

# THE ORDINANCES FOR UNDERGRADUATE PROGRAMMES

BTech, BArch and  
Dual Degree BTech – MTech Programmes

FROM 2019 ADMISSION ONWARDS



July 2019

# Contents

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1	Introductory	1
2	Power of the Senate	2
3	Programmes	3
4	Academic Calendar	4
5	Admissions	4
6	Registration	5
7	Leave of Absence	5
8	Duration and Academic Requirements	5
9	Teaching and Evaluation	6
10	Conduct and Discipline	6
11	Requirements for Graduation and Grant of Degrees	7
12	Scholarships, Prizes, Medals and Financial Assistance	7
13	Payment of Fees and Other Dues	7
14	Regulation: Introduction	9
15	The Undergraduate Programmes	12
16	Admission	13
17	Additional Scope for Already Admitted Students	14
18	Internship	15
19	Academic Session	16
20	Curriculum	18
21	Registration for Courses	20
22	Teaching	22
23	Evaluation System	23
24	Graduation Requirements	27
25	Scholarships, Medals, Awards and Prizes	29
26	End Note	30

The provisions contained in these ordinances govern the policies and procedures on the admission of students, imparting instructions of courses, conducting of examinations and evaluation and certification of student's performance.

These ordinances, on approval by the Board of Governors, shall be applicable to the students taking admission in 2019 and onwards.

For students admitted in earlier years, these ordinances are also applicable wherever eligible. But such applications shall be dealt with appropriately and carefully, so as to ensure that these students are not subjected to any unfair situation whatsoever. In case of any conflict with the present regulations and earlier regulations, rules those are in favour of these students shall be applicable.

# The Ordinances for Undergraduate Programmes

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## 1 Introductory

In exercise of the powers conferred by section 28 of the National Institutes of Technology, Science Education and Research Act, 2007 (29 of 2007), the Senate of the Indian Institute of Engineering Science and Technology, Shibpur, hereby frames the following Ordinances for the conduct and regulation of undergraduate programmes of the Institute and for matters connected therewith.

### 1.1 Short Title and Commencement

- 1) These Ordinances may be called the Ordinances for Undergraduate Programmes, 2019.
- 2) These shall come into force on such date as the Chairman, Senate, may appoint and different dates may be appointed for different provisions of these Ordinances and for different programmes.

### 1.2 Application

These Ordinances shall apply to the following programmes of the Institute:

- 1) Bachelor of Technology programme offered in the following branches of study –
  - a) Aerospace Engineering,
  - b) Civil Engineering,
  - c) Computer Science and Technology,
  - d) Electrical Engineering,
  - e) Electronics and Telecommunication Engineering,
  - f) Information Technology,
  - g) Mechanical Engineering,
  - h) Metallurgy and Materials Engineering, and
  - i) Mining Engineering.
- 2) Bachelor of Architecture programme;
- 3) Dual (BTech-MTech) Degree Programme; and
- 4) Any other programme to which the Senate, through a resolution, decides to apply these Ordinances.

### 1.3 Definitions

- 1) In these Ordinances, unless the context otherwise requires: -

**Academic Session** means academic session of the Institute Referred to in section 8 of these Ordinances;

**Act** means the National Institutes of Technology, Science Education and Research Act, 2007;

**Authorities, Officers and Faculty Members**, in relation to the Institute, respectively mean, the authorities, officers and faculty members of the Institute;

**Board** means the Board of Governors of the Institute;

**Central Government** means the Government of India;

**Department or School or Centre** means an Academic Department or School or Centre, as the case may be, established to impart instruction or for carrying out or facilitating the academic and research activities relating to any particular area or discipline or areas of inter-disciplinary nature;

**Director** means the Director of the Institute referred to under Statute 17 of the Statutes;

**Head or Chair** in relation to a Department or School or Centre, as the Case may be, means the Head thereof;

**Institute** means the Indian Institute of Engineering Science and Technology, Shibpur;

**Notification** means any notification published under the authority of the Senate and includes all such notifications published under these Ordinances;

**Ordinances** means These Ordinances, i.e., The Ordinances for Undergraduate Programmes, 2019

**Programme** means an academic programme of the Institute;

**Regulations** and **bye-laws** means respectively regulations and byelaws made under these Ordinances.

**Rules** means the rules made under the Act;

**Senate** means the Senate of the Institute referred to under Statute 7 of the Statutes;

**Statutes** means the Statutes of the Indian Institute of Engineering Science and Technology, Shibpur, 2017 and shall include all the amendments made thereto;

**Student** means a student of the Institute pursuing any of the programmes to which these Ordinances apply.

- 2) Unless repugnant to the context, all other terms used in these Ordinances shall have the same meaning as defined in the Act and/ or Statutes.

## 1.4 Abbreviations and Acronyms

In these Ordinances the following abbreviations and acronyms have been used to mean the expression mentioned against each of them:

- a) BArch Bachelor of Architecture
- b) BoAc Board of Academics
- c) BTech Bachelor of Technology
- d) DD Dual Degree (BTech – MTech)
- e) DUGC Department Undergraduate Committee
- f) MTech Master of Technology
- g) SUGC Senate Undergraduate Committee
- h) UG Undergraduate
- i) MHRD Ministry of Human Resources Development

## 2 Power of the Senate

### 2.1 To Take Measures for Conduct and Regulation of the UG Programmes

- 1) Subject to the provisions of these Ordinances, the Senate shall have the power to take all such measures as it deems necessary or expedient for the purpose of conducting and regulating the undergraduate programmes of the Institute.

- 2) The Senate may, if it considers it necessary or expedient so to do for the purpose of these Ordinances, by a resolution adopted in a meeting of the Senate, constitute a standing committee or committees by such name or names as may be specified in the resolution, for the purpose of exercising and performing such of the powers and functions (including the power to issue directions) of the Senate under these Ordinances and for taking measures with respect to such of the matters referred to in sub-section (2) as may be mentioned in the resolution and subject to the supervision and control of the Senate and the provisions of such resolution, such standing-committee or standing-committees may exercise the powers or perform the functions or take the measures so mentioned in the resolution as if such standing-committee or standing-committees had been empowered by these Ordinances to exercise those powers or perform those functions or take such measures.

## **2.2 To Make Regulations**

- 1) For conduct and Regulations of the programmes mentioned in sub-section (1.2) of these Ordinances, the Senate may make regulations consistent with these Ordinances for all or any of the following purposes, namely -
  - a) the admission of the students to any or all of the programmes mentioned in sub-section (1.2) of these Ordinances;
  - b) the courses of study to be laid down for the programmes mentioned in sub-section (1.2) of these Ordinances;
  - c) the conditions under which students shall be admitted to the degree programmes mentioned in sub-section (1.2) of these Ordinances and to the examinations of the Institute, and shall be eligible for degrees and diplomas;
  - d) the conditions of award of the fellowships, scholarships, exhibitions, medals and prizes;
  - e) the conditions and mode of appointment and duties of examining bodies, examiners and moderators;
  - f) the conduct of examinations;
  - g) the maintenance of discipline among the students of the Institute; and
  - h) any other matter which by the Act or the Statutes is to be or may be provided for by the Ordinances.

## **3 Programmes**

- 1) The Institute shall provide Programmes leading to Bachelor's Degree in different branches of Engineering, Technology, and in Architecture, and in such other branches of study as may be instituted by the Board on its own initiative or on the recommendations of the Senate;
- 2) The Institute may introduce new programmes.
  - a) In every such case, the Senate, after examining each proposal for introduction of a new course from the point of view of its viability and desirability in the light of broad goals as set forth in the Act and the Statutes, shall make suitable recommendations to the Board.
  - b) The recommendations of the Senate on each proposal for introduction of a new course shall be considered by the Board for possible introduction of the course.
- 3) For every programme, whether existing or new –
  - a) The minimum admission standards, admission procedure and the duration of each course, shall be approved by the Senate.

- b) The curriculum of each course, required for its successful completion, shall require prior approval of the Senate. Any change in the approved curriculum of any existing Programme shall also require prior approval of the Senate.
- 4) The Senate shall approve the format of each Degree to be awarded to a student after successful completion of the Programme. Any revision in the format of a Degree shall also require approval of the Senate.
- 5) The Institute may, also, from time to time provide short-term and part-time courses in subjects of scientific, technological and professional interest.

## **4 Academic Calendar**

- 1) The Academic Session shall normally commence in the middle of July every year. Each Academic Session shall consist of two regular semesters and a Summer-Term. Each regular semester shall normally consist of about fifteen working weeks including two weeks of examination period. The Summer-Term shall consist of about eight working weeks including the examination period.
- 2) The dates for the important academic events scheduled during the Academic Session shall be specified in the Academic Calendar. In particular, the dates for the following events shall be specified: Orientation, Registration, Late Registration, Commencement of Classes, Examinations, Supplementary Examinations, Submission, Conversion and Authentication of Marks/Grades, and Vacations.
- 3) The Academic Calendar, or any change therein during the session, shall require prior approval of the Senate.

## **5 Admissions**

- 1) Admission to the Institute shall be open to students, irrespective of sex, race, creed, caste or class, provided they satisfy the minimum educational and other requirements as prescribed in the regulations.
- 2) The Senate shall appoint each year Admission Committees for admission of students to the undergraduate and postgraduate courses.
- 3) Admission to the undergraduate courses shall ordinarily be made at the beginning of the academic session.
- 4) The number of admissions (seats) that can be made to any approved programme of the Institute shall be as decided by the Senate from time to time. Reservation of seats for various reserved categories shall be as prescribed by the MHRD.
- 5) The Admission of Indian Nationals to the BTech programmes shall be made once a year on the basis of the Joint Entrance Examination (JEE - Main). For foreign students, a few admissions will be offered under the Cultural Exchange Fellowship Programme of the Government of India and through DASA.
- 6) Students admitted to the B. Tech. courses shall normally pursue the courses initially allocated to them at the time of admission. However, the Senate may permit a limited number of students to change their courses as per the "Change of Branch Rules" laid down by the Senate.
- 7) Some students of the BTech programme may opt for a Dual Degree programme or include minors in the existing programme as per rules and procedures laid down by the Senate.
- 8) Every student, admitted provisionally or otherwise to any course of the Institute, shall submit copies of the qualifying degree / provisional certificate and such other documents as prescribed by the Senate. These documents must be submitted by the prescribed date. The admission, provisional or otherwise,

of any student who either does not submit the required documents by the stipulated date or fails to meet any other stipulated requirement for admission can be cancelled by the Senate.

