only within the first two weeks of a regular term. Dropping a course is permitted within the first four weeks of a regular term. Add or, Drop is not allowed after registration of courses for Supplementary-I and Supplementary-II Examination.

Any student willing to add or, drop courses has to fill up a Course Adjustment Form. This also has to be done in consultation with and under the guidance of the student's respective adviser. The original copy of the Course Adjustment Form has to be submitted to the Registrar's Office, where the required numbers of photocopies are made for distribution to the concerned adviser, Head, Dean, Controller of Examinations, and the student.

All changes must be approved by the adviser and the Head of the department. The Course Adjustment Form has to be submitted after being signed by the concerned persons.

2.14. <u>Withdrawal from a Term</u>

If a student is unable to complete the Term Final Examination due to serious illness or, serious accident, he/she may apply to the Head of the degree-awarding department for total withdrawal from the term before commencement of term final examination. However, the application may be considered during the term final examination in the special case. The application must be supported by a medical

certificate from the Medical Officer of MIST. The concerned student may opt for retaining the sessional courses of the term. The Academic Council will take the final decision about such applications. However, the total duration for graduation will not exceed 7 academic years for the Department of Architecture.

2.15. The Grading System

The total performance of a student in a given course is based on a scheme of continuous assessment, for theory courses this continuous assessment is made through a set of quizzes, class tests, class evaluation, class participation, homework assignment, mid-term exam, and a term final examination. The assessments for sessional courses are made by evaluating the performance of the student at work during the class, viva-voce during laboratory hours, reports, and quizzes. Besides that, in the end, there will be a final lab test. Each course has a certain number of credits, which describes its corresponding weightage. A student's performance is measured by the number of credits completed satisfactorily and by the weighted average of the grade points earned. A minimum grade point average (GPA) is essential for satisfactory progress. A minimum number of earned credits also have to be acquired in order to qualify for the degree. Letter grades and corresponding grade points will be given as follows:

Numerical Markings	Grade	Grade Points
80% and above	A+	4.00
75% to below 80%	A	3.75
70% to below 75%	A-	3.50
65% to below 70%	B+	3.25
60% to below 65%	B	3.00
55% to below 60%	B-	2.75
50% to below 55%	C+	2.50
45% to below 50%	C	2.25
40% to below 45%	D	2.00
Below 40%	F*	0.00
	AB	Absent
	DC	Dis-collegiate
	VW	Voluntary Withdrawn
	X	Project/ Thesis Continuation
	E	Expelled
	S	Satisfactory

*Subject in which the student gets an F grade shall not be regarded as earned credit hours for the calculation of Grade Point Average (GPA).

2.16. Marks Distribution

2.16.1. Theory

Forty percent (40%) of marks of a theoretical course shall be allotted for continuous assessment, i.e. pop quizzes, assignments, class tests, observations/ class participation, projects and mid-term examination. These marks must be submitted to the Office of Controller of Examinations before the commencement of the final exam. The rest of the marks will be allotted to the Term Final Examination. The duration of the final examination will be three (03) hours. The scheme of continuous assessment that a particular teacher would follow for a course will be announced on the first day of the classes.

The distribution of marks for a given theory course is as follows:

Class Attendance	5%
Class Performance	5%
Class Test/ Assignment/Homework	20%
Mid-Term Assessment (Exam/Project)	10%
Final Examination (Section A and B)	60%
Total	**100%**

Note**:** Distribution of marks may change based on the decision of Academic Council of MIST.

2.17. Class Attendance

Class attendance may be considered as a part of continuous assessment.

2.18. Collegiate and Non-collegiate Students

Students having class attendance of 85% or, above in individual subjects will be treated as collegiate and less than 85% and up to 70% will be treated as non-collegiate in that subject (Subject to change). The non-collegiate student(s) may be allowed to appear in the examination subject to payment of non-collegiate fee/fine of an amount fixed by MIST/BUP. Students having class attendance below 70% will be treated as dis-collegiate and will not be allowed to appear in the examination and treated as fail. But in a special case, such students may be allowed to appear in the examination with the permission of Commandant and it must be approved by the Academic Council.

2.19. Calculation of GPA and CGPA

Grade Point Average (GPA) is the weighted average of the grade points obtained of all the courses passed/completed by a student. For example, if a student passes/completes n courses in a term having credits of $C_1, C_2, ..., C_n$ and his grade points in these courses are $G_1, G_2, ..., G_n$ respectively then

$$GPA = \frac{\sum_{i=1}^{n} C_i G_i}{\sum_{i=1}^{n} C_i}$$

The Cumulative Grade Point Average (CGPA) is the weighted average of the GPA obtained in all the terms passed/completed by a student. For example, if a student passes/ completes n terms having total credits of TC_1, TC_2, ..., TC_n and his GPA in these terms are GPA_1, GPA_2, GPA_n respectively then

$$CGPA = \frac{\sum_{i=1}^{n} TC_i GPA_i}{\sum_{i=1}^{n} TC_i}$$

2.20. Numerical Example

Suppose a student has completed seven courses in a term and obtained the following grades:

Course	Credits, C_i	Grade	Grade G_i	Points, C_i*G_i
ARCH-1101	2.00	A	3.75	7.50
ARCH-1102	6.00	A+	4.00	24.00
MATH-1111	2.00	A+	4.00	8.00
ARCH-1104	3.00	A+	4.00	12.00
HUM-1111	2.00	A	3.75	7.50
ARCH-1103	2.00	A+	4.00	8.00
ARCH-1105	2.00	B+	3.25	6.50
Total	**19.00**			**73.50**

GPA = 73.50/19.00 = **3.87**

Suppose a student has completed four terms and obtained the following GPA.

Level	Term	Credit Earned, TC_i	Hours GPA Earned, GPA_i	GPA_i*TC_i
1	1	18.50	3.73	69.005
1	2	19.50	3.93	76.635
2	1	21.50	3.96	85.140
2	2	17.50	4.00	70.000
Total		**77.00**		**300.78**

CGPA = 300.78/77.00 = **3.91**

2.21. <u>Minimum Earned Credit and GPA Requirement for Obtaining Degree</u>

Minimum credit hour requirements for the award of Bachelor's degree in Architecture (B. Arch) and other disciplines will be decided as per existing rules. The minimum CGPA requirement for obtaining a Bachelor's degree in Architecture and other discipline is 2.20.

2.22. <u>Minimum Earned Credit and GPA Requirement for Obtaining Degree (Additional Course)</u>

Minimum credit hour requirements for the award of Bachelor's degree in Architecture (B. Arch) and other discipline will be decided by the respective department (BUGS). However, at least 184 credit hours for Architecture must be earned to be eligible for graduation. This must include the specified core courses. The minimum GPA requirement for obtaining a Bachelor's degree in Architecture is 2.20. A student may take additional courses with the consent of his Advisor in order to raise GPA, but he/she may take a maximum of 18 such additional credits in architecture beyond respective credit-hour requirements for Bachelor's degree during his/her entire period of study.

2.23. <u>Impacts of Grade Earned</u>

The courses in which a student has earned a 'D' or a higher grade will be counted as credits earned by him/her. Any course in which a student has obtained an 'F' grade will not be counted towards his/her earned credits or, GPA calculation. However, the 'F' grade will remain permanently on the Grade Sheet and the Transcript.

A student who obtains an 'F' grade in a core course will have to repeat that particular course. However, if a student gets an 'F' in an optional course, he/she may choose to repeat that course or, take a substitute course if available. When a student will repeat a course in which he/she has previously obtained an 'F', he/she will not be eligible to get a grade better than 'B+' in that repeated course.

If a student obtains a grade lower than 'B+' in a particular course, he/she will be allowed to repeat the course only once for the purpose of grade improvement. However, he/she will not be eligible to get a grade better than 'B+' for an improvement course.

A student will be permitted to repeat for grade improvement purposes a maximum of 6 courses in BSc. Engineering programs and a maximum of 7 courses in B. Arch. Program.

If a student obtains a 'B+' or a better grade in any course, he/she will not be allowed to repeat the course for grade improvement.

2.24. Classification of Students

At MIST, regular students are classified according to the number of credit hours completed/ earned towards a degree. The following classification applies to all the students:

LEVEL	CREDIT HOURS EARNED (ARCHITECTURE)
Level 1	0.0 to 34.0
Level 2	More than 34.0 to 72.0
Level 3	More than 72.0 to 110.0
Level 4	More than 110.0 to 147.0
Level 5	More than 147.0

* Note: Subject to review regularly.

However, before the commencement of each term all students other than new batch are classified into three categories:

a) **Category 1:** This category consists of students who have passed all the courses described for the term. A student belonging to this category will be eligible to register for all courses prescribed for the upcoming term.

b) **Category 2:** This category consists of students who have earned a minimum of 15 credits but do not belong to category 1. A student belonging to this category is advised to take at least one course less since he/she might have to register for one or, more backlog courses as prescribed by his/her adviser.

c) **Category 3:** This category consists of students who have failed to earn the minimum required 15 credits in the previous term. A student belonging to this category is advised to take at least two courses less than a category 1 student subject to the constraint of registering at least 15 credits. However, he will also be required to register for backlog courses as prescribed by the adviser.

2.25. Definition of Graduating Student

Graduating students are those students who will have ≤ 24 credit hours remaining for completing the degree requirement.

2.26. Performance Evaluation

The performance of a student will be evaluated in terms of two indices, viz. Term Grade Point Average and Cumulative Grade Point Average which is the grade average for all the terms completed.

2.26.1.

Students will be considered to be making normal progress toward a degree if their Cumulative Grade Point Average (CGPA) for all work attempted is 2.20 or, higher.

Students who regularly maintain a term GPA of 2.20 or better are making good progress toward the degrees and are in good standing with MIST. Students who fail to maintain this minimum rate of progress will not be in good standing. This can happen when any one of the following conditions exists:

The term GPA falls below 2.20.

The Cumulative Grade Point Average (CGPA) falls below 2.20.

The earned number of credits falls below 15 times the number of terms attended.

2.26.2.