- 9) The admission of any student may also be cancelled by the Senate, at any later time, if it is found that the student had supplied some false information or suppressed some relevant information while seeking admission.
- 10) The Chairman of the Senate may admit students for short-term and part-time courses as may be offered from time to time on the recommendation of the Committees set up to organize such courses.

## **6 Registration**

- 1) The Senate shall lay down norms for registration of students.
  - a) Before the commencement of each semester, every student, unless otherwise exempted by the Senate, shall register for the prescribed courses to be pursued during that semester on the registration date as specified in the Academic Calendar. The registration for Summer-Term shall be subject to the conditions that may be laid down by the Senate.
  - b) Payment of prescribed semester / summer-term fees, and all other dues outstanding against the name of the student to the Institute shall ordinarily be a pre-condition for registration.
  - c) For bonafide reasons, students may be permitted to register late in a semester/summer-term on the date so prescribed in the Academic Calendar on payment of prescribed late registration fee. The Senate shall lay down the conditions and procedure for such late registration. Any other exceptional case of registration requires approval of the Senate.
  - d) The registration of any student may be cancelled or changed during the semester/summer-term, partly or wholly, according to the norms laid down by the Senate.
  - e) A letter grade shall be awarded in a course to a student only if the student is duly registered in the course at the time of the award of the letter grade.

## **7 Leave of Absence**

- 1) Absence during the semester shall be discouraged for all registered students. However, for bonafide reasons, a student may be granted leave of absence as per provisions made by the Senate for such absence.
- 2) Undergraduate students shall be entitled to avail the vacations as provided in the Academic Calendar. In addition, the Undergraduate students may be allowed leave of absence during a semester, as per rules and procedures laid down by the Senate.
- 3) Without prejudice to the provision made for leave of absence in the Ordinances, unauthorized absence (i.e., absence without due permission) for a period of four or more weeks at a stretch, during a semester, shall result in automatic cancellation of the registration of students from the course(s) in that semester.
- 4) Students are expected to complete their Course of Study without any break. However, for bonafide reasons, Senate may grant leave of absence from the Course of Study. But such absence(s) shall ordinarily not exceed two semesters with or without break.

## **8 Duration and Academic Requirements**

- 1) The Senate shall prescribe the minimum duration for all approved Programmes. The Senate shall also prescribe the maximum duration within which each Programme must be completed.
- 2) All approved Degree courses are credits based. The Senate shall prescribe the minimum credits requirements through coursework and/or project work.



- 3) The Senate shall prescribe the structure of courses to be successfully completed in all Bachelor's Degree and Dual Degree courses.

## **9 Teaching and Evaluation**

- 1) The medium of instruction, examination and evaluation shall be the English Language.
- 2) Each course, along with its credits, shall require approval of the Senate. Only approved courses can be offered during any semester / summer-term.
- 3) The list of all courses to be offered by a department, during any semester/summer-term, shall be finalized, before the beginning of the semester/summer-term, by the concerned Head of the Department, taking into consideration all the departmental requirements and shall be approved by the Senate.
- 4) The Teachers and Instructors for all the courses to be offered by a Department, during any semester/summer-term shall be assigned by the concerned Head of Department.
- 5) Students registered in courses shall be continuously evaluated through examinations, quizzes, class-tests, viva, project, presentation, assignment etc.
- 6) For the regular full semester courses, there shall normally be one Mid-Semester Examination and one End-Semester Examination.
- 7) Students who fail to appear in any End-Semester examination, due to bonafide reasons, may be permitted to appear in the Supplementary Examination as per the procedures laid down by the Senate.
- 8) Students who fail to appear in any Mid-Semester examination, due to bonafide reasons, may be permitted to appear in make-up Examination as per the decision of the teacher of the concerned course.
- 9) Each student, registered for a course, shall be awarded a letter grade. The grade awarded to a student depends upon his/her performance in various examinations, assignments, class tests, presentations, laboratory work etc. The letter grades to be used and their numerical equivalents will be decided by the Senate.
- 10) The academic performance of a student in any given semester shall be measured in terms of the Semester Grade Point Average (SGPA). The SGPA is the weighted average of the grade points, the weights being the course credits.
- 11) The Cumulative Grade Point Average (CGPA) in a semester is computed in a manner similar to the computation of SGPA from the grade points of all the grades that a student has received up to that semester in the Programme.

## **10 Conduct and Discipline**

- 1) Each student shall conduct himself/ herself, both within and outside the campus of the Institute, in a manner befitting a student of an Institute of National importance. No student is expected to indulge in any activity which tends to bring down the prestige of the Institute. Each student shall show due respect and courtesy to the teachers, administrators, officers and employees of the Institute; and, good neighbourly behaviour to fellow students. They should also pay due attention and courtesy to the visitors and residents of the campus.
- 2) Without prejudice to the general requirements of conduct and discipline stipulated in subsection (1) above, every student shall conduct herself/ himself within and outside the precincts of the Institute in a manner befitting the students of the Institute and shall abide by the 'code of conduct for students' framed by the Senate.

- 3) Violation of the 'code of conduct for students' by any student, shall invite disciplinary action and may merit punishment, such as reprimand, disciplinary probation, fine, being debarred from examination, debarring the use of placement services, withholding of grades, withholding of degree, cancellation of registration, rustication and expulsion from the Institute.

## **11 Requirements for Graduation and Grant of Degrees**

- 1) In order to qualify to obtain a degree under any of the programme listed in sub-section (1.2) a student shall be required to pursue the courses of study for the specific programme and shall have to complete prescribed minimum number of credits for graduation.
- 2) A student shall be deemed to have completed the graduation requirements if the student has:
  - a) earned all the prescribed credits;
  - b) attained the minimum required CGPA;
  - c) satisfied the minimum academic and residence requirements (if any);
  - d) satisfied all the requirements specified by the concerned department, if any;
  - e) satisfied all the requirements specified by the Senate and the Ordinances;
  - f) paid all the dues to the Institute, and, has no pending case of indiscipline.
- 3) A student who has completed all the graduation requirements shall be recommended by the Senate to the Board of Governors for the award of appropriate Degree in the ensuing Convocation. A Degree can be awarded only after the Board has approved the award of the Degree.
- 4) Under exceptional circumstances, where gross violation of the graduation requirements is detected at a later stage, the Board of Governors may, on the recommendation of the Senate, cancel the Degree already awarded.

## **12 Scholarships, Prizes, Medals and Financial Assistance**

- 1) Scholarships, Free studentships, Prizes, Awards and Certificates of Merit shall be awarded to undergraduate students according to the rules laid down by the Senate and provisions of Statutes.
- 2) Scholarships and Free studentships are liable to be withdrawn, partially or wholly, in case of misconduct, deliberate concealment of material facts and/or supply of false information.
- 3) Scholarships will not be paid after the month in which a student completes all the prescribed academic requirements of the course.
- 4) To promote and recognize academic excellence, constructive leadership and overall growth and development of students, the Senate shall award Prizes/Medals/Scholarships to be instituted either by the Institute or through endowment/grants of donors. The norms and conditions for the institution of such Scholarships/Prizes/Medals shall require approval of the Board of Governors.

## **13 Payment of Fees and other Dues**

- 1) Every student shall pay to the Institute all such fees as may be charged from time to time towards academic and other incidental fees. All such fees will have to be paid within the dates as may be stipulated through notifications or as may be mentioned in the academic calendar.
- 2) Every student, who has been allotted a seat in a hostel or a hall of residence shall pay the hostel fees and clear all mess dues within the dates as may be notified.
- 3) The first instalment of fees which a student shall be required to pay at the time of admission will cover:

- a) Admission Fee
  - b) Registration Fee
  - c) First instalment of Tuition Fee
  - d) First instalment of seat rent including water and electricity charges (for students residing in Hostels/Halls)
  - e) Fees for Student's Senate, Medical Examination and Medical aid
  - f) Institute Caution Money
  - g) Hostel/Hall Caution Money (for students residing in Hostels/Halls)
  - h) Mess Advance (for students residing in Hostels/Halls)
  - i) Any other fees as may be decided.
- 4) In addition to the fees payable as above, a student who has been allotted a seat in a Hostel/ Hall shall be required to pay messing charges and such other dues as may be specified by the Warden of the Hostel/ Hall every month and in accordance to the rules framed.
- 5) A student who does not pay the requisite fees within the specified dates during semester registration shall be debarred from all academic activities.
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**Indian Institute of Engineering Science and Technology, Shibpur**  
**The Regulations for Undergraduate Programmes, 2019**  
**(BTech, BArch and Dual Degree BTech – MTech Programmes)**

## **1 Introduction**

Whereas Section 27 of the National Institutes of Technology, Science Education and Research Act, 2007 (29 of 2007) enumerates the matters for which the Ordinances can be made.

And Whereas Section 28 of the said Act stipulates that the Ordinances shall be made by the Senate.

And Whereas the Senate of the Institute has framed the Ordinances for Undergraduate Programmes, 2019.

And Whereas Section 6 of the said Ordinances provides for framing of Regulations for the conduct and regulation of undergraduate programmes of the Institute and for matters connected therewith.

And Whereas it is considered necessary further to implement the Provisions of the aforementioned Act and the said Ordinances in so far as they relate to the conduct and regulation of undergraduate programmes; the Senate frames the Regulations for undergraduate programmes as follows: -

### **1.1 Title and Commencement**

- 1) These Regulations may be called the Regulations for Undergraduate Programmes, 2019.
- 2) These shall come into force on such date as the Chairman, Senate, may appoint and different dates may be appointed for different provisions of these Regulations and for different programmes.

### **1.2 Application**

- 1) These Regulations shall apply to all the programmes of the Institute to which the Ordinances for Undergraduate Programmes, 2019 apply.

### **1.3 Definitions**

- 1) **Ordinances** shall mean The Ordinances for Undergraduate Programmes, 2019 of the Institute.
- 2) **Department** shall mean an academic Department under whose aegis an undergraduate programme of the Institute is offered; the term shall include any Academic School or Centre offering an undergraduate programme.
- 3) Unless repugnant to the context, all terms used in these Regulations shall have the same meaning as defined in the Act and/ or the Statutes and/ or the Ordinances.

### **1.4 Abbreviations and Acronyms**

- 1) In these Regulations, the abbreviations and acronyms have the same meaning as mentioned in the Ordinances.

### **1.5 Committees and Officials**

The academic programmes of the Institute shall be governed by Rules and Regulations approved by the Senate from time to time. The Senate is the highest statutory and the supreme academic body of the institute that governs all academic matters of the Institute, and the rulings of Senate Chairman (Director of the Institute) are final in regard to all academic issues. A definite time schedule is set by the Senate for various academic

activities, through an Academic Calendar issued at the beginning of each academic year. The Senate continuously assesses the academic programmes and makes appropriate revisions/ modifications/ improvements as and when required through different Standing Committees of the Senate.

#### **1.5.1 Senate Undergraduate Committee (SUGC)**

The Senate Undergraduate Committee (SUGC) shall be a standing committee constituted by the Senate to look after all issues regarding all UG and DD programmes of the Institute. The SUGC shall make such recommendations on academic matters, including policy matters, for conduct of the programmes listed in Sub-section (1.2) of the Ordinances, as it may deem necessary or expedient, to the Senate, provided that no recommendation on policy matters shall be made without consulting Dean (Academic).

In particular, the SUGC shall have jurisdiction in recommending the Senate on following matters relating and concerning the undergraduate programmes of the institute:

- a) formal approval of new courses of instruction,
- b) desirable minor modifications of courses already approved,
- c) credit valuation of courses,
- d) formal approval of admission of the first-year students and others with advance standing,
- e) supervise conducting of examinations,
- f) evaluation of academic performance, and
- g) such other matters as may be referred to it by the Senate.

While the final authority shall vest with the Senate, the functions of the SUGC shall be primarily of general policy determination, coordination and review. The SUGC shall take views of on such matters relating to academics and academic discipline as may be referred to it by the Senate or by the Academic Section. While discharging its duties and responsibilities, the SUGC shall make full use of the appraisals and recommendations of the various academic departments/ schools/centres/ sections.

The composition of the SUGC shall be as given in **Annexure – I**.

#### **1.5.2 Departmental Undergraduate Committee (DUGC)**

The Departmental Undergraduate Committee (DUGC) shall be a department level committee that shall, in general:

- a) Advise the students about their curriculum and resolve any problem relating to conduct of an undergraduate programme run under the aegis of the department.
- b) Advises them about academic opportunities
- c) Monitors the progress of academically weak students
- d) Assists the Head of the Department in all UG/DD activities

The DUGC shall comprise members to be nominated by the DFC concerned.

The DUGC shall report and make recommendations to the SUGC as and when required. The SUGC, while making any recommendations may, in its own discretion, seek/receive opinions/recommendations from DUGC.

The composition of the DUGC shall be as given in **Annexure – I**.

#### **1.5.3 Departmental Faculty Committee (DFC)**

Departmental Faculty Committee (DFC) shall comprise all permanent faculty members of the Department and shall be chaired by the Head of the Department. DFC will nominate members of the DUGC.

#### **1.5.4 Board of Academics (BOAC)**

Each Department will have a Board of Academics (BOAC) consisting all faculty members of the Department and Experts from Industries and Premier Academic Institutes. Course curriculum and syllabi of the courses of any program offered by the Department will be examined and duly recommended by the BOAC for subsequent approval by the Senate. Any new course or program to be offered by the Department should also be examined and recommended by the BOAC before submission through SUGC to the Senate for approval.

#### **1.5.5 Academic Counsellor**

A student is assigned to an Academic Counsellor from his/her Department. Students are expected to consult the Academic Counsellor on any matter relating to selection of their courses and their academic performances in various semesters/ summer terms. The Academic Counsellor advises the students to complete their courses of study for the required degree in a smooth and satisfactory manner. The Academic Counsellor guides the students about the rules and regulations governing the courses of study for a particular degree.

The academic counsellor is the person whom the parents/ guardians should contact for performance related issues of their ward. The DUGC allots Academic Counsellors for the students after joining the Institute. A student remains under the guidance of the same Academic Counsellor throughout the duration of his/her programme of study.

All academic issues connected with the UG and DD programmes are handled by DUGC and SUGC. If, on any academic matter, a student would like to approach this administrative structure, it is always through the DUGC with advice and recommendations from his/her Academic Counsellor.

#### **1.5.6 Semester Course Convener**

Courses in a semester are conducted by the Semester Course Convener with the assistance of the required number of faculty members, instructors, and teaching assistants. The Semester Course Convener, as nominated by the DUGC, will be responsible for conducting the courses with the assistance of the respective teachers including preparation of question papers, evaluations of the answer scripts of mid-semester and end-semester examinations, evaluation of internal assessments, online marks entry and sending the award lists to the Academic Section within the prescribed time limit.

#### **1.5.7 Academic Section**

The office of the Dean (Academic), hereinafter called the **Academic Section**, is responsible for the implementation of the decisions taken on academic matters by the Senate and the SUGC.

## 2 The Undergraduate Programmes

The undergraduate programmes of the Institute shall be offered under the aegis of the different Departments as mentioned below.

### 2.1 Bachelor of Technology (BTech)

<b>BTech Programme in</b>	<b>Offered by</b>
a) Aerospace Engineering	Department of Applied Mechanics and Aerospace Engineering
b) Civil Engineering	Department of Civil Engineering
c) Computer Science and Technology	Department of Computer Science and Technology
d) Electrical Engineering	Department of Electrical Engineering
e) Electronics and Telecommunication Engineering	Department of Electronics and Telecommunication Engineering
f) Information Technology	Department of Information Technology
g) Mechanical Engineering	Department of Mechanical Engineering
h) Metallurgy and Materials Engineering	Department of Metallurgy and Materials Engineering
i) Mining Engineering	Department of Mining Engineering

### 2.2 Bachelor of Architecture (BArch)

This programme is offered by the Department of Department of Architecture, Town and Regional Planning.

### 2.3 Dual Degree (BTech - MTech)

<b>Dual Degree (BTech-MTech) Programme in</b>	<b>Offered by</b>
a) Aerospace Engineering	Department of Applied Mechanics and Aerospace Engineering
b) Civil Engineering	Department of Civil Engineering
c) Computer Science and Technology	Department of Computer Science and Technology
d) Electrical Engineering	Department of Electrical Engineering
e) Electronics and Telecommunication Engineering	Department of Electronics and Telecommunication Engineering
f) Information Technology	Department of Information Technology
g) Mechanical Engineering	Department of Mechanical Engineering
h) Metallurgy and Materials Engineering	Department of Metallurgy and Materials Engineering
i) Mining Engineering	Department of Mining Engineering

### 2.4 Duration of Programmes

Unless otherwise decided by the Senate, every BTech programme shall be of four-year duration while the BArch and the Dual Degree programmes shall be of five-year duration.

### 2.5 Introduction of New Programmes

The Senate may introduce such other UG programmes in such other disciplines for such other durations as it may decide through a resolution. However, no such new programme shall be introduced without the approval of the Board.

### **3 Admission**

#### **3.1 Admission Office**

The institute shall have an Undergraduate Admission Office (under the Dean-Academic) that will look after the entire admission procedure for the B Tech, B Arch and Dual Degree programmes.

#### **3.2 Eligibility for Admission**

The eligibility of a candidate and the admission criteria would be guided by the MHRD and the respective Councils for admission. Admissions to all Undergraduate Programmes will be at the First Semester level only. There will be no direct admission to higher semesters of the course.

##### **3.2.1 Indian Students**

In general, the admission of Indian nationals to the programmes mentioned in Sections (2.1 to 2.2) is through a national level selection test held once or more than once in a year. Presently, the performance in the **JEE-Main** is considered to be the basis for admission to these programmes. Students will get admission to a particular branch depending on their performance in the selection test and availability of seats in that particular branch.

##### **3.2.2 Foreign Students**

Admission of foreign students to the **BTech/DD courses**, are offered under the Cultural Exchange Fellowship Programme of the Government of India, administered by Indian Council of Cultural Relations (ICCR), New Delhi. The candidates are required to apply through the Indian High Commission/Embassy in their respective countries. For admission through Direct Admissions of Students Abroad (DASA) programme, prospective candidates may check the respective website. Each admitted student must submit authenticated copies of certificates/ mark-sheets/ transcripts of their qualifying degree and such other documents to the Academic Section before the Admission/ Registration date for the course.

#### **3.3 Availability of Seats**

Each year, before admission to the first semester level, the actual number of seats available in each of the programmes mentioned in Sections (2.1 to 2.2) will be decided by the SUGC following the MHRD instructions, and will be subsequently approved by the Senate. The Institute will follow policies of reservation of seats in various categories as per the existing instructions of the Central Government.

The candidates who are selected for admission to a particular programme should remit admission and other fees to the Institute.

#### **3.4 Cancellation of Admission**

- 1) All students admitted provisionally or otherwise to any programme shall submit prescribed documents by the last date specified for the purpose by the Academic Section. If any student fails to submit the prescribed documents by the specified date or to meet other stipulated requirement(s), his/her admission shall be cancelled.
- 2) The admission will also be cancelled at any later time if it is found that the student had supplied some false information or suppressed relevant information while seeking admission.
- 3) All admissions and cancellation of admissions to the programmes shall be reported by the SUGC to the Senate for approval.



## **4 Additional Scope for Already Admitted Students**

A student admitted to a department through the process described in section 3, may opt for:

- a) Change of Branch (switching to another department after first year)
- b) Dual Degree (B. Tech.–M. Tech.) Programme

### **4.1 Change of Branch**

Change of the branch is a privilege and not a right. Candidates admitted through JEE (Main) to B. Tech. programs (other than B. Arch students) only are eligible to be considered for a change of branch after the second semester.