All such students can make up their deficiencies in GPA and credit requirements by completing courses in the subsequent term(s) and backlog courses, if there are any, with better grades. When the minimum GPA and credit requirements are achieved the student is again returned to good standing.

2.27. Application for Graduation and Award of Degree

A student who has fulfilled all the academic requirements for Bachelor's degree will have to apply to the Controller of Examinations through his/her Adviser for graduation. Provisional Degree will be awarded by BUP on completion of credit and GPA requirements.

2.28. Time Limits for Completion of Bachelor's Degree

A student must complete his studies within a maximum period of 7 (seven) years for architecture.

2.29. Attendance, Conduct, and Discipline

MIST has strict rules regarding the issues of attendance in class and discipline.

2.29.1. Attendance

All students are expected to attend classes regularly. The university believes that attendance is necessary for effective learning. The first responsibility of a student is to attend classes regularly as per MIST rules.

2.29.2. Conduct and Discipline

During their stay in MIST, all students are required to abide by the existing rules, regulations, and code of conduct. Students are strictly forbidden to form or, be members of the student organization or, political party, club, society, etc., other than those set up by MIST authority to enhance student's physical, intellectual, moral, and ethical development. Zero tolerance in regard to sexual abuse and harassment in any forms and drug abuse and addiction are strictly observed on the campus.

2.30 <u>Teacher-Student Interaction</u>

The academic system in MIST encourages students to come in close contact with the teachers. For promotion of high level of teacher-student's interaction, a course coordinator (CC) is assigned to each course. Students are free to discuss with CC about all academic matters. Students are also encouraged to meet other teachers any time for help and guidance for academic matters. Heads of the departments, Director of Administration, Director of Students Welfare (DSW), Dean and Commandant address the students at some intervals. More so, monthly Commandant's Parade is organized in MIST where all faculty members, staff and students are formed up, thereby increasing teacher-student interaction.

2.31. <u>Absence during a Term</u>

A student should not be absent from quizzes, tests, etc. during the term. Such absence will naturally lead to a reduction in points/marks, which count towards the final grade. Absence in the Term Final Examination will result in an 'F' grade in the corresponding course. A student who has been absent for short periods, up to a maximum of three weeks due to illness, should approach the course teacher(s) or, the course coordinator(s) for make-up quizzes or, assignments immediately upon return to classes. Such a request has to be supported by a medical certificate from a competent authority (e.g. CMH/MIST Medical Officer).

2.32. <u>Recognition of Performance</u>

As recognition of performance and ensure continued studies MIST awards medals, scholarships and stipends will be given as per existing rules and practices.

2.33. <u>Types of Different Examination</u>

Following different types of final Examinations will be conducted in MIST to evaluate the students of Undergraduate Programs:

a) **Term Final Examination:** At the end of each normal term (after 22 week or so), Term Final Examination will be held. Students will appear in the Term Final Examination for all the theory courses they have taken in the Term.

b) **Supplementary Examination:** It will take place twice a year. Supplementary-I is defined as the provision of giving exam in the first week of Spring Term (Jan-Jun)/ Fall Term (Jul – Dec) end break and Supplementary-II in the first week of Fall Term (Jul – Dec)/ Spring Term (Jan – Jun) end break respectively. Students will be allowed to register for a maximum of two theory courses (Failed / Improvement) in Supplementary-I and a maximum of one theory course (Failed / Improvement) in Supplementary-II.

c) **Improvement Examination:** It will be taken during Supplementary-I and Supplementary-II examination. Questions will be the same as the question

of the regular examination of that Supplementary Examination (if any). Students can take a maximum of two subjects at a time (two subjects in Supplementary-I and one subject in Supplementary-II) and a maximum of 6 subjects in the whole academic duration. If a student obtains a grade lower than 'B+' in a course, he/she will be allowed to repeat the course only once for grade improvement. However, he/she will not be eligible to get a grade better than 'B+' for an improvement course. Among the previous result and improvement examination results, the best one will be considered as the final result for an individual student. However, the performance of all examination i.e. previous to improvement examination, shall be reflected in the transcript.

2.34. Rules of Different Examinations

2.34.1. Term Final Examination

Following rules to be followed:

a) Registration to be completed before the commencement of the class. A student has to register for his desired courses paying registration, examination fee, and other related fees.

b) Late registration will be allowed without penalty within the first week of the term.

c) Within 1st two weeks of a term, a student can Add/Drop course/courses. To add a course, in the 3rd week, one has to register the course by paying additional fees. To drop the course, one has to apply within three weeks and paid fees will be adjusted/ refunded. If anyone wants to drop a course after three weeks and within 4 weeks, that will be permitted but paid fees will not be refunded in that case.

d) Registrar office will finalize registration of all courses within 7 (seven) weeks, issue registration slip and that will be followed by issuing Admit Card.

e) Term Final Examination to be conducted in the 18-20th week of the term as per approved Academic Calendar.

2.34.2. Supplementary Examination

Following rules to be followed:

a) Supplementary-I is defined as the provision of giving exam in the first week of Spring Term (Jan – Jun) / Fall Term (Jul – Dec) end break and Supplementary-II in the first week of Fall Term (Jul – Dec) / Spring Term (Jan – Jun) end break, respectively.

b) Students will be allowed to register for a maximum of two theory courses (Failed / Improvement) in Supplementary-I and a maximum of one theory course (Failed / Improvement) in Supplementary-II.

c) No class will be conducted.

d) 40% marks will be considered from the previous exams.

e) The maximum grading in the Supplementary Exam will be 'B+'.

f) No sessional exam will be conducted.

g) The examination will be taken on 60% marks like Term Final Examination.

h) If a student fails in a course more than once in regular terms, then for calculating 40% marks, the best one of all continuous assessment marks will be counted.

i) If anyone fails in the sessional course, that course cannot be taken in the supplementary examination.

j) If any student fails in a course, he/she can clear the course retaking it 2nd time, or he/she can clear the examination appearing at the supplementary examination as well. Anyone who fails twice in a course can only retake it in the regular term for appearing the third time. But anyone fails even after the third time, he/she has to take the approval of the Academic Council of MIST for appearing 4th (last) time in a course and need to pay an extra financial penalty. If any student fails even 4th time in a course, will not be allowed to appear anymore in this same course.

k) Registration of Supplementary-I Exam to be done within 5th week after completion of Fall Term (July to Dec) and registration of Supplementary-II Exam to be done during the Mid-Term break of Spring Term (Jan –Jun), paying all the required fee.

l) There will be no provision for add/drop courses after registration.

m) Question setting, Moderation, and Result Publication to be done following the same rules of Spring (Jan –Jun) / Fall (Jul – Dec) Term Final Exam as per existing MIST Policy.

n) Moderation of the questions for Supplementary-I will be done in the 5th week after completion of Fall Term (Jul –Dec) Final Exam and Supplementary-II with the moderation of the questions of Spring Term (Jan – Jun).

o) Separate Tabulation sheet to be made.

2.34.3. Improvement Examination

Following rules to be followed:

a) Improvement examination is to be taken during the Supplementary-I and Supplementary-II examinations.

b) For the Improvement examination, registration is to be done during the registration of Supplementary-I and Supplementary-II examinations by paying all the fees.

c) Question setting, Moderation, and Result publication to be done with courses of Supplementary-I and Supplementary-II examinations.

d) Any student gets a grading below 'B+' and desires to improve that course, he/she will be allowed to appear the improvement examination for that particular course.

e) The highest grade of improvement examination will be 'B+'.

f) One student is allowed to appear at an improvement exam in 6 (six) courses in his/her whole graduation period taking a maximum of two courses at a time (two courses in Supplementary-I and one course in Supplementary-II).

2.35. <u>Irregular Graduation</u>

If any graduating student clears his/her failed course in Term-1 and his graduation requirements are fulfilled, his graduation will be effective from the result publication date of Term-1 and that student will be allowed to apply for a provisional certificate.

CHAPTER 3

3. DEPARTMENT OF ARCHITECTURE (ARCH)

3.1. <u>Introduction to ARCH</u>

Architecture education is an academic pursuit which involves learning by creative thinking and experiencing built environment. Grounded in a multidisciplinary structure, the Department of Architecture of MIST started offering 5 years Bachelor of Architecture program since 2015. The B.Arch. program at MIST emphasizes a supportive studio culture through facilitated peer teaching and teamwork. The department encourages intellectual inquiry as the basis to forge individual design path. The Department's philosophy of design excellence integrates the imaginative and skilful manipulation of form, as well as the ability to draw inspiration from a broad spectrum of knowledge. The architecture curriculum includes design studio, theory, visual studies, history, technology, and professional practice, with design as the central focus of instruction. Architecture faculty and students explore a range of design investigations, expand knowledge, and confront the challenges of the contemporary built environment. Our design-studios form both the physical and pedagogical core of the department.

The creative, collaborative atmosphere of the department enable architecture students to develop, discuss, exchange, and materialize ideas through a comprehensive range of platforms and process that are further enriched by the department's parallel learning events, exhibitions and publications. As new ways of thinking emerge in the profession of architecture, the field grows increasingly complex and requires new techniques of inquiry and design. MIST educates committed individuals who have assumed leadership roles in shaping the built environment in global context.

3.2. <u>Vision and Mission of the Department</u>

The mission of the Dept. of Architecture is drawn from the vision of MIST and composed with followings:

- To nurture design-minded and globally competent students to engage in architecture in it's civic, social, and professional realms for the benefit of built and natural environment.
- To promote a learning environment for involving the students in intellectual inquisitiveness, exploring knowledge dimensions, developing high technical competence and design skill for future application in industry, profession and life.
- To provide hands-on, process-based learning through problem solving and critical thinking.
- To foster strategic alliances with academia, industry and government for research and its application.

- To inculcate the ethical, social and moral values which is the basis of human social order.
- To create awareness among students regarding responsibilities of built environment on communities and settlements by advocating the responsible architecture in the realm of social, political, environmental and economic issues in creating a sustainable future locally, nationally and globally.

3.3. <u>Laboratory Facilities of the Department</u>

The department endeavors to provide its faculty members and students adequate laboratory, library, and other facilities. Departmental undergraduate courses are laboratory intensive and these requirements are catered by the following laboratories:

a) Model Making Lab

b) Environmental Design Lab

c) Building Technology Lab

d) Urban and Landscape Design Lab

e) Architecture Design Lab

f) Heritage Conservation and Rebuilding Lab

g) Photography and Digital Image Lab

h) Computer Lab

If necessary, undergraduate students can access the facilities of other departments and centres during their project, thesis, and research work.

3.4. <u>Awarded Degrees from ARCH Department</u>

ARCH department will offer the Bachelor of Architecture (B. Arch.) in the undergraduate degree program.

CHAPTER 4

4. COURSE CURRICULUM STRUCTURE AND SCHEDULE FOR ARCH DEPARTMENT

Considering the program outcome mentioned in Chapter 3, the course schedule for the undergraduate students of the Department of Architecture (ARCH) is designed and described in this chapter. This curriculum will be effective from the spring 2024 session. All enrolled students for the five (5) years' Bachelor of Architecture (B.Arch.) program shall have to complete minimum **184.0** credit.

4.1. Final Year Research Project (FYA)/Thesis Project:

Final Year Research Project (FYA) or Thesis Project will have to be undertaken by students under a supervisor in partial fulfilment of the requirement of his/her degree in the final year/ Level 5. Credit hours allotted to the thesis will be 10.00 corresponding to 15.00 contact hours.

4.2. Teaching Strategy

a) Theory courses will be conducted by participatory lectures, presentation slides, demonstration videos, white board, etc.

b) Sessional courses will be conducted by demonstration, discussion, special lecture, field visit, etc. based on the course contents.

4.3. Summary of Courses:

Bachelor of Architecture (B.Arch.) program requires a minimum of 184 credits in 5 years that comprises 104 credit of core studio courses, 62 credit of core theory courses and 18 credit of elective theory courses.

		Offered Cr.	Required Cr.
Core Sessional	Design Studio	80	80
	Design Communication Studios	19.5	19.5
	Technical System	1.5	1.5
	Not Defined Course	3.0	3.0
	Total for Sessional	**104**	**104**
Core Theory	General Education	8.0	8.0
	History	14.0	14.0
	Human Behavior & Environment	14.0	14.0
	Technical System	18	18
	Practice	6.0	6.0
	Not Defined Course	2.0	2.0
	Total for Theory	**62**	**62**

Elective Theory	General Education	10.0	
	History	4.0	
	Human Behaviour & Environment	14.0	18
	Technical System	12.0	
	Practice	-	
	Not Defined Course	20.0	
	Total for Elec. Theory	**60**	**18**
Total for Bachelor of Architecture (B.Arch.) Program		**226.0**	**184.0**

4.4. Stream-wise Distribution of Courses

DESIGN STUDIO				
Course Code	**Course Name**	**Type of Course**	**Credit Hour**	**Contact Hour/wk**
ARCH 1102	Design Studio I	Core	6.0	9.0
ARCH 1202	Design Studio II	Core	6.0	9.0
ARCH 2102	Design Studio III	Core	8.0	12.0
ARCH 2202	Design Studio IV	Core	8.0	12.0
ARCH 3102	Design Studio V	Core	8.0	12.0
ARCH 3202	Design Studio VI	Core	8.0	12.0
ARCH 4102	Design Studio VII	Core	8.0	12.0
ARCH 4202	Design Studio VIII	Core	8.0	12.0
ARCH 5102	Design Studio IX	Core	10.0	15.0
ARCH 5202	Design Studio X	Core	10.0	15.0
Total			**80.0**	**120.0**

DESIGN COMMUNICATION STUDIO				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
ARCH 1112	Architectural Graphics I	Core	3.0	6.0
ARCH 1212	Architectural Graphics II	Core	3.0	6.0
ARCH 1114	Computer Application I	Core	1.5	3.0
ARCH 1214	Computer Application II	Core	1.5	3.0
ARCH 2114	Computer Application III	Core	1.5	3.0
ARCH 2112	Graphic Art and Sculpture	Core	1.5	3.0
ARCH 2212	Photography and Film	Core	1.5	3.0
ARCH 3112	Working Drawing I	Core	1.5	3.0
ARCH 3212	Working Drawing II	Core	1.5	3.0
ARCH 4112	Landscape Design Studio	Core	1.5	3.0
ARCH 4212	Interior Design Studio	Core	1.5	3.0
Total			**19.5**	**39.0**

GENERAL EDUCATION				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
HUM 1121	English	Core	2.0	2.0
MATH 1121	Mathematics	Core	2.0	2.0
PHY 1221	Physics	Core	2.0	2.0
ARCH 1221	Art History	Core	2.0	2.0
HUM 1221	Sociology	Elective	2.0	2.0
HUM 1223	Anthropology	Elective	2.0	2.0
HUM 2121	Logic and Philosophy	Elective	2.0	2.0
HUM 2123	Psychology and Behaviour	Elective	2.0	2.0
HUM 5121	Economics	Elective	2.0	2.0
Total			**18.0**	**18.0**

HISTORY				
Course Code	**Course Name**	**Type of Course**	**Credit Hour**	**Contact Hour/wk**
ARCH 1131	History of Architecture I	Core	2.0	2.0
ARCH 1231	History of Architecture II	Core	2.0	2.0
ARCH 2131	History of Architecture III	Core	2.0	2.0
ARCH 2231	History of Architecture IV	Core	2.0	2.0
ARCH 3131	History of Architecture V	Core	2.0	2.0
ARCH 1133	Design Theory	Core	2.0	2.0
ARCH 3231	Architecture of Bengal	Core	2.0	2.0
ARCH 4131	Post Modern Architecture	Elective	2.0	2.0
ARCH 4133	Contemporary Architecture	Elective	2.0	2.0
Total			**18.0**	**18.0**

HUMAN BEHAVIOR & ENVIRONMENT				
Human Behavior				
Course Code	**Course Name**	**Type of Course**	**Credit Hour**	**Contact Hour/wk**
ARCH 2241	Basic Planning	Core	2.0	2.0
ARCH 3241	Urban Design I	Core	2.0	2.0
ARCH 3243	Landscape Design	Core	2.0	2.0
ARCH 4141	Interior Design	Core	2.0	2.0
ARCH 4143	Housing	Core	2.0	2.0
ARCH 3141	Space and Forms in Architecture	Elective	2.0	2.0
ARCH 4241	Urban Design II	Elective	2.0	2.0
ARCH 4243	Advanced Planning	Elective	2.0	2.0
ARCH 4245	Rural Planning	Elective	2.0	2.0
Total			**18.0**	**18.0**

Environment				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
ARCH 1141	Ecology and Environment	Core	2.0	2.0
ARCH 1241	Climate and Design	Core	2.0	2.0
ARCH 2245	Design in the Tropics	Elective	2.0	2.0
ARCH 2243	Green and Sustainable Architecture	Elective	2.0	2.0
ARCH 3143	Architecture in Extreme Environment	Elective	2.0	2.0
Total			**10.0**	**10.0**

TECHNICAL SYSTEM				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
ARCH 2151	Building and Finish Material	Core	2.0	2.0
ARCH 2153	Visual and Sonic Environment	Core	2.0	2.0
CE 2151	Structure I	Core	2.0	2.0
CE 2251	Structure II	Core	2.0	2.0
CE 3151	Structure III	Core	2.0	2.0
CE 3251	Structure IV	Core	2.0	2.0
ARCH 2251	Building Services I: Mechanical and Electrical	Core	2.0	2.0
ARCH 2252	Building Material and Construction	Core	1.5	3.0
EWCE 3151	Building Services II: Plumbing	Core	2.0	2.0
ARCH 3151	Construction Method and Detail	Core	2.0	2.0
ARCH 3153	Advanced Construction and Building Technology	Elective	2.0	2.0
ARCH 3157	Modular Architecture, Production Line and Customization	Elective	2.0	2.0
ARCH 3159	Ambient Technology and Building Environment	Elective	2.0	2.0
ARCH 3155	Tall Buildings and Composite Structure	Elective	2.0	2.0
ARCH 5253	Building Safety Design	Elective	2.0	2.0
ARCH 5251	Heritage Conservation	Elective	2.0	2.0
Total			**31.5**	**33.0**

PRACTICE				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
ARCH 4161	Cost Estimation and Specification	Core	2.0	2.0
HUM 4261	Project Management	Core	2.0	2.0
ARCH 5261	Professional Practice	Core	2.0	2.0
Total			**6.0**	**6.0**

NOT DEFINED COURSES				
Course Code	Course Name	Type of Course	Credit Hour	Contact Hour/wk
ARCH 5171	Survey and Research Methods	Core	2.0	2.0
HUM 5171	Accounting	Elective	2.0	2.0
ARCH 5172	Seminar	Core	1.5	3.0
ARCH 4272	Professional Training	Core	1.5	320 Man Hour
ARCH 2271	Vernacular Architecture	Elective	2.0	2.0
ARCH 3171	Bio-Design and Architecture	Elective	2.0	2.0
ARCH 4171	Music and Film Appreciation	Elective	2.0	2.0
ARCH 4271	Transportation and Mobility Design	Elective	2.0	2.0
ARCH 5273	Health Facilities Planning and Design	Elective	2.0	2.0
ARCH 5275	Industrial and Commercial Building Design	Elective	2.0	2.0
ARCH 5277	Educational, Religious and Recreational Design	Elective	2.0	2.0
ARCH 5279	Disaster and Post Disaster Responsive Architecture	Elective	2.0	2.0
ARCH 5271	Architecture for Children and Differently-abled People	Elective	2.0	2.0
Total			**25.0**	**25.0**

4.5. Term-wise Distribution of Courses

		L-1, T-1	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 1102: Design Studio I	6	9
	Design Communication Studios	ARCH 1112: Architectural Graphics I	3	6
		ARCH 1114: Computer Application I	1.5	3
	Total Sessional		**10.5**	**18**
Core Theory	General Education	HUM 1121: English	2	2
		MATH 1121: Mathematics	2	2
	History	ARCH 1131: History of Architecture I	2	2
		ARCH 1133: Design Theory	2	2
	Human Behaviour & Environment	ARCH 1141: Ecology and Environment	2	2
	Technical System			
	Practice			
	Not Defined Course			
	Total Core Theory		**10**	**10**
Elective Theory	General Education			
	History			
	Human Behaviour & Environment			
	Technical System			
	Practice			
	Not Defined Course			
	Total Elective Theory		**0**	**0**
	Total		**20.5**	**28**