#### **4.1.1 Eligibility**

- a) The student must have completed all the credits prescribed in the first two semesters of the course, in his/her first attempt.
- b) The student must have obtained a Cumulative Grade Point Average (CGPA) not lower than 8.0 at the end of the Second Semester.
- c) The student has successfully completed the NCC/ NSS etc., requirements.
- d) No disciplinary action was taken against the student during the first two semesters.

#### **4.1.2 Notification**

The academic section will notify the students and display on the notice boards about the changes of the branch at least fifteen days before the assigned date(s) of the registration of the third semester. All changes of branch made in accordance with the above rules will be effective from the third semester.

#### **4.1.3 Application for Branch Change**

- a) Application for a change of branch must be made by the interested eligible students through a prescribed form (Annexure-II), after the notifications are made by the Academic Section at the end of the second semester. The students must apply to the Academic Section by the specified deadline.
- b) Application can be made for a change of branch to any Engineering branch (except Architecture, TRP).
- c) Eligible students may specify the choices of branches, in order of preference, to which they wish to change over. Choices cannot be changed once the application form is submitted.
- d) Change of branch shall be made strictly on the basis of merit of the applicant. For this purpose, the CGPA obtained at the end of the second semester will be considered. Ties will be broken by the JEE Main ranks of the applicants.
- e) Students whose branch change applications have been granted will be informed accordingly before the assigned date(s) of the registration of the third semester.

#### **4.1.4 Admission to the New Branch**

- a) Students granted a branch change should do registration in the third semester for the branch to which change is granted.
- b) These students should register for courses after consulting the DUGC convener of the department to which they have been admitted.
- c) There is no provision for withdrawal from a branch change. Once a student's branch change application has been accepted, she/he will be considered a student of the new department for the entire period of her/his branch of study.

#### 4.1.5 Availability of Seats for Branch Change

- a) In any year, number of seats available in a particular branch is to be calculated before the branch change program. It may be calculated as (Sanctioned Strength + 2) – Existing Strength in that branch. Existing strength equals the number of students eligible for registration in third semester from the same branch. The actual vacancies in various categories (Gen/SC/ST/OBC/PC etc.) should also be noted.
- b) As a result of branch change allotment, number of registered students in third semester in any branch should not fall below 75% of its sanctioned strength in that year.

#### 4.1.6 Procedure for Branch Change

- a) From all valid applications for branch change, a rank list is prepared based on the CGPA obtained at the end of the second semester, separately for each category.
- b) Depending on the availability and her/his rank, a student will be allotted a branch as per her/his preference.
- c) The cutoff rank for branch change will be guided by clause 4.1.5 b).

#### 4.1.7 Important Note for Branch Change

- a) All changes of branches will be final and binding on the applicants. No student will be permitted, under any circumstances, to refuse the change of branch offered, and she/he cannot revert to the original department.
- b) Change of branch rules is subject to revision from time to time and the decision of the Senate will be final and binding.

#### 4.2 Dual Degree (BTech–MTech) (DD) Programme

- a) In the Dual Degree (BTech – MTech) D programme, a student will obtain both BTech and MTech degrees in same discipline after successful completion of the programme.
- b) An academically good student, having a CGPA of at least 7.0 till the end of sixth semester and without any backlog at the time of application, may exercise the option for entering a DD programme, at the end of 6<sup>th</sup> semester by filling up a prescribed form (**Annexure – III**) and their selection would be decided by the DUGC and SUGC.
- c) The selection for a DD programme is based on merit of the applicant and subject to availability of seats in the specialisation selected by the student.
- d) The duration of the DD programme is 10 (Ten) semesters.
- e) The course structure of a DD Programme up to the Sixth semester is common with that of BTech programme of the branch. A student will be allowed to pursue the DD programme from Seventh Semester onwards.

### 5 Internship

A student has to undergo at least one internship, as a part of her/his graduation requirement. This internship may be with an industry, with a research organization or with an IIT/NIT/Institutes of National Repute. The student may even undergo the internship with IEST also. Each internship will carry a credit of 2 (two). For awarding the credit, performance of the student will be assessed by the industry/institute and/or the Department concerned.

## **6 Academic Session**

### **6.1 Duration**

The academic session normally runs from mid-July in one year to the mid-July in the next year. It is divided into three parts:

- a) Odd semester Middle of July to middle of December
- b) Even semester End of December/beginning of January to middle of May
- c) Summer term Middle of May to middle of July

### **6.2 Semester Weeks**

Each of the two semesters (Odd and Even) consists of about eighteen weeks including i) class-weeks (13 weeks) devoted to teaching and continuous evaluation of theory and practical subjects, ii) examination (2 weeks), iii) publication of results (2 weeks) and iv) Fests, Sports and Holidays (1 week). All such activities throughout the semester will be displayed in the **Academic Calendar**.

### **6.3 Summer Term**

A Summer-Term is a condensed version of a regular semester, where, like a regular semester, classes and exams for courses will be held for academically weak students, for making up their deficiencies and improving their performances.

#### **6.3.1 Duration**

The duration of the Summer Term shall be eight weeks from the middle of May till the middle of July. The exact dates for holding the Summer Term in a year shall be decided by the Senate and will be mentioned in the Academic Calendar.

#### **6.3.2 Class Loads**

The total contact hours for the courses taken in the summer term will be same as that of the regular semester. The credits allotted to these courses shall remain the same.

#### **6.3.3 Attendance**

The attendance requirement for the Summer Term shall be the same as for a regular semester. A student who does not satisfy the norms will not be allowed to appear at the examination.

#### **6.3.4 Eligibility**

- a) A student will be eligible to register in a subject if he/she actually appeared at the last end-semester examination in that subject and obtained the grade 'F'.
- b) A student who is de-registered in one or more courses has to register for those courses in Summer-term only.
- c) A student shall not be allowed to register for more than two courses during a Summer Term.
- d) Summer Term in a course shall be offered only if at least 5 students register for that course.

#### **6.3.5 Registration**

All students intending to join a Summer Term must register themselves for the courses concerned on the day fixed for the purpose. No late registration shall be permitted on any ground. The intending students have to pay a Summer Term registration fee.

The list of courses to be offered during Summer Term will be finalized before the registration and will be displayed on the Institute website.

#### **6.3.6 Assessment**

The examinations and continuous evaluation for internal assessment will be similar as that of regular semesters.

#### **6.4 Academic Calendar**

The dates of all academic activities including semester registration, the first and the last days of classes, mid-term break, mid-term examination, end semester examination, supplementary examination, Fest days, holidays and vacations, are published in the Academic Calendar every year by the Academic Section as approved by the Senate. The Academic calendar will be available on the Institute website.

## 7 Curriculum

Every Department has a prescribed course structure which, in general terms is known as the Curriculum. It prescribes all the Theory courses/Laboratory courses/Projects and other requirements for the degree. It also gives the syllabus and a list of text/ reference books for each course. These courses/syllabi are updated regularly and are made available at the Institute Website.

Any faculty member can offer a new course by submitting a new course proposal to the concerned DUGC chairman. The course is to be recommended by the BOAC for approval by the Senate.

### 7.1 Courses

The courses in a discipline are broadly classified as Theory Courses and Laboratory Courses. Theory courses consist of lecture (L) and tutorial (T) hours and may have attached practical (P) hours in special cases while Laboratory courses have only practical (P) class hours.

The entire curriculum is divided into various set of courses: –

- a) **Institute Core (IC):** This is a compulsory set of courses for all B Tech /B. Arch students which include basic courses in Basic Science (Physics, Chemistry, and Mathematics), Engineering Science (Computing, Electrical, Electronics, Engineering Graphics, and Engineering Mechanics), Workshop, Humanities and Social Science, Communication Skills and Physical Education.
- b) **Departmental Compulsory Courses (DC):** This is a compulsory set of courses for Bachelor's students in their parent discipline.
- c) **Departmental Electives (DE):** These are elective courses that students have to take from within their parent discipline.
- d) **Open Electives (OE):** Courses offered by departments that students can take from outside their parent discipline. The students can also take the PG level open electives offered by other departments.
- e) **Laboratory:** The laboratory papers are based on some of the theory papers for which experimental, design or other field support is required.
- f) **Projects:** Students are to take some projects as sessional work in different stages of their curriculum:
  - 1) **B. Tech. Project:** In a B. Tech project, a student is required to do some innovative/practical work individually or in a group, under the guidance of a faculty member. This is done during the seventh and eighth semester. B. Tech. project may be offered as one unit 'Project' for a two-semester duration, or two independent units as Project-1 and Project-2 in the two semesters. In the second case, Project-2 builds on Project-1, and Project-1 becomes a pre-requisite for the Project-2.
  - 2) **Architectural Thesis:** BArch students will undertake architectural thesis in ninth and tenth and semester.
  - 3) **DD Project** is a mandatory requirement in the Dual Degree (BTech – MTech) Program. The project consists of three stages, spread over three semester duration, starting from the eighth semester and finishes in the tenth semester. These are research and development projects of an individual student, where the student trains himself/herself under the guidance of the supervisor(s).
- g) **Comprehensive Viva-Voce:** This will be held at the end of eighth semester for B. Tech. students and at the end of ninth semester for B. Arch. Students, to assess their overall domain knowledge. The students will appear before the board of examiners comprising of the teachers of the theory and laboratory courses the student has taken till that semester.

- h) **Internship/Industrial Training:** A student has to undergo one or more mandatory internship/training in the 8-semester B. Tech. programme as a part of his/her graduation requirement. This internship/training may be taken in an industry, in a research organization or in an Institute of national repute or even in this Institute. The total duration of internship/training in the 8-semester programme must be of minimum 4 weeks. BArch students will undertake the internship/professional training for a duration of 24 weeks in eighth semester.
- i) **Educational Tour:** BArch students will undertake two outstation tours in two semesters to learn about and gain exposure to architecture and/or town planning.
- j) **Non-Credit Courses:** One of the following activities, National Cadet Corps (NCC)/ National Social Service (NSS)/ Physical Training (PT)/ Yoga/ Physical Education is a mandatory requirement for all students for the award of degree. These are designed to sensitize the students to social/ national issues and are the non-credit courses.
- k) **Additional Courses:** A student may take additional courses over and above the curriculum requirement, either available as Institute/Departmental courses or online courses (NPTEL/MOOCs, etc.). Credits earned by the student from such courses will not be used to calculate the CGPA/SGPA of the student, but will be shown in the Grade Card as additional credits earned.

The list of courses (as detailed in section 7.1) to be offered by a department will be finalized by the Academic Section in consultation with the respective DUGC well before the date of registration. Details of various courses for undergraduate programmes being offered by various departments will be made available on the Institute website.

## **8 Registration for Courses**

### **8.1 Registration during Admission**

All admitted students must register for all the specified courses on payment of requisite fees within the scheduled date as mentioned in the admission brochure/ notified on the Institute website.

### **8.2 Semester Registration**

- a) For every student, registration for the courses before the beginning of each semester is mandatory till he/she completes his/her entire course of study.
- b) The registration is done on remittance of the requisite fees within the prescribed dates announced in the Academic Calendar/Institute website.
- c) The subjects to be pursued will be suggested by the Academic Counsellors from the respective departments.
- d) If a student does not register in a particular semester without prior permission of the SUGC, his/her studentship is liable to be cancelled.
- e) Without registration, a student will be debarred from all academic activities (courses/ seminars /projects etc.) in a semester and the student will be declared failed in all the courses of that semester and he/she has to repeat the semester.

### **8.3 Registration for Summer Term Courses**

- a) A student must register for Summer Term courses to make-up for any of his/her de-registered course(s)/failed course(s) including laboratory within the scheduled dates and must remit the requisite fees.
- b) Other students may also register for any summer term course being offered if they like to improve their grade. In that case, the earlier grade will be ignored.
- c) A student can register for a maximum of two courses in a summer term. No late registration shall be permitted on any ground.

### **8.4 Registration for Supplementary Examinations**

A student who obtained 'F' grade or 'I' grade in a course may appear in the Supplementary Examination which will be held after publication of results of the even semester. Students willing to appear in the supplementary examinations for such courses, should also register for those courses remitting the requisite fees within the scheduled dates. A student is allowed to appear for a maximum of three courses in the Supplementary examination.

### **8.5 Registration for Internship**

Any internal or external student may register for an Internship programme on any desired course/project in any Department during the summer term on remittance of requisite fees within the scheduled dates, which will be announced in the institute website. No late registration shall be permitted on any ground.

### **8.6 Procedure for Registration**

The registration schedule will be mentioned in the Academic Calendar. The registration process generally starts before the commencement of each semester. However, registration after the last date may be allowed with a 'Late Fee'. In all circumstances, semester registration must be completed on or before the prescribed last date for registration.

The registration process is to be followed as per the existing practice of the Institute – either online or manual. The student has to fill a Course Registration Form (CRF) for the courses that the student is required to pursue in that semester. The Common Course Registration Form is shown in **Annexure-V**.

### **8.7 Late Registration**

In special cases, on the ground of severe illness or some exigencies in the family of the student, if a student fails to contact the academic counsellor and/or avail the online facility/ institute portal in due time, the student may apply to the Chairman, DUGC through his/her academic counsellor with supporting documents/ medical certificates for late registration. The application will be processed through the Academic Section and sent to the SUGC for approval. In such cases, the student may be allowed by the SUGC to register late even after the commencement of semester classes (latest by one month) with payment of a late registration fee.

### **8.8 Cancellation of Registration**

A teacher of a course may recommend cancellation of registration of any student in that course for inadequate attendance without proper authorization.



## **9 Teaching**

### **9.1 Medium of Instruction**

The medium of instruction and examination is English. All students admitted to the B. Tech./ B. Arch. curriculum are required to take English as a part of their mandatory curriculum requirement.

### **9.2 Class Timings**

The Institute follows a 5 days per week schedule. Regular classes are held from Monday through Friday from 9am to 4:35pm. No classes are scheduled beyond this time period on a regular basis. Lecture/Tutorial classes are usually scheduled in 55-minute slots and lab classes are usually scheduled in 3 class-hours (165 minutes) slots. No classes are usually held on Saturdays and Sundays, unless announced by the Institute on recommendation of the Senate to make up for some holidays due to exigent conditions.

### **9.3 Extra Classes**

Extra classes may be scheduled by the teacher of a course, in case he/she cannot complete the allotted number of lecture-hours for the course, if he/she misses the scheduled classes due to repeated holidays on class-days or due to his/her leave or any other exigencies. Extra classes should be scheduled in consultation with the students registered in the course at a time mutually convenient to everyone.

### **9.4 Attendance**

- a) The attendance of a student in a course should not fall below 75% of total number of classes held for that course in the semester.
- b) The teacher of a course will inform the students about the status of their attendance in a subject after the mid-semester examination. The teacher will send the list of students having attendance less than 75%, one week before the end-semester examination, to the Academic Section for necessary action.
- c) Students having attendance below 75% in a course will be de-registered for that course. He/she will be debarred from appearing in the semester examination for that course and will be awarded an **DR** grade for that course.
- d) A student de-registered for a course may again register for that course in the next Summer Term.
- e) Attendance requirement for the Summer Term courses shall be the same as for a regular semester. A student not satisfying the norms will not be allowed to appear in the examination.

### **9.5 Absence due to any Genuine Reason**

If the absence of a student is due to any genuine reason like prolonged illness or serious accident or due to some assignments vested on the student by the Institute during the class-days to participate in any inter-institute sports, tech-fests, campus interviews etc., the student may apply to the Chairman of DUGC through the Academic Counsellor/ Institute Infirmary/ Dean of Students Welfare / Head of HRM Dept., as the case may be, with proper supporting documents for consideration by the SUGC that will take decision well before the commencement of the end semester examination.

## 10 Evaluation System

### 10.1 Evaluation for Theory Courses

The evaluation of students' performance in a theory course is a continuous process. A Student's performance in theory papers will be evaluated through Internal Assessment and an End-Semester Examination.

#### 10.1.1 Examinations

- a) In any semester, for theory courses there will be mid-semester examinations and end-semester examinations, conducted centrally by the Academic Section. Mid-semester examinations will be held in the middle of a semester, generally after completion of the first six to seven weeks of study. End-semester examinations will be held after the completion of the course. The dates of such examinations will be displayed in the Academic calendar.
- b) There will be supplementary examinations for the theory courses in which students have failed. Each year, supplementary examinations will be held after the publication of even semester results. Supplementary examinations are equivalent to the end-semester examinations and the students can retain their internal assessment.
- c) In the Summer Term also, for theory papers there will be mid-term examinations and end-term examinations, similar to mid-semester and end-semester examinations.
- d) The dates all examinations will be displayed in the Academic calendar.

#### 10.1.2 Internal Assessment

- a) The Internal Assessment has two components – i) performance in mid-semester examination and Teacher's assessment.
- b) The Teacher's assessment may have the following components – class tests, quizzes, home assignments, group assignments, viva-voce etc. as per the teacher's discretion.

#### 10.1.3 Weightages

A typical distribution of relative weightage for the various modes of assessments is mentioned below. The course teacher will inform the students about these weightages at the start of the semester.

- |  |     |
|--|-----|
| a) Internal Assessment   |     |
| i) Mid-semester examination  | 30% |
| ii) Class Test/Quiz/Viva-voce/ Assignments/<br>Presentation etc. as per Teacher's discretion | 20% |
| b) End-semester Assessment   | 50% |

For any student, appearing in the end-semester examination is mandatory.

To ensure the principle of continuous evaluation, it is recommended that the Teacher will conduct at least two quizzes/ class tests, one before the mid-term examination and other between the mid-term and the end-semester examination. If a student fails to appear in a mid-semester examination or class test or quiz, or submit an assignment etc., it is entirely up to the Teacher to judge about validity of the reason and decide whether or not to provide a make-up opportunity.

### 10.2 Evaluation for Laboratory Courses

The assessment in a laboratory course will be based on continuous evaluation of the student's weekly performance in laboratory experiments/ work, quality of their reports and a final performance in a semester-end test that contains experiment/quiz/test/viva-voce. The semester-end test on laboratory sessional will

normally be held a week before the end-semester theory examinations. For any student, appearing in the end-semester test is mandatory.

### 10.2.1 Weightages

A typical distribution of the relative weightage for these modes of assessments may be as follows.

- |  |     |
|--|-----|
| a) Regular performance in laboratory works | 30% |
| b) Quality of laboratory reports           | 30% |
| c) Semester-end test                       | 20% |
| d) Viva-voce/Teacher's Assessment          | 20% |

The course teacher will inform the students about these weightages at the start of the semester.

### 10.3 Evaluation of Projects and Seminars

Projects will be evaluated based on the performance of a student throughout the semester. These projects are performed by the students and need regular interaction (at least once a week) with the supervisor. At the end of the semester the student should submit a project report duly approved by the supervisor, and present the same through a seminar cum viva-voce before a board duly constituted by the department.

Departments may evolve rubrics for evaluation of Project work, which may include components like selection of topic, problem statement, literature review, methodology, oral and written presentation of the work done and performance in viva-voce examination.

#### 10.3.1 Weightages

A typical distribution of relative weightage may be as follows.

- |  |     |
|--|-----|
| a) Supervisor's Assessment (Project work + Report + Seminar) | 60% |
| b) Board of Examination's Assessment (Report + Seminar)      | 40% |

In case of an irregularity of interactions, or if the performance of a student is not satisfactory, the student may be awarded a 'F' grade. Such a student will be given a maximum time of two months to improve his/her performance. If the performance of such a student is not satisfactory even after the extended time period, he/she will have to repeat the project work in the next academic year. The board may award an 'I' grade if the student misses the presentation. If the basis for absence is valid, the student may be granted a second chance for presentation and 'I' grade may be converted to suitable grade that the student deserves.

### 10.4 Evaluation of Comprehensive Viva-voce

The comprehensive viva voce will be conducted for the students at the end of eighth semester to assess the comprehensive knowledge of the student in all the courses he/she has pursued till that semester. A viva voce board consisting of subject-teachers covering most of the courses is formed by the DUGC to conduct such viva voce examination.