		L-1, T-2	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 1202: Design Studio II (Prerequisite Design Studio I)	6	9
	Design Communication Studios	ARCH 1212: Architectural Graphics II	3	6
		ARCH 1214: Computer Application II	1.5	3
	Total Sessional		**10.5**	**18**
Core Theory	General Education	PHY 1221: Physics	2	2
		ARCH 1221: Art History	2	2
	History	ARCH 1231: History of Architecture II	2	2
	Human Behaviour & Environment	ARCH 1241: Climate and Design	2	2
	Technical System			
	Practice			
	Not Defined Course			
	Total Core Theory		**8**	**8**
Elective Theory	General Education	HUM 1221: Sociology	2	2
		HUM 1223: Anthropology		
	History			
	Human Behaviour & Environment			
	Technical System			
	Practice			
	Not Defined Course			
	Total Elective Theory		**2**	**2**
	Total		**20.5**	**28**

		L-2, T-1	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 2102: Design Studio III (Prerequisite Design Studio II)	8	12
	Design Communication Studios	ARCH 2114: Computer Application III	1.5	3
		ARCH 2112: Graphic Art and Sculpture	1.5	3
	Total Sessional		**11**	**18**
Core Theory	General Education			
	History	ARCH 2131: History of Architecture III	2	2
	Human Behaviour & Environment			
	Technical System	ARCH 2151: Building and Finish Material	2	2
		ARCH 2153: Visual and Sonic Environment	2	2
		CE 2151: Structure I	2	2
	Practice			
	Not Defined Course			
	Total Core Theory		**8**	**8**
Elective Theory	General Education	HUM 2121: Logic and Philosophy	2	2
		HUM 2123: Psychology and Behaviour		
	History			
	Human Behaviour & Environment			
	Practice			
	Not Defined Course			
	Total Elective Theory		**2**	**2**
	Total		**21**	**28**

		L-2, T-2	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 2202: Design Studio IV (Prerequisite Design Studio III)	8	12
	Design Communication Studios	ARCH 2212: Photography and Film	1.5	3
	Technical System	ARCH 2252: Building Material and Construction	1.5	3
	Total Sessional		**11**	**18**
Core Theory	General Education			
	History	ARCH 2231: History of Architecture IV	2	2
	Human Behaviour & Environment	ARCH 2241: Basic Planning	2	2
	Technical System	CE 2251: Structure II	2	2
		ARCH 2251: Building Services I: Mechanical and Electrical	2	2
	Practice			
	Not Defined Course			
	Total Core Theory		**8**	**8**
Elective Theory	General Education			
	History			
	Human Behaviour & Environment	ARCH 2245: Design in the Tropics		
		ARCH 2243: Green and Sustainable Architecture	2	2
	Technical System			
	Practice			
	Not Defined Course	ARCH 2271: Vernacular Architecture		
	Total Elective Theory		**2**	**2**
	Total		**21**	**28**

		L-3, T-1	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 3102: Design Studio V (Prerequisite Design Studio IV)	8	12
	Design Communication Studios	ARCH 3112: Working Drawing I	1.5	3
	Total Sessional		**9.5**	**15**
Core Theory	General Education			
	History	ARCH 3131: History of Architecture V	2	2
	Human Behaviour & Environment			
	Technical System	CE 3151: Structure III	2	2
		EWCE 3151: Building Services II : Plumbing	2	2
		ARCH 3151: Construction Method and Detail	2	2
	Practice			
	Not Defined Course			
	Total Core Theory		**8**	**8**
Elective Theory	General Education			
	History			
	Human Behaviour & Environment	ARCH 3143: Architecture in Extreme Environment	2	2
		ARCH 3141: Spaces and Forms in Architecture		
	Technical System	ARCH 3153: Advanced Construction and Building Technology		
		ARCH 3157: Modular Architecture, Production Line and Customization		
		ARCH 3159: Ambient Technology and Building Environment		
		ARCH 3155: Tall Buildings and Composite Structure		
	Practice			
	Not Defined Course	ARCH 3171: Bio-Design and Architecture		
	Total Elective Theory		**2**	**2**
	Total		**19.5**	**25**

		L-3, T-2	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 3202: Design Studio VI (Prerequisite Design Studio V)	8	12
	Design Communication Studios	ARCH 3212: Working Drawing II	1.5	3
	Total Sessional		**9.5**	**15**
Core Theory	General Education			
	History	ARCH 3231: Architecture of Bengal	2	2
	Human Behaviour & Environment	ARCH 3241: Urban Design I	2	2
		ARCH 3243: Landscape Design	2	2
	Technical System	CE 3251: Structure IV	2	2
	Practice			
	Not Defined Course			
	Total Core Theory		**8**	**8**
Elective Theory	General Education			
	History			
	Human Behaviour & Environment			
	Technical System			
	Practice			
	Not Defined Course			
	Total Elective Theory			
	Total		**17.5**	**23**

		L-4, T-1	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 4102: Design Studio VII (Prerequisite Design Studio VI)	8	12
	Design Communication Studios	ARCH 4112: Landscape Design Studio	1.5	3
	Total Sessional		**9.5**	**15**
Core Theory	General Education			
	History		2	2
	Human Behaviour & Environment	ARCH 4141: Interior Design	2	2
		ARCH 4143: Housing		
	Technical System			
	Practice	ARCH 4161: Cost Estimation and Specification	2	2
	Not Defined Course			
	Total Core Theory		**6**	**6**
Elective Theory	General Education			
	History	ARCH 4131: Post Modern Architecture	2	2
		ARCH 4133: Contemporary Architecture		
	Human Behaviour & Environment			
	Technical System			
	Practice			
	Not Defined Course	ARCH 4171: Music and Film Appreciation		
	Total Elective Theory		**2**	**2**
	Total		**17.5**	**23**

		L-4, T-2	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 4202: Design Studio VIII (Prerequisite Design Studio VII)	8	12
	Design Communication Studios	ARCH 4212: Interior Design Studio	1.5	3
	Not Defined Course	ARCH 4272: Professional Training	1.5	3
	Total Sessional		**11**	**18**
Core Theory	General Education			
	History,			
	Human Behaviour & Environment			
	Technical System			
	Practice	HUM 4261: Project Management	2	2
	Not Defined Course			
	Total Core Theory		**2**	**2**
Elective Theory	General Education			
	History			
	Human Behaviour & Environment	ARCH 4241: Urban Design II		
		ARCH 4243: Advanced Planning		
		ARCH 4245: Rural Planning		
	Technical System		2	2
	Practice			
	Not Defined Course	ARCH 4271: Transportation and Mobility Design		
	Total Elective Theory		**2**	**2**
	Total		**15**	**22**

		L-5, T-1	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 5102: Design Studio IX (Prerequisite Design Studio VIII)	10	15
	Design Communication Studios			
	Not Defined Course	ARCH 5172: Seminar	1.5	3
	Total Sessional		**11.5**	**18**
Core Theory	General Education			
	History			
	Human Behaviour & Environment			
	Technical System			
	Practice			
	Not Defined Course	ARCH 5171: Survey and Research Methods	2	2
	Total Core Theory		**2**	**2**
Elective Theory	General Education	HUM 5121: Economics		
	History			
	Human Behaviour & Environment		2	2
	Technical System			
	Practice			
	Not Defined Course	HUM 5171: Accounting		
	Total Elective Theory		**2**	**2**
	Total		**15.5**	**22**

		L-5, T-2	Cr.	Cont hr / wk
Core Sessional	Design Studios	ARCH 5202: Design Studio X (Prerequisite Design Studio IX)	10	15
	Design Communication Studios			
	Total Sessional		**10**	**15**
Core Theory	General Education			
	History			
	Human Behaviour & Environment			
	Technical System			
	Practice	ARCH 5261: Professional Practice	2	2
	Not Defined Course			
	Total Core Theory		**2**	**2**
Elective Theory 1	General Education			
	History			
	Human Behaviour & Environment			
	Technical System	ARCH 5253: Building Safety Design		
	Practice		2	2
	Not Defined Course	ARCH 5279: Disaster and Post Disaster Responsive Architecture		
Elective Theory 2	General Education			
	History			
	Human Behaviour & Environment			
	Technical System	ARCH 5251: Heritage Conservation		
	Practice			
	Not Defined Course	ARCH 5273: Health Facilities Planning and Design		
		ARCH 5275: Industrial and Commercial Building Design	2	2
		ARCH 5277: Educational, Religious and Recreational Design		
		ARCH 5271: Architecture for Children and Differently-abled People		
	Total Core Theory		**4**	**4**
	Total		**16**	**21**

CHAPTER 5

5. DETAILED CURRICULUM OF UNDERGRADUATE COURSE

5.1 Design Studio

ARCH 1102 - Design Studio I

6.0 Credits. 9 Hrs/Wk

Course Details:

Design Studio I provides a conceptual framework for the student beginning the architecture curriculum with an exploration of fundamental design principles. This course is a fundamental inquiry into the nature of spatial composition. Line, plane, mass and volume will be investigated through a series of abstract exercises. Students will explore basic compositions with points, straight and curved lines and pure geometric shapes. This course employs a series of abstract exercises of two dimensional compositions using various media to study the basic design principles of order and balance, proportion. solid-void relationship, symmetry, movement, flexibility, texture, harmony, and shade and shadow. The final project will synthesize all of these elements.

ARCH 1202 - Design Studio II

6.0 Credits. 9 Hrs/Wk (Prereq. ARCH 1102)

Course Details:

This studio introduces students to a set of generative, representational, and 3D form-making techniques that will enable them to propose, explore, develop, and communicate an architectural proposition into three dimensional compositions. Students engage the design process through various 2-dimensional and 3-dimensional media. Working directly with representational and model making techniques, students gain experience in the conceptual, formal, spatial and material aspects of architecture. Through a series of small scale individual 3 dimensional design projects, students will become comfortable working in the fundamental idioms of the architectural discipline.