### 10.5 Display of In-Semester Performance

In-semester performances in Mid-semester exam, quiz/ class test/viva etc. of all students must be displayed/communicated by the course teacher to the students before the commencement of the end-semester examination.

### 10.6 Disclosing the Evaluated Answer Scripts

The evaluated answer scripts of the end-semester examination of a subject have to be displayed to the students within the date, as mentioned in the Academic Calendar.

## 10.7 Retention of Answer Scripts

Evaluated answer scripts are to be preserved by the Teacher/ Departmental Office at least for one year.

## 10.8 Grade Card

- a) At the end of a semester examination, supplementary examination or summer-term examination, the teacher of a theory course will evaluate the end-semester answer-scripts and make online entry of the internal assessment marks and end-semester marks. For laboratory and other courses also, the concerned teacher will make online entry of marks obtained by the students in such courses. The teacher will also send a signed award sheet to the Academic Section within the scheduled date.
- b) The Academic Section will compile the marks and a letter grade will be awarded to the student for each course. A Grade Card will be prepared for each student showing the grades obtained by the student in each course and corresponding credit for the course. The Grade Card will also show the semester grade point average (SGPA) value and semester grade point average (CGPA) value obtained by the student.

### 10.8.1 Letter Grade

- a) As a measure of students' performance, a 10-scale grading system using the following letter grades and corresponding grade points per credit will be followed for theory courses.

Performance	Marks Obtained (%)	Letter Grade	Grade Point Credit
Excellent	90 to 100	A+	10
Very Good	80 to 89	A	9
Good	70 to 79	B	8
Fair	60 to 69	C	7
Average	50 to 59	D	6
Pass	40 to 49	P	5
Fail	< 40	F	0
Incomplete	–	I	–
De-registered	–	DR	–

- b) For practical courses including laboratory courses, projects, seminars, viva-voce, training etc., the 'P' grade is at 50%. Students who obtained marks less than 50% will be awarded 'F' grade. Definition of all other grades remains same.
- c) The course in which a student obtains 'F' grade will be a 'Backlog' for the student. A backlog can be cleared by appearing in a supplementary examination. The internal assessment marks obtained by the student for the course will be retained. The student may also register in the Summer-term for the course (if available), without retaining the internal assessment marks obtained for the course.
- d) A student may be awarded the grade 'I' (Incomplete) in a course if she/he fails to attend the end-semester examination. The candidate has to appear in supplementary examination for converting it into quantifiable letter grade.
- e) Students having attendance below 75% in a course will be de-registered and will be awarded a 'DR' grade. The student will not be eligible for supplementary examination and has to register for the course in the Summer-Term, without retaining the internal assessment marks obtained for the course.

### 10.8.2 Change of an Already Awarded Grade

The marks and the letter grades once awarded shall not be changed unless a request for change of marks is made by the teacher of the course, and is accepted by the Chairman-SUGC. Any such request for a change of grade must be made within two weeks from the publication of results.

### 10.8.3 Semester/Summer term Grade Point Average (SGPA)

A Semester Grade Point Average (SGPA) will indicate the performance of the student in a semester and the summer term to which it refers. It will be computed as follows.

$$SGPA = \frac{\sum_{i=1}^n c_i g_i}{\sum_{i=1}^n c_i}$$

where  $n$  is the number of courses the student registered in the semester/summer term,  $c_i$  is the number of credits allotted to the  $i$ -th course and  $g_i$  is the grade points awarded to the student for the  $i$ -th course. The calculated SGPA will be rounded off to the second place of decimal and recorded as such.

### 10.8.4 Cumulative Grade Point Average

Starting from the second semester, the Cumulative Grade Point Average (CGPA) would indicate the cumulative performance of the student from the first semester up to the semester/summer term to which it refers and will be computed as follows.

$$CGPA = \frac{\sum_{i=1}^m c_i g_i}{\sum_{i=1}^m c_i}$$

where  $m$  is the number of courses the students registered from first semester up to and including the semester/summer term concerned,  $c_i$  is the number of credits allotted to the  $i$ -th course and  $g_i$  is the grade points awarded to the student for the  $i$ -th course. The calculated CGPA will be rounded off to the second place of decimal and recorded as such. The CGPA, SGPA and the grades obtained in all the subjects in a semester will be shown in the Grade Card to be delivered to every student at the end of every semester/summer term.

### 10.8.5 Conversion of CGPA into Percentage Marks

In case of a specific query by a student/employer/any other Institute regarding conversion of CGPA into percentage marks, the following formula may be adopted for notional conversion of CGPA into percentage marks.

$$\% \text{ Marks} = (CGPA - 0.5) \times 10$$

## 10.9 Declaration of the Result

- a) The Academic Section will place the results of the examinations in a meeting of SUGC to decide about declaration. The grades earned by a student in a semester/summer term shall be communicated to him/her in the form of a printed copy of Grade Card. A sample Grade Card (sheet) is shown in Annexure- XI. The rank of a student will be decided based on CGPA obtained by him/her.
- b) Grade Card of a student may be withheld if he/she has not paid his/her dues, or if there is a pending disciplinary action against her/him, or for any other appropriate reason as per the directives of the Senate.

### 10.10 Provisional Certificate

The Academic Section will duly issue a certificate to declare that the student is provisionally admitted to the degree of BTech/BArch with effect from the date of the publication of result for the final examination provided the rest of the official procedure is completed by the student.

### **10.11 Degree Certificate**

The name of the student admitted to the Degree of the BTech/ BArch is to be approved by the Senate for conferring the formal degree in the next convocation of the Institute. A degree certificate duly signed by the competent authority will be awarded to the student.

### **10.12 Transcripts**

Students may apply for the transcripts for the courses pursued in different semesters, if required by other Institutes. The transcript will show the final grades and credits obtained in all courses semester-wise and also for the summer term(s) showing the date on which the credit was actually credited.

## **11 Graduation Requirements**

### **11.1 BTech and BArch Degree**

In order to qualify for a BTech or BArch Degree of the Institute covered under these Regulations a student must:

- a) Complete all the credit requirements for the degree as laid down in the prescribed curriculum of the discipline.
- b) Obtain a CGPA of 5.00 or higher at the end of the semester in which he/she completes all the requirements for the degree.
- c) Have cleared all dues to the Institute, the Halls of Residence, the Library, other facilities and the Department.

### **11.2 Award of the Degree**

The name of the student admitted to the Degree of the BTech/BArch is to be approved by the Chairman, Senate for conferring the formal degree in the next convocation of the Institute.

### **11.3 Course Completion Time**

Normally a student should complete all the requirements i) in eight consecutive semesters for a BTech degree, ii) in ten consecutive semesters for a BArch Degree and iii) in ten consecutive semesters for a Dual Degree (BTech – MTech). However, academically deficient students may complete their requirements within a maximum period of (i) Eight years for B. Tech. degree, (ii) Ten years for B. Arch. Degree and iii) Ten years for Dual Degree (BTech – MTech).

### **11.4 Inadequate Academic Performance**

A student is expected to maintain at least a minimum level of performance at all times. The academic performance of academically deficient students is reviewed by the DUGC/SUGC/academic counsellor at the end of each semester.

#### **11.4.1 Academically Weak Student**

A student having two or more backlogs in a semester will be identified as an academically weak student. The student will be placed on warning, and his/her parents/guardian will be informed. She/he shall not hold any office in the Hall of Residence, Students Senate/Hobby Clubs or any other organization/body.

#### **11.4.2 Promotion to the Next Year**

A student may be promoted to the next academic year, if

- a) the student does not have any backlog of the previous year (if any), and
- b) the student should not have more than five backlogs in the current academic year.

Otherwise, the student will not be promoted and has to repeat the current year. In case of repeat, a student may opt for repeating only for the courses in which she/he obtained 'F' grade. He/she may also selectively choose to repeat for any/all subjects he/she obtained grades higher than 'F', and apply to the SUGC through DPGC and academic counsellor.

### **11.5 Discontinuation of Study**

If a student does not register and defaults in paying the dues for a semester, without the approval of the SUGC or any other competent authority, he/she shall have to discontinue studies and leave the Institute.

A student, whose cumulative academic records at the end of any semester clearly indicate that he/she will not be able to qualify for the degree for which he/she had been admitted within the specified maximum time limits, may be asked to discontinue studies and leave the Institute.

A student having faced a disciplinary action for some of his/her act(s), which is detrimental to the student life and may pollute the academic environment in the Institute, the Institute may cancel his/her admission and the student may be asked to leave the Institute at any time at the discretion of the SUGC/Senate.

The Academic Section will issue a termination letter to the respective student. This information will also be sent to the Head of the Department and other concerned offices. The student will have to vacate his/her hostel accommodation and shall not be entitled to enjoy any other facility of the Institute.

### **11.6 Appeal against Discontinuation**

- a) A student whose program is terminated may appeal to the Chairperson, Senate, for re-reinstatement in the program.
- b) In cases of termination due to inadequate academic performance, the student should clearly explain causes for the poor performance, including how those causes will not adversely affect her/his performance in the future. The Senate shall take a final decision after considering all available inputs.
- c) A student may re-appeal even after a previous appeal has been rejected. However, the Senate may not entertain any re-appeal for review unless substantial additional information is brought to its notice.

### **11.7 Relaxation**

Under exceptional circumstances, if a student has a severe deficiency in any of the requirements stated in these Regulations due to psychological or other medical conditions, the SUGC/Senate may relax the relevant provisions of these Regulations based on the merit of the case. The grounds on which such relaxation is granted shall invariably be recorded and cannot be cited as precedence.

### **11.8 Temporary Withdrawal from the Course of Study**

Students are expected to complete their Course of Study without any break. However, for bonafide reasons like prolonged illness or acute problems or exigencies happening in his/her family, Senate may grant leave of absence (temporary withdrawal) from the Course of Study. But such absence(s) shall ordinarily not exceed two semesters with or without break.

The student should apply to the DUGC within 15 days of the commencement of the semester or the incident or from the date he/she last attended his/her classes whichever is later, stating fully the reasons for such withdrawal together with supporting documents and endorsement of the parent/guardian.