ARCH 2102 - Design Studio III

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 1202)

Course Details:

Design Studio III introduces students to architectural design projects. This course translates the conceptual framework into small and medium-scale architectural projects in a variety of contexts. This course emphasizes the fundamental role of site,

program, function, spatial arrangement and material as determinants of architectural projects scaled to address issues of dwelling. Provides instruction in architectural design and project development within design constraints including architectural program and site. Through the design problems, students will also engage in multiple modes of analytical processes that inform and inspire the study of mass, proportion, and tactility to add aesthetic value to the designs.

ARCH 2202 - Design Studio IV

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 2102)

Course Details:

This course expands upon Design Studio III (ARCH-2101), emphasizing the design of site, program, material, structure and technology as determinants of architectural projects scaled to address issues related to public buildings. Provides instruction in architectural design and project development with an emphasis on social, cultural, or civic programs. Builds on foundational design skills with more complex functions, constraints, contexts, climatic consideration and environmental performances. Integrates aspects of architectural theory, and building technology into the design process.

ARCH 3102 - Design Studio V

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 2202)

Course Details:

This course emphasizes the comprehensive nature of architectural design. One project of moderate program complexity on a site visit allows students to engage in many design issues and develop concepts to a higher level of solution. Emphasis is on the development of individual approaches to the design process through the investigation of specific architectural topics in the areas on site, program, structure and technology. Focuses upon the 'making of architecture and built form' as a tectonic, technical and materially driven endeavour. It is a design investigation that is rooted in a larger culture of materiality and the associated phenomena -- but a study of the language and production of built form in terms of structural soundness and aesthetic value as an integrated response to the conceptual proposition of the project. The studio will look to works of architecture where the material tectonic and its resultant technology or fabrication become instrumental to the realization of the ideas, in whatever form they may take. Explores the 'art of technology' -- suggesting a level of innovation and creative manipulation as part of the design process transforming built forms into a composition of beauty and poetry as well as environmental control.

ARCH 3202 - Design Studio VI

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 3102)

Course Details:

This studio class expands the comprehensive development of Design Studio V's (ARCH-3102) architectural design. Arch 3202 is an advanced design studio course which expands upon the knowledge and skills acquired in the core design curriculum in designing high rise buildings. Provides instruction in more advanced architectural design projects. Students develop integrated design skills as they negotiate the complex issues of program, site, and form in a specific cultural and environmental context. Focuses on how architectural concepts and ideas translate into vertical built structures and its system that transform the public sphere. Studio designed to prepare students for studies in the field. One project of high complexity on a challenging visit able site allows students to further develop comprehensive strategies and to carry concepts to a level of higher resolution than in the studio.

ARCH 4102 - Design Studio VII

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 3202)

Course Details:

This course introduces students to the knowledge and skills required to develop design proposals at an urban architectural scale. The course considers the local, national as well as international contexts. The local Urban Design Project will consider design proposals and supporting infrastructure that analyses and critiques the intellectual tradition of the city using the greater metropolitan area through drawing and both digital and physical modelling. Based on the acquired primary and secondary information of the case study area, interventions for urban design, conservation, revitalization, and redevelopment will be proposed. Studio work is integrated with field trips throughout the city.

ARCH 4202 Design Studio VIII

8.00 Credits. 12 Hrs/Wk (Prereq. ARCH 4102)

Course Details:

Design Studio VIII tackles the complexity of the urban condition through the design of housing and community architecture. From individual to collective, from spatial to infrastructural, from units to systems, housing not only confronts the multiple scales of design but also exposes the values and ideals of its society. The semester will be an opportunity to imagine the possible futures of the city, recognizing the role of architecture at the intersection of the many interdependent as well as contradictory forces at play, and the negotiations that must necessarily take place.

ARCH 5102 - Design Studio IX

10.00 Credits. 15 Hrs/Wk (Prereq. ARCH 4202)

Course Details:

This course completes the sequence of advanced option studios and presents the broad range of issues & concerns of architectural design in anticipation of the degree project year. Expanded development of individualized approaches to the design process refines the student's ability to work independently. Investigation into the architectural issues relative to site, program and technology prepares the student to define specific topics of investigation. Emphasis is on the research & design of an architectural proposal carried to the most advanced pre-professional level of conceptual, programmatic & technical inquiry & resolution at various scales of specific system oriented projects (i.e. hospital, industry, transportation hub etc) development.

ARCH 5202 - Design Studio X (Thesis)

10.00 Credits. 15 Hrs/Wk (Prereq. ARCH 5102)

Course Details:

Thesis is the capstone of the B. Arch. educational program. Thesis joins the goals of general education and cultural contexts with those of professional education and practice, informing architecture and interior architecture. The studio exercise includes an integrative project, synthesizing technical perspectives appropriate to a design-school graduate. Each student forms and develops a thesis and then frames a design project to test or explore that thesis. The studio includes Design exercises of realistic complexities emphasizing professional level of achievement. Formulation of Architectural programs for given projects. Preparation of design solution and development through the various phases.

5.2. Design Communication Studios

ARCH 1112 - Architectural Graphics I

3.00 Credits. 6 Hrs/ Wk

Course Details:

Techniques of mechanical and freehand drawings for architectural presentation. Lettering and graphic presentation symbols. Multi-view drawings for a building such as plan, elevation and section. Single-view drawings such as axonometric and isometric view. One-point perspective.

ARCH 1212 - Architectural Graphics II

3.00 Credits. 6 Hrs/ Wk

Course Details:

Mechanical and free hand architectural drawing. Single view drawing: two and three point perspectives. Shade and shadow and reflection in perspective. Presentation drawing in black and white, and colour.

ARCH 1114 - Computer Applications I

1.5 Credits. 3 Hrs/ Wk

Course Details:

Introduction to Computer-Aided Design software (i.e. AutoCAD) and necessary software for graphical presentation of architectural design (i.e. Illustrator, Photoshop, InDesign).

ARCH 1214 - Computer Applications II

1.5 Credits. 3 Hrs/ Wk

Course Details:

Introduction to 3D and parametric modelling software (i.e. Sketchup / Rhino + Grasshopper). Basic understanding of Building Information Modelling or BIM (i.e. Revit / ArchiCAD) along with 3D visualization and rendering software (i.e. Lumion / Enscape / Twinmotion)

ARCH 2114 - Computer Applications III

1.5 Credits. 3 Hrs/ Wk

Course Details:

Detailed learning of BIM software (i.e. Revit / ArchiCAD) and learning simulation software (i.e. Ladybug, Climate Studio, Karamba) for proper building and environmental analysis.

ARCH 2112 - Graphic Art & Sculpture

1.5 Credits. 3Hrs/ Wk

Course Details:

Basic techniques used in graphic design. Selection of drawing instruments, surface-s, typography. Graphic reproduction techniques and the pros and cons of the differ-

rent systems to achieve the most effective presentation. Sketching as an essential technique to record design ideas during conceptualization. Graphic design of posters, products, display, portfolio. Introduction to computer generated presentation.

ARCH 2212 Photography & Film

1.5 Credits. 3 Hrs/ Wk

Course Details:

This course is intended to foster a critical awareness of the significance of images in our culture and how they are produced and constructed through practical instruction, field trips, group discussions, and individual reviews. Student-initiated term projects are at the core of this exploration of the relationship of image to language and issues of interpretation and personal history. Architectural photography and filming, principle of composing photographs of building and interiors; communication through photography, application and exploration of various media of graphic reproduction. Besides, this course also offers practical instruction in digital imaging, fundamentals of camera operation, lighting, film exposure, development and printing. Course provides opportunity for continued exploration.

ARCH 3112 - Working Drawing I: Construction Drawing

1.5 Credits. 3 Hrs/ Wk

Course Details:

Design and drawings specifying materials and instructions for construction. Understanding construction process and techniques. The construction drawing will include preparation of working and detail drawings of all building components. Details of drainage, damp-proofing and insulation. Bathroom and kitchen layouts. Application of building codes and bylaws.

ARCH 3212 - Working Drawing II: Production Drawing

1.5 Credits. 3 Hrs/ Wk

Course Details:

Design and drawings specifying materials and instructions to manufacturers of building elements, components, fittings and fixtures which are industrially produced. Understanding manufacturing process to generate creative design. The production drawing will include designing with variety of materials and manufacturing processes of a range of building components like door, window, fitting and fixture of functional and decorative nature.

ARCH 4112 - Landscape Design Studio

1.5 Credits. 3 Hrs/ Wk

Course Details:

Analysis of landscape elements through sketches, drawings and reports on outdoor environment, Site analysis. Application of the principles and techniques of landscape design through design exercises of site planning and area development.

ARCH 4212 - Interior Design Studio

1.5 Credits. 3 Hrs/ Wk

Course Details:

Preparation of interior design drawings for different types of spaces such as office, studio, bank, restaurant, club and shop. Detailed specifications of finish materials for floor, ceiling and wall. Natural and artificial lighting and ventilation. Fixed and movable furniture, decorative element, upholstery, drapery, art work, interior plantation, fountain.

5.3. <u>General Education</u>

HUM 1121 - English

2.00 Credits. 2 Hrs/Wk

Course Details:

Effective and efficient reading, writing, listening and speaking skill. Phonetics, places and manners of articulation. Vocabulary, improvement techniques. Practical grammar for daily communication, sentence construction, common errors etc. Academic essays. Academic, commercial and institutional correspondences.

MATH 1121 - Mathematics

2.0 Credits. 2 Hrs/Wk

Course Details:

Calculus: Definition of limit, continuity and differentiability, successive and partial differentiation, maxima and minima, standard integrals, definite integrals, area under a plane curve in Cartesian co-ordinates.

Solid Geometry: System of coordinates, direction cosines, shortest distance between two given straight lines, equations of planes, standard equations of sphere and ellipsoid.