The Institute has to be satisfied that, inclusive of the period of withdrawal, the student is likely to complete his requirements for the degree within the time limits specified in Section 11.3, and that there are no outstanding dues or demands on him/her.

A student who has been granted temporary withdrawal from the Institute will be required to pay the tuition fee and other essential fees/late fees/ other charges for the intervening (withdrawal) period while joining for

the course later. A student will be granted only one such temporary withdrawal during his/her entire tenure as a student of the Institute. A student who has been granted a temporary withdrawal on medical grounds will be allowed to re-join and resume his/her studies only after being declared medically fit by the Institute Hospital. The grounds on which such withdrawal is granted shall invariably be recorded and cannot be cited as precedence.

## **12 Scholarships, Medals, Awards and Prizes**

### **12.1 Institute Scholarships, Medals and Prizes**

The Institute awards a number of medals and prizes to students with excellent academic records, from the Institute fund. List of such medals and prizes are available from the Academic Section as well as in the Institute website.

Basic Eligibility Criteria for all Institute Medals, Awards and Prizes: A student is eligible for the award of any medals or prize if

- a) He/she has passed in all the prescribed subjects in the programme and cleared all other requirements, if any, obtaining a CGPA not lower than 8.0 in the semester after which the Medal or Prize is to be awarded.
- b) He/she has not failed in any subject at any stage during his/her academic career till the time of the award.
- c) No disciplinary action has been taken against him/her for any offence at any time prior to the award.
- d) He/she has not been punished under examination malpractice and involved in violation of code of conduct at any stage of the course in the Institute.

Specific rules that govern any particular medal/award/prize, are mentioned against each such award in the List. In case of a tie between two or more students, the prize will be awarded jointly, the value of prize shall be equally shared amongst the awardees and the award certificate will mention 'jointly awarded'.

### **12.2 Endowment Medals, Prizes and Scholarship**

A number of medals and prizes are awarded through endowment fund. Lists and the rules that govern such awards are mentioned in the list of Endowment Awards, available in the Academic Section. The Institute awards endowment medals, scholarships, awards and prizes to the students on the basis of merit or means as specified in each case separately. The following basic rules govern the conditions for such awards.

All Endowment Scholarships will be awarded from the income of endowments received by the Institute from Industries, Institutions, R & D Organizations, Alumni and other individuals for this purpose.

The students i) who have failed in any subject at any stage during his/her academic career till the time of the award, ii) undergone disciplinary action for any offence at any time prior to the award, iii) punished under examination malpractice and involved in violation of code of conduct at any stage of the course in the Institute; are not eligible for such award.

The Institute may decide to discontinue the award of any endowment medal, prize or merit certificate at any moment of time, if it so desires and feels fit. The same be communicate in writing, citing the reasons to the donor/society granting such funds or endowments.

The conferment of award, medals, prizes & merit certificate shall be made during the Annual Convocation of the Institute/or on any other occasion decided by the Senate, following the announcement of the results on which the prize is based.



### **12.3 Conduct of an Awardee**

An awardee of a medal, award or prize under these rules is expected to maintain, besides satisfactory academic progress, regularity in attendance and good conduct, behaviour and discipline in the Department and in the Institute/Halls of Residence. In the event of an awardee being found to be involved in any act of misconduct, misbehaviour, indiscipline or adopting unfair means at an examination, the award or prize is liable to be cancelled with immediate effect, before its disbursement.

### **13 End Note**

The rules and regulations mentioned in this document are to be applicable from 2019 onwards. However, some propositions mentioned here are new compared to the prevailing rules/norms and are dependent on the appropriate/adequate infrastructure available in the Institute. It is suggested to have gradual implementation of such rules/propositions in commensurate with the improvements in the infrastructure. However, the basic spirit of quality teaching, opportunities for students, and improving the academic ambience should continuously be adhered to.

## Constitutions of Various Committees

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### A. Senate Under-Graduate Committee (SUGC)

The Senate Undergraduate Committee (SUGC) will have the following members –

- 1) Chairperson
- 2) Members–
  - a) Conveners of various DUGCs
  - b) Last SUGC Chairperson (Ex-officio)
  - c) One Senate Nominee
  - d) Four Students Representatives from the Students Senate

The Chairperson shall be nominated by the Senate from amongst the members of the Senate. The tenure of the Chairman and the Senate nominee shall be normally of two years. Student representatives as nominated by the undergraduate students will change every year. One member will be nominated by the Chairman to act as convener.

The SUGC must meet as frequently as essential, but at least two times in every Semester.

### B. Departmental Under-Graduate Committee (DUGC)

Each academic department constitutes this committee which consists of the following –

Chairperson : Head of the Department

Convener : A faculty member of the department, nominated by the DFC

Members : At least four faculty members of the Department

Student Representatives: Two undergraduate students (one preferably a female student) of the department one each from second year and third year.

The members and the convener will have a rotational term of two years. Student representatives as nominated by the undergraduate students will change every year.

### C. Departmental Faculty Committee (DFC)

The Departmental Faculty Committee will have the following structure –

Chairperson : Head of the Department

Convener : A faculty member of the department, nominated by the Head

Members : All faculty members of the Department

Tenure of the Convener will be normally of two years.

### D. Board of Academics (BOAC)

Each Department should have a Board of Academics comprising the following members –

Chairperson : Dean Academic

Convener : Head of the Department

Members : All faculty members of the Department

External Members : Eminent experts from Industry and Premier Academic/Research Institutes

Names of the External Members will be nominated by the DFC through the Head to the Senate for approval.

Tenure of the External Members will normally be of two years.

## Indian Institute of Engineering Science &amp; Technology, Shibpur

## Application Form for Branch Change

Student Name : Academic Session: 20....-....

Department : Semester :...2<sup>nd</sup>.....Enrolment no. : CGPA till 2<sup>nd</sup> Semester: .....

Student registered e-mail : Backlog, if any: .....

Opting for Change to other department in order of preference:

1)
2)
3)

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Signature of the Student

Endorsed by:

Parent/Guardian of the Student Academic Counsellor Chairman, DUGC of parent Dept.

Permitted/Not permitted

Dy. Registrar (Academic)

Chairman /SUGC

**Indian Institute of Engineering Science & Technology, Shibpur**  
**Option Form for Dual Degree**

Student Name : Academic Session : 20....-....  
Department : Semester No...6<sup>th</sup>  
Enrolment no. : CGPA till 6<sup>th</sup> Semester: .....  
Student registered e-mail : Backlog, if any:  
.....

I am opting for Dual Degree programme now at the end of 6<sup>th</sup> semester for remaining four semesters i.e. from 7<sup>th</sup> – 10<sup>th</sup> semesters. I accept the terms and conditions of the Dual Degree programme:

\_\_\_\_\_  
Signature of the Student

Endorsed by:

Parent/Guardian of the Student Academic Counsellor  
Accepted in the specialisation of \_\_\_\_\_  
Chairman, DUGC of parent Dept.

I agree.

\_\_\_\_\_  
Signature of the Student

Chairman /SUGC

**Indian Institute of Engineering Science & Technology, Shibpur**

**Application for Summer Internship Programme**

Applicant's Name : Academic Session: 20....-....

Applicant's Institute & Department Address:

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Opting for the Summer Internship on (vide advertisement dated: .....)

Course/Project

Title

.....

Course/Project under Prof. ....

In the Department of ....., IEST, Shibpur

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Signature of the Student

Recommendation by the parent Institute/Department is attached/uploaded:

Endorsement by:

Faculty member providing the Internship

Chairman DUGC.

Permitted/Not permitted

Intern ID:

Tuition Fee:

Residence Fee:

Other Fees:

Dy Registrar (Academic)

Chairman /SUGC

## Indian Institute of Engineering Science &amp; Technology, Shibpur

## Common Course Registration Form

Indian Institute of Engineering Science &amp; Technology, Shibpur

Student Name :

Academic Session: 20....-....

Department :

Semester No.....

Enrolment no. :

Semester: Autumn/Spring/Summer

Student registered e-mail:

CGPA till last Semester: .....

Backlog, if any: .....

Registration for Supplementary Examination/Courses (separate form should be submitted)

Core Theory (with code)	
Elective (with code)	
Open Elective(with code)	
Project/ Internship/Viva voce, Seminar, etc.	
Laboratory (with code)	

Endorsement by:

Signature of the Student

Academic Counsellor

Chairman DUGC

Dy Registrar (Academic)

### Unique Coding of a Course, Contact Hours and Credit

The name of a course will follow the identification pattern with Alpha-Numeric code.

Procedure for Subject Coding:

Code: WWXYZZ

WW: Department Code (e.g., EE/CE/ME etc.)

X: Year (1,2,3,4 for BTech; 5,6 MTech, MSc, MBA; 8 for PhD)  
(1,2,3,4,5 for BArch.; 6,7 for MPlan)

Y: Sem Code – 1 for odd semester and 2 for even semester

*Theory Courses*

ZZ: 01 – 20 – for Core Courses

21 – 60 – for Dept. Electives

61 – 70 – for Open Electives

*Laboratory / Practical / Project*

71 – 90 – Laboratory courses with weekly class loads

91 – 99 – Thesis/Project/internship/Viva etc., without weekly class loads

The contact hours and credits are also expressed in numeric. Contact hours may be for purely Lecture (L), Tutorial (T), and purely practical (P). viz. for a Civil Engineering UG 4<sup>th</sup> semester theory course: **Soil Mechanics** with 3 Lecture classes/week and a credit of 3 the code is **CE 2205** derived as follows:

Dept. Code		Year	Semester	Serial No		Title	L	T	P	C
A	A	N	N	N	N	C	N	N	N	N
C	E	2	2	0	5	Soil Mechanics	3	0	0	3

In the course curriculum, the class-hr & credit for the above course will be mentioned as: **3 0 0 3**.

Similarly, for a Civil Engineering UG 5<sup>th</sup> semester laboratory/practical course **Structural Engineering Lab** is shown as: **CE 3107** and its class-hr & credit will be mentioned as **0 0 3 2**.