PHY 1221 - Physics

2.0 Credits. 2Hrs/Wk

Course Details:

Overview of different theories of Sound, Light and Heat. Effects of Sound, Light and Heat on building and building structures as well as buildings environments regarding user, climate, culture, building type, etc. Advantages and disadvantages of Sound, Light and Heat conditions of a building.

HUM 1221 - Sociology

2.00 Credits. 2 Hrs/Wk

Course Details:

Definition, nature and basic scope of sociology. Early civilization and social structure. Gender, kinship and descent, economics, politics, religion, survival of ethnic groups etc. Basic ideas on socialist movements. Role of government and politics on society in developing countries. Influence of 19th century industrial revolution, industrialization and current digital revolution on employment, family and social structure, culture urbanization and architecture. Influence of family, population, social structure, work, education, religion, culture, politics etc. on built forms

ARCH 1221 - Art History

2.0 Credits. 2 Hrs/ Wk

Course Details:

This course is a critical survey of art across the globe including the Art of Bangladesh with an introduction to the art of Ancient times, Middle ages, Renaissance, Modern and Contemporary period. Emphasis will be placed on the analysis of style, subject-matter, and function within an historical context in which it was produced, with attention to social, political, religious, and intellectual movements.

HUM 1223 - Anthropology

2.00 Credits. 2 Hrs/Wk

Course Details:

This course is a general introduction to the four fields of anthropology that looks at how anthropologists' study cultural and physical aspects of humankind. Methods anthropologists study. economic systems, population dynamics, kinship, political systems, religion, art, medicine, as well as globalization, power relations and ethics. This course covers cross-cultural ethnographic data including Africa, Meso-America, Australia, and Asia.

HUM 2121 - Logic and Philosophy

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction to Deductive Logic: Definition and scope of deductive logic; terms and predicable; proposition and opposition of propositions; inference and syllogism. Introduction to inductive Logic: Definition and scope of inductive logic; nature, characteristics and bases of scientific induction; methods of scientific induction; nature of hypothesis; inference and analogy. Introduction to Philosophy: Nature and scope of philosophy; relation of philosophy to other sciences, methods of philosophical inquiries, epistemology, metaphysics. Ideas of great philosophers.

HUM 2123 - Psychology & Behaviour

2.0 Credits. 2 Hrs/ Wk

Course Details:

Introduction to psychology: Nature and scope of psychology; maturation and development; biological bases of behaviour. Learning: Factors of learning; classical conditioning; instrumental conditioning; perceptual learning. Motivation and emotion: Nature of motive; fulfilment and frustration of motives; constructive and destructive effects of frustration; nature of emotional development; emotion and personality. Sensory processes and vision: auditory processes, eye and visual processes; perceptual organization and colour perception. Social influences on behaviour. Conflict and adjustment: Nature of conflict; problems of marital adjustment

HUM 5121 - Economics

2.00 Credits. 2 Hrs/Wk

Course Details:

Basic concepts of economics. Micro economics: supply and demand and their elasticity, price determination, indifferent curve, marginal analysis, market, production and production function, fixed and variable cost. Macroeconomics: investment, savings, national income analysis. Economic and fiscal policies and impact on development. Relation of economic policies, market situation and construction industries.

5.4. <u>History</u>

ARCH 1133 - Design Theory

2.00 Credits. 2 Hrs/Wk

Course Details:

Design Fundamentals: Motivation behind Designing; Design in Nature as a universal source of Inspiration. Emphasis, Continuity, Balance; Rhythm, Hierarchy, Repetition, Variety and Unity; Order in Architecture: Axis, Balance, Datum; Proportion and Scale; Dominance and Subordination, Colour: The Dynamics of Colour; Light and Shadow; Form, Space, Enclosure; Spatial Impact: Relaxation, Tension, Fright, Gaiety, Spiritual, Contemplation. Study with relevant Examples from composition, architecture and art.

ARCH 1131 - History of Architecture I

2.0 Credits. 2 Hrs/ Wk

Course Details:

The course is a critical survey of ancient settlements including Prehistoric structures across the globe with an introduction to the evolution of architecture alongside the culture of early civilizations. It will include critical analysis of early settlement and built form of Egypt, West Asia (Mesopotamia, Assyria, neo-Babylon and Persia), China, Pre-Columbian America, Greece (Aegean to Hellenistic times) and Rome. It will include study of Indus Valley Civilization and the early Aryan architecture of the Ganga basin, Vedic principles of planning. It will also emphasize the Inception and development of Buddhist architecture in the Indian subcontinent and overview of its developments in South East Asia, Japan, China and the Silk Route.

ARCH 1231 - History of Architecture II

2.0 Credits. 2 Hrs/ Wk

Course Details:

The course is a critical survey of Architecture that was developed due to the advent of Christianity and Islam. It will explore the inception of the Architecture with special characteristics during the Early Christian, Byzantine, Romanesque, Gothic, Renaissance, Baroque, Rococo period, etc and its development in Europe and rest of the world. It will also analyse the design principles of each type in reference to their key attributes. It will also explore the inception of the Architecture with special characteristics after the advent of Islam and its development in Middle East, Iran, Central Asia, Egypt, Europe and Africa till the modern era. It will also analyse the design principles in reference to their key attributes through selected examples.

ARCH 2131 - History of Architecture III

2.0 Credits. 2 Hrs/ Wk

Course Details:

The course is a critical survey of Architecture that was developed in Asia with a special focus on Indian Sub-continent, from the Gupta period to till the beginning of the Islamic period in the Sub continent. Inception and development of the religious structures with reference to Hindu and Buddhist planning principles and design elements; Development of regional styles and manifestations thereof; Evolution of temple complexes and temple towns; Overview of religious architecture in Burma, Cambodia, Indonesia, Nepal, Sri Lanka, Thailand, China, Japan and Korea.

ARCH 2231 - History of Architecture IV

2.0 Credits. 2 Hrs/ Wk

Course Details:

The course is a critical survey of Architecture that was developed in the Indian Sub-continent, from the Sultanate period to the colonial era (European) in the Sub continent. It will emphasize the advent of Islamic Architecture into Indian subcontinent and its impact on structural and construction systems; Influences of Islamic ideas on architecture in the Subcontinent during the Sultanate and Mughal period. It will also give an overview of the Islamic Architecture in Southeast Asia and China.

ARCH 3131 - History of Architecture V

2.0 Credits. 2 Hrs/ Wk

Course Details:

The course is a critical survey of Modern movements in Architecture across the globe with a special focus on Europe, America and Indian Subcontinent. The course will explore the impact of growing international trade, and industrialization on the architecture of Europe, America and Indian Subcontinent and preface the context of Modern movement in Architecture. It will allow critical evaluation of associated movements and trends in western Architecture and give an overview of the Modern Movement, International style etc. in Architecture with selected examples of master-architects of the period, across the globe. However, it will analyse western influences on the sub continental colonial architecture that includes early buildings of the Dutch, Portuguese and the English in various parts of Indian subcontinent, and Inception and growth of different cities. It will explore factors like introduction of Iron and Steel in construction sector and its impact on the inception and development of different type of buildings and structures like Iron bridges, Railway station,

Industries, etc. in response to the perceived needs of the British in Indian subcontinent. It will also give an overview of Modern Movement in South Asian Architecture.

ARCH 3231 - Architecture of Bengal

2.0 Credits. 2 Hrs/ Wk

Course Details:

Study of society, culture, architecture and urban settlements of Bengal through the ages: Mauryan, Gupta, Pala, Sena, Sultanate, Mughal and Colonial periods. It will also include the post-colonial influences and the emergence of modern and contemporary architecture in Bangladesh.

ARCH 4131 - Post Modern Architecture

2.0 Credits. 2 Hrs/ Wk

Course Details:

The goal of this course is to investigate with students' backgrounds on some of the pivotal events that have shaped our understanding and approach to architecture. Emphasis of discussion will be primarily on buildings and works of individual architects. Canonical architects, buildings and movements that have exerted significant influences on the development of architecture will be studied in detail. Recent developments in the fields of architecture around the world by the influence of new technology and changes in contemporary social vocabulary. Recent developments in the fields of Architecture of SAARC countries, Study of Architectural identity and regionalism in architecture of SAARC countries.

ARCH 4133 - Contemporary Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Modern style as a point of departure for new theories. Recent developments in the fields of architecture around the world, by the influence of new technology and changes in contemporary social vocabulary. Impact of globalization and open market system in architecture; Study of Architectural identity and regionalism in architecture; Contemporary Architecture of South Asian.

ARCH 1141 - Ecology and Environment

2.00 Credits. 2 Hrs/Wk

Course Details:

This foundational course offers an introductory exploration into the fundamental principles of environment and ecology, encompassing both basic concepts and contemporary challenges. students will delve into the core concepts of ecology and environmental science. Topics covered include the structure and function of ecosystems, biodiversity, species interactions, and population dynamics. It also explores contemporary environmental challenges, including pollution, climate change, and human impacts on ecosystems.

ARCH 1241 - Climate & Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Climate and weather. External and internal climatic condition of building and its behaviour and performance as a climatic modifier. Climate factors site climate, human comfort criteria and ranges. Principles of thermal design and natural ventilation. Thermal comfort and energy saving considerations for design. Global climate concern, climate change adaptation through design.

ARCH 2241 - Basic Planning

2.00 Credits. 2 Hrs/Wk

Course Details:

Early History of Human Settlements, Origin and evolution of settlements and cities. Society and City planning during Ancient, Classical, Medieval, Neo-classical period. Industrial revolution and changes in the character of cities. New thoughts and ideas in planning after the industrial revolution. The spatial structure of cities: Concentric zone theory, Sector theory, Multiple nuclei theory, Image of the city: Five points.

ARCH 2243 - Green and Sustainable Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Theories and ideas of green architecture and sustainable architecture. Relation between green and sustainable architecture. Means of green architecture, technologies, green living and design. Introduction. The use of the word Green and

Sustainability. How and why? History of Green Building. Green Architecture. Green Building: Basic idea of Technology. Why (Building) and How? Rating tools and Standard. What is Sustainable Design? Building an Environmental Ethic, Climate Related Issues, The Basic Principles of Passive Design, Sustainable Materials, Assessing Green Buildings, And Carbon Neutral Design.

ARCH 2245 - Design in The Tropics

2.00 Credits. 2 Hrs/Wk

Course Details:

Architectural response to the climatic characteristics of tropical region. Understanding of the problem and mechanism of air and moisture movement, surface condensation, rain penetration, solar radiation, temperature etc. Tools and techniques of moisture control and passive cooling. Understanding of alternative solutions and secondary implications of environmental control decisions.

ARCH 3141 - Spaces & Forms in Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Critical appreciation of Spaces and Forms in Architecture and Urban design; Understanding well-articulated forms and spaces through worldwide built examples, Examples from historical monuments to contemporary icons of residential, educational, recreational, specialized office, civic facilities and etc.

ARCH 3143 - Architecture in Extreme Environments

2.00 Credits. 2 Hrs/Wk

Course Details:

Building design in hostile and extreme environment like desert, under water (sea bed), volcano, arctic zone, mountains and other planet (Moon, Mars). Architectural Solution for disaster management after floods, Tsunamis, cyclones and building at coastal areas.

ARCH 3241 - Urban Design I

2.00 Credits. 2 Hrs/Wk

Course Details:

This course enables a critical exploration into the relationship between urban space, people, and society. Basic concepts, aims, objectives and scope of urban design. Introducing to the historical development of cities and civic spaces. Highlighting the social, political, cultural, environmental, and economic forces that have shaped the urban fabric, urban experiences and the plans of the city. Theories and dimensions of urban design, image of the city, responsive environment; guideline of urban design process; elements of urban design, streetscape, open space, plaza, green network etc.

ARCH 3243 - Landscape Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Principles and elements of landscape design. Theory and models of design process. Historical references to landscape design practice and its association with art, architecture and urbanism. Biosphere and eco- system. Ecological design and sustainability. Simple practical elements, outdoor space, outdoor activities, circulation and linkage, vegetation and gardening, utility services and maintenance etc.

ARCH 4141 - Interior Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Purpose of interior space and its relation with users and environment. Interior design principles for different types of spaces and elements such as colour, Lighting, furniture, upholstery, floor finish, plantation, decors, non-structural materials like false ceiling, wall panels etc. Study of precedents of interior environments, furniture, interior design style, use of day-lighting and artificial lighting and colour schemes.

ARCH 4143 - Housing

2.00 Credits. 2 Hrs/Wk

Course Details:

Housing as a process. Role of housing in development. Housing problems in developing countries. Housing design and aspects of sustainability, density, neighbourhood environment etc. Housing in the context of Bangladesh, major policies, reforms, legislation, movements, and comparison between traditional and

contemporary housing. Mass housing and problems particularly for lower and middle income people. Public housing, supply, demand, beneficiaries, maintenance etc. housing in the private sector, demand, supply, affordability, beneficiaries etc. and overview of informal settlements.

ARCH 4241 - Urban Design II

2.00 Credits. 2 Hrs/Wk

Course Details:

This course intends to facilitate the advanced topics of the urban environment through the study of theory and critique of contemporary urban design approaches. Advance study of urban morphology including urban form, patterns and typologies. Concepts of public space design and planning, place making, process of co-creation. Introducing to the issues of sustainability and equity; relationship between urban design and social justice, strategies for inclusive city design. Local and global examples will be studied with focus on graphic analysis of social, performative, and experiential dimensions of urban design.

ARCH 4243 - Advanced Planning

2.00 Credits. 2 Hrs/Wk

Course Details:

Theories of Urban Development i.e. political economic, spatial and socio-spatial aspects. Methods & Techniques of Urban analysis, Relationship between land use development and the overall urban development process and the role of physical planning as a tool for achieving desired objectives. Density, planning related terminologies, methods and techniques of urban analysis for planning, Introduction to the social and technical aspects of Urban Systems; Analysis of relationship between politics and planning; urban governance, principles and practices of development regulations, project programming, implementation and management. The Planning Process, Planning Approaches, Levels and Sectors of Developmental Planning, Development Plan System, Structure Plan, Detail Area Plan, Different Strategies and Techniques of Detail Area Planning and various plans of Dhaka and other case studies.

ARCH 4245 Rural Planning

2.00 Credits. 2 Hrs/Wk

Course Details:

Formulation of rural development projects: concepts, principles and techniques. Institutions for rural development. The process of planning. Policies and strategies of

rural development. Origin and development of social anthropology: ethnography and ethnology. Tools of anthropological research and their applications in architectural studies and analysis. Mutual interaction of people and their built environment. Impact of social stratification. Pluralism in complex societies.

5.6 Technical System

CE 2151 - Structure I

2.0 Credits. 2 Hrs/ Wk

Course Details:

Force system; resultants and Components; coplanar Con-current forces; moments of coplanar forces; centroid; moment of Inertia of areas; Fundamental concepts of stress and strain; mechanical properties of materials; Steel, Timber and Concrete.

CE 2251 - Structure II

2.0 Credits. 2 Hrs/ Wk

Course Details:

Stresses and strains in members subjected to tension, compression, shear and temperature changes; Shear force and bending moment diagrams for statically determinate beams and frames; Flexural and shearing stresses in beams; Deflection in statically determinate beams by Area-Moment method; Truss Analysis.

CE 3151 - Structure III

2.0 Credits. 2 Hrs/ Wk

Course Details:

Fundamentals of reinforced concrete design; Concrete and its effective preparation; Concepts of WSD and USD methods; Analysis and design of reinforced beams by USD; Design of slabs, one way and two ways; reinforced concrete columns and buckling; Introduction to Shear-walls, earthquake resistant structural systems.

CE 3251 - Structure IV

2.0 Credits. 2 Hrs/ Wk

Course Details:

Approximate analysis of multi-storeyed buildings for gravity and lateral loads. Simple analysis of Truss Sections; analysis and preliminary design of steel beams and columns;

Introduction to various structural forms and systems; Types of Foundations; Concepts of bearing capacity and settlement and Pilling.

ARCH 2151 - Building & Finish Materials

2.00 Credits. 2 Hrs/Wk

Course Details:

Knowledge of different types of building and finish materials. Preparation, manufacture, properties, uses and applications of clay and brick, concrete, timber, glass, tile, paint, terrazzo, plaster, etc. Understanding them on regarding building with climatic and environmental value.

ARCH 2153 - Visual and Sonic Environment

2.00 Credits. 2 Hrs/Wk

Course Details:

Lighting design: visual environment, physical nature of the lighting environment, human responses to environmental vision factors. Daylight in buildings, requirements and prediction tools, design for daylight in the tropic. Light as an architectural element. Tools and techniques of supplementary and artificial lighting.

Acoustic design: basic concepts and problems related to architectural acoustics. Properties of sound perception, generation and propagation; behavior of sound in enclosed spaces. Acoustical measurements and calculations. Acoustic design of spaces for speech, music and multipurpose use. Noise, noise control and noise control design.

ARCH 2252 - Building Material and Construction

1.5 Credits. 3 Hrs/ Wk

Course Details:

Normal consistency, initial setting time, and fineness test of cement, compressive strengths of cement mortar; gradation, specific gravity, absorption capacity and unit weight of fine and coarse aggregates; design and testing of a concrete mix and testing of bricks for compressive strength. Tension, direct shear and impact tests of mild steel specimen; slender column test; static bending test; hardness test of metals.

ARCH 2251 - Building Services I: Mechanical and Electrical

2.0 Credits. 2 Hrs/ Wk

Course Details:

Electrical units and standards, electrical networks and circuit theorems. Alternating current RLC series and parallel circuits. Introduction to electrical wiring for residential, commercial and industrial installations and buildings. Illumination and different types of lighting. Review of basic concepts and definitions. Application of air-conditioning. Psychometric. Cooling load calculation, air-conditioning systems, air handling and distribution, design of ducts. Air conditioning equipment. Fire hazards, firefighting methods. Vertical transportation: types of elevators, determination of size and quantity of elevators. Incoming and outgoing traffic handling. Escalators, moving ramps.

EWCE 3151 - Building Services II: Plumbing

2.0 Credits. 2 Hrs/ Wk

Course Details:

Introduction to plumbing, water requirements, water sources; water supply and distribution in buildings. Sewage and sewer system, building plumbing of multi- storied buildings; rural sanitation programs in Bangladesh.

ARCH 3151 - Construction Method & Details

2.0 Credits. 2 Hrs/ Wk

Course Details:

Types of structures and their methods and techniques of construction. Foundation, floor, wall and roof systems. Use of different types of modules. Moisture and thermal protection of floor, wall and roof. Doors and windows. Details of kitchen, bathroom and stair. Elevators and escalators.

ARCH 3153 - Advanced Construction & Building Technology

2.00 Credits. 2 Hrs/Wk

Course Details:

Basic idea of Different Advanced (Automated and prefabricated) Construction Systems used to building construction in developed countries. On site factory, Logistic, Automation & Robotics in construction. Definitions, types, preparation, manufacture, properties, uses, and applications of stone, metal, reconstructed

wood, plastic and rubber. Modular coordination. Pre-fabrication Techniques of building components. Construction techniques of special forms: dome, vault, shell, space frame and metal structure. Techniques of construction with indigenous materials.

ARCH 3155 - Tall Buildings and Composite Structure

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction to the high rise structure, Functional requirements of high-rise building and the technologies and processes used in high-rise building construction, Foundation systems; typical vertical and horizontal loads on high-rise buildings, structural systems including structural steel, Composite and reinforced concrete construction; enclosure systems; material handling and construction methods including selection of mobile and tower cranes, and lift systems. Contributions of high-rise building features, processes and technologies to the practice of sustainable construction and opportunities for high-rise building practice to align with UN Sustainability Development Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable

ARCH 3157 - Modular Architecture, Production Line and Customization

2.00 Credits. 2 Hrs/Wk

Course Details:

Modular product design and construction, production line design, customization and mass customization, prefabricated modules, transportation, quality, modular production in different industries.

ARCH 3159 - Ambient Technology and Building Environment

2.00 Credits. 2 Hrs/Wk

Course Details:

Understanding of different ambient technologies that are used in building environment throughout the world. Advantages and disadvantages of ambient technology. Using different sensor system throughout building environment due to user need. Automated alarming system, voice control, artificial intelligence of the building.

ARCH 5251 - Heritage Conservation

2.0 Credits. 2 Hrs/ Wk

Course Details:

Introduction to Heritage and its Branches; Value and value defining attributes; Authenticity and Integrity; History and Theories of Conservation; Degrees of Intervention; Architectural Documentation; Diagnosis and Repair; Heritage Management; World Heritage; Introduction to International Charters and guidelines; Climate Change and Heritage; Heritage Impact Assessments (HIAs), Cultural economics, Heritage Tourism; Heritage Conservation in Bangladesh; Case studies; etc.

ARCH 5253 - Building Safety Design

2.0 Credits. 2 Hrs/ Wk

Course Details:

Advancement of fire-fighting, fire-related legislation and code, fire pattern, capacity and occupant load, fire load, fire resistance criteria, compartmentation, service core, fireman's lift, fire –fighting lift, means of escape, assembly point, refuge cell, fire classification, fire extinguishing agents and tools, etc. Advancement of earthquake resilient building and building design, design considerations, technologies, process, etc.

5.7. Practice

ARCH 4161 - Cost Estimation & Specification

2.0 Credits. 2 Hrs/ Wk

Course Details:

Preparation of tender documents, rules, regulations and obligations. Determination of cost of construction. Cost analysis of the various items of construction. Preparation of schedules. Control of cost. Case studies. Written details answering what, where, when, how in relation to drawn details for building construction. Specifying materials and methods of installation and precautions.

HUM 4261 - Project Management

2.00 Credits. 2 Hrs/Wk

Course Details:

Management: its meaning, scope and objectives. Functions and nature of management. Planning: objectives and types of plans, limits of planning, logistics

and strategy. Organizing: grouping of activities, delegation of authority and decentralization. Organization structure- line, staff and functional organization, committee, span of supervision. Direction: motivation and co-ordination. Controlling: steps in control, requirements.

ARCH 5261 - Professional Practice

2.0 Credits. 2 Hrs/ Wk

Course Details:

The role of the architect in the building industry and process; duties, responsibilities and obligations of the architect; general conditions of contract; owner –architect relationship; architectural services; the architect and the public; legal responsibilities of the architect; the architect's office; administration of construction; the architect and his consultants; official correspondence; professional organizations: local and international.

5.8. Not Defined Courses

ARCH 2271 - Vernacular Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

This course intends to explore the architectural design style and concept that reflects the geographic and cultural context of the site and surroundings, focusing on local construction with traditional and regional materials with focus on the examples of South East Asia. The layout of homestead in the various regions of Bengal and associated indigenous construction techniques and materials.

ARCH 3171 - Bio-Design and Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Integration of design with biological systems (plant, animal, etc.), often to achieve better ecological performance. In contrast to design that mimics nature or draws on biology for inspiration, Bio-Design incorporates living organisms into design as building blocks, material sources, energy generators, digital storage systems and air purifiers, just to name a few possibilities.

ARCH 4171 - Music & Film Appreciation

2.0 Credits. 2 Hrs/ Wk

Course Details:

Musical forms. Ingredients of music- sound and time. Indian and western music-melody and harmony. Foundation of sub continental music- ragas system: Dhrupad, Kheyal, Tappaaand Thumri. Styles and presentation of vocal and instrumental music. The modern period of Bengali music- the five great composers: Rabindranath, Nazrul, Atul Prashad, D. L. Roy and RajaniKanta. Introduction to western classical music and works of some European masters- Bach, Beethoven, Handel, Mozart, Tchaikovsky. Invention of film and movie, film in different ages, etc.

ARCH 4271 - Transportation and Mobility Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Rural, urban and sub-urban, regional level transportation planning, underground, over ground and sky transportation planning. Transportation hub, linkage, node, etc. planning. Mobility; single to multipurpose mobility design, mobility for children, disable and aging society, high-tech mobility, etc.

ARCH 4272 - Professional Training

1.5 Credits. 8 weeks of Compulsory training (320 working hours)

Prereq. Level- 3 sessional courses

Course Details:

Credited compulsory training. The student is required to work in an architectural firm/organization for a minimum of eight weeks to gain practical experience. This training will include working drawings and site supervision.

HUM 5171 - Accounting

2.00 Credits. 2 Hrs/Wk

Course Details:

Principles of Accounting; Accounts transactions, Accounting procedures, financial statements, cost accounting, direct and indirect costs; Overhead Costing; Break even analysis; Construction accounting; Budgeting and budgetary control; Capital budgeting.

ARCH 5171 - Survey and Research Methods

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction to surveying- principles and techniques of physical surveys. Chain survey, traverse survey, plane table survey, levels and levelling, contours and layout surveys. Introduction to research, different types of research approaches, positivism, phenomenalism, research design, hypothesis, variables and indicators. Introduction to data collection methods such as interview, questionnaire survey, observation etc. Theoretical study of sampling techniques, random and non-random sampling and their implication. Understanding of interview techniques, formal and informal interviews. Understanding of questionnaire survey techniques, different types of questionnaire survey, and dealing with non-response. Introduction to quantitative analysis and simple statistical analysis methods such as mean, median, standard deviation, linear regression etc.

ARCH 5172 - Seminar

1.5 Credits. 3 Hrs/ Wk

Course Details:

Overview of current development in research related to art and architecture. Preparation of research papers including literature search, writing skills and referencing. Verbal and written presentation skills and techniques.

ARCH 5271 - Architecture for Children and Differently able People

2.00 Credits. 2 Hrs/Wk

Course Details:

Children psychology and their environment; both interior and exterior. How to design spaces for children of different age groups. Ergonomics, security education and recreation of children. Space design for Differently able and autistic people. Ramp, walkway, lift way, ADL (Activities of Daily Living) spaces for Differently able persons.

ARCH 5273 - Health Facilities Planning & Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Approaches to health facilities planning and design. Philosophy, policies and processes within comparative and historical perspective. Fundamentals of programming, planning and design of health care facilities.

ARCH 5275 - Industrial & Commercial Building Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Historical development and classification of industrial buildings; site development and master planning; environmental impact assessment; working conditions; criteria for overall design; machinery layout; environmental control; services; fire protection; security and safety measures; signs and symbols; legislation and codes. Case studies. Introduction to commercial building as occupancy and building type. Structural system and space articulation. Service, maintenance and fire protection standards. Natural and mechanized ventilation and lighting. Safety and security. Design criteria for commercial buildings. Case studies.

ARCH 5277 - Educational, Religious & Recreational Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Historical development of educational facilities. Elements of education and classification of educational institutions. Socio economic, cultural and environmental aspects influencing educational facilities design. Components of institutions: grouping and organization of spaces. Design criteria: forms, modifiers and standards. Furniture design. Case studies.

ARCH 5279 Disaster & Post Disaster Responsive Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Disaster managements through architecture like: building, temporary shelter, temporary bridge, tree house, floating house, boat-house for flood effected area, etc. Modular and temporary building product design for after disaster effects.

5.9. Course Bank

ARCH 0000 - Community Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Understanding community dynamics: social networks and relationships, identifying community needs and aspirations; Community engagement and participation: participatory design process, methods for engaging with communities, tools, and techniques for involving stakeholders; Social equity in design: equity, diversity, and inclusion in architecture, designing for marginalized communities; Role of architecture in social cohesion, architecture as a tool for fostering social interactions, designing inclusive community and public spaces; Architectural responses to humanitarian crises; Case studies of successful community based architectural projects.

ARCH 0000 - Architectural Monument and Heritage

2.00 Credits. 2 Hrs/Wk

Course Details:

Study of different world famous and local Monuments and Heritage regarding time, concept, society, culture, aesthetic, belief, etc. Category of Monuments, scale and proportion. Potentials of Historical monuments to create images of cities, Behavior to heritage and their conservation.

Arch 0000 - Dynamic Architecture

2.00 Credits. 2 Hrs/Wk

Course Details:

Architecture to Engineering. Dynamic practice of architecture throughout the world in modern times. Moving towers by Dr. David Fisher. Building with AI (Artificial Intelligence), buildings responding different natural forces like air, rain, sun path orientation, etc. Modern theories of designing Dynamic Building.

Arch 0000 - Medicare Product Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Knowledge of designing different Medicare products, ADL (Activities of Daily Living) products like Medicare Bath system, Personal hygiene, massage unit, Medicare base

home furniture, etc. Medicated Environment space of the building (both interior and exterior).

Arch 0000 - Fashion Design

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction of Textile and Lather Technology regarding fashion design. Design of various fabrics in relation to climate and environmental factors. Color and texture schemes. Quality judgment, dress design idea.

Arch 0000 - Seminar on Special Problem

2.00 Credits. 2 Hrs/Wk

Course Details:

Seminar on special problem; problem selection, analysis, data collection, questionnaires, survey, literature, writing and presentation.

Arch 0000 - Book Keeping

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction to book keeping, Theories, book management, documentation, referencing, coding, leveling, etc.

Arch 0000 - Marketing

2.00 Credits. 2 Hrs/Wk

Course Details:

Introduction to marketing, theories, marketing policy and policy making, goal, process, strategy, etc.

Arch 0000 - Computer Application IV

1.5 Credits. 3 Hrs/Wk

Course Details:

Introduction to special software related to architectural education and practice i.e. BIM, animation, advanced Ravit, advanced AutoCAD, etc.

Arch 0000 - Artificial Intelligence in Architecture

1.5 Credits. 3 Hrs/Wk

Course Details:

This course provides an in-depth exploration of how artificial intelligence (AI) is transforming the field of architecture. From design and modeling to construction and sustainability, AI technologies are revolutionizing traditional practices and pushing the boundaries of architectural innovation. Students will learn about the latest AI techniques, tools, and applications relevant to architecture, and gain practical skills to leverage AI in their own architectural projects.

Arch 0000 - Workshop on Special Topic

1.5 Credits. 3 Hrs/Wk

Course Details:

Workshop organized on special topic or problem.