Dept. Code		Year	Semester	Serial No		Title	L	T	P	C
C	E	3	1	0	7	Structural Engineering Lab	0	0	3	2

## Structure of the Curriculum

### *Four-Year B. Tech. Curriculum*

The structure of the curriculum consists of the courses as mentioned in section: 7.

About 13 Fundamental Courses (FC) introducing the student to the foundations of engineering and social sciences.

About 20 Departmental Core (DC) subjects enabling the students to take up a group of courses in his/her branch of study

About 2 Departmental Electives (DE) subjects and

About 2 Open Electives (OE) subjects offered by other departments;

About 24 laboratory/practical courses

Internship and project

In addition, a student should satisfactorily complete the prescribed non-credit courses on NCC/NSO/NSS/PT/Yoga/Physical education, etc. programme.

### Five-Year Dual Degree (B. Tech – M. Tech) Programme

The Dual Degree Programme structure has two basic parts – BTech and MTech. The structure of the B. Tech part has all the components as mentioned in Section 9.7.1. The M. Tech part is divided into two categories – Programme Core (PC) and Programme Elective (PE) in addition to MTech thesis.

### Curriculum Credit Ranges

The total credit in different parts of the curriculum structure of a department may vary, depending on the requirements of a particular Department. The possible ranges are mentioned below.

Degree Type	Fundamental Courses (FC)	Departmental Core (DC)	Departmental Elective (DE)	Open Elective (OE)	Project (PR)	Comprehensive Viva (CV)	Total
BTech.	57-60	103-110	6	6	10	2	184-194

Degree Type	Fundamental Courses (FC)	Departmental Core (DC)	Departmental Elective (DE)	Open Elective (OE)	Project and Thesis (PR)	Comprehensive Viva (CV)	Total
BArch.	21(7 courses)	85(31 courses)	6(2 courses)	6(2 courses)	44	2	179

Degree Type	Fundamental Courses (FC)	Departmental Core (DC)	Open Elective (OE)	Programme Core (M. Tech)	Thesis	Comprehensive Viva (CV)	Total
Dual Degree (BTech. –MTech.)	57-60	97-104	6	24-28	54	2	239-254



## Semester-wise Course Structure

4-year BTech Programme from 2019-20 session

## First Semester

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Mathematics – I		3	1	0	4	4	100
2.	Chemistry/Physics		3	0	0	3	3	100
3.	Intro to Computing/English Communication		3	0	0	3	3	100
4.	Ecology & Environment /Mechanics		3	0	0	3	3	100
5.	Basic Electronics /Basic Electrical		3	0	0	3	3	100
	Theory Sub-total		15	1	NIL	16	16	500
6.	Chemistry Lab/Physics Lab		0	0	3	2	3	50
7.	Electronics Lab/ Electrical Lab		0	0	3	2	3	50
8.	Drawing/Workshop		0	0	3	2	3	50
9.	Computer Lab/ English Lab		0	0	3	2	3	50
10.	NSS/NCC/PT/Yoga							
	Practical Sub-total		NIL	NIL	12	8	12	200
	First Semester Total					24	28	700

## Second Semester

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Mathematics – II		3	1	0	4	4	100
2.	Physics/Chemistry		3	0	0	3	3	100
3.	English Communication/Intro to Computing		3	0	0	3	3	100
4.	Mechanics/Ecology & Environment		3	0	0	3	3	100
5.	Basic Electrical/Basic Electronics		3	0	0	3	3	100
	Theory Sub-total		15	1	NIL	16	16	500
6.	Physics Lab/Chemistry Lab		0	0	3	2	3	50
7.	Electrical Lab/Electronics Lab		0	0	3	2	3	50
8.	Workshop/Drawing		0	0	3	2	3	50
9.	English Lab/Computer Lab		0	0	3	2	3	50
	Practical Sub-total		NIL	NIL	12	8	12	200
	Second Semester Total					24	28	700

**Third Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Mathematics – III		3	0	0	3	3	100
2.	Core Theory – I		3	1	0	4	4	100
3.	Core Theory – II		3	0	0	3	3	100
4.	Core Theory – III		3	0	0	3	3	100
5.	Core Theory – IV		3	0	0	3	3	100
	Theory Sub-total		15	1	NIL	16	16	500
6.	Core Lab/Pract – I		0	0	3	2	3	50
7.	Core Lab/Pract – II		0	0	3	2	3	50
8.	Core Lab/Pract – III		0	0	3	2	3	50
9.	Seminar/Minor Project		0	0	0	2	0	50
	Practical Sub-total		NIL	NIL	9	8	9	200
	Third Semester Total					24	25	700

**Fourth Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – V		3	0	0	3	3	100
2.	Core Theory – VI		3	1	0	4	4	100
3.	Core Theory – VII		3	0	0	3	3	100
4.	Core Theory – VIII		3	0	0	3	3	100
5.	HSS –II		3	0	0	3	3	100
	Theory Sub-total		15	1	NIL	16	16	500
6.	Core Lab/Pract – IV		0	0	3	2	3	50
7.	Core Lab/Pract – V		0	0	3	2	3	50
8.	Core Lab/Pract – VI		0	0	3	2	3	50
9.	Core Lab-VII /Minor Proj contd.		0	0	0	2	0	50
	Practical Sub-total		NIL	NIL	9	8	9	200
	Fourth Semester Total					24	25	700

**Fifth Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – IX		3	1	0	4	4	100
2.	Core Theory – X		3	1	0	4	4	100
3.	Core Theory – XI		3	0	0	3	3	100
4.	Core Theory – XII		3	0	0	3	3	100
5.	HSS – III		3	0	0	3	3	100
	Theory Sub-total		15	3	NIL	18	17	500
6.	Core Lab/Pract – VIII		0	0	3	2	3	50
7.	Core Lab/Pract – IX		0	0	3	2	3	50
8.	Core Lab/Pract – X		0	0	3	2	3	50
	Practical Sub-total		NIL	NIL	9	6	9	150
	Fifth Semester Total					24	26	650

**Sixth Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – XIII		3	1	0	4	4	100
2.	Core Theory – XIV		3	1	0	4	4	100
3.	Core Theory – XV		3	0	0	3	3	100
4.	Core Theory – XVI		3	0	0	3	3	100
5.	Core Theory – XVII		3	0	0	3	3	100
	Theory Sub-total		15	2	NIL	17	17	500
6.	Lab – XI		0	0	3	2	3	50
7.	Lab – XII		0	0	3	2	3	50
8.	Lab – XIII		0	0	3	2	3	50
	Practical Sub-total		NIL	NIL	9	6	9	150
	Sixth Semester Total					23	26	650

**Seventh Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – XVIII		3	0	0	3	3	100
2.	Core Theory – XIX		3	0	0	3	3	100
3.	Core Elective – I		3	0	0	3	3	100
4.	Open Elective – I		3	0	0	3	3	100
	Theory Sub-total		12	0	0	12	12	400
6.	Lab – XIV		0	0	3	2	3	50
7.	Lab – XV		0	0	3	2	3	50
8.	B. Tech Project/1		0	0	2	4	2	100
9.	Internship from 4 <sup>th</sup> /6 <sup>th</sup> Sem (Evaluation)		0	0	0	2	0	50
	Practical Sub-total		NIL	NIL	8	10	8	250
	Seventh Semester Total					22	20	650

**Eighth Semester**

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – XX		3	1	0	4	4	100
2.	Core Elective – II		3	0	0	3	3	100
3.	Open –Elective II		3	0	0	3	3	100
	Theory Sub-total		10	1	0	10	10	300
4.	B. Tech Project /2		0	0	2	8	2	200
5.	Seminar		0	0	0	2	0	50
6.	Comprehensive Viva		0	0	0	2	0	100
	Practical Sub-total		10	1	2	12	2	350
	Eighth Semester Total					22	12	650

This is the basic course structure. There may be small variations in credits depending on the requirements of a particular department. Credits in each semester may vary between 22-26.

## Semester-wise Course Structure

5-year Dual Degree BTech-MTech Programme from 2019-20 session

The course structure for 1<sup>st</sup> to 6<sup>th</sup> semester for Dual Degree is same as BTech curriculum for the respective semester.

## Seventh Semester (DD)

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	Core Theory – XVIII		3	0	0	3	3	100
2.	DD I		3	0	0	3	3	100
3.	DD II		3	0	0	3	3	100
4.	DD III		3	0	0	3	3	100
5.	Open Elective – I		3	0	0	3	3	100
	Theory Sub-total		15	0	0	15	15	500
6.	Lab – XIV		0	0	3	2	3	50
7.	Lab – XV		0	0	3	2	3	50
8.	Internship from 4 <sup>th</sup> /6 <sup>th</sup> Sem (Evaluation)		0	0	0	2	0	50
	Practical Sub-total		NIL	NIL	8	10	8	150
	Seventh Semester Total					22	21	650

## Eighth Semester (DD)

Sl. No	Course Name	Course code	Class Load/Week			Credit	Class load/ week	Marks
			L	T	P			
1.	DD IV		3	0	0	3	3	100
2.	DD V		3	0	0	3	3	100
3.	DD VI		3	0	0	3	3	100
4.	DD VII		3	0	0	3	3	100
5.	Open –Elective II		3	0	0	3	3	100
	Theory Sub-total		10	1	0	10	15	500
6.	M. Tech Project Part I (Term paper)		0	0	2	4	2	200
7.	Term paper seminar and viva voce		0	0	0	2	0	100
8.	Comprehensive Viva		0	0	0	2	0	100
	Practical Sub-total		10	1	2	12	2	400
	Eighth Semester Total					22	17	900

**Ninth Semester (DD)**

Sl. No	Course Name	Course code	Class Load/ Week			Credit	Class load/ Week	Marks
			L	T	P			
1.	DD VIII		3	0	0	3	3	100
	Theory subtotal		3	0	0	3	3	100
2.	M. Tech. Project Part II (Progress report)		0	0	0	12	0	300
3.	Progress report seminar and viva voce		0	0	0	6	0	100
	Practical Sub-total		0	0	0	18	0	400
	Ninth Semester Total					21	3	500

**Tenth Semester (DD)**

Sl. No	Course Name	Course code	Class Load/ Week			Credit	Class load/ Week	Marks
			L	T	P			
1.	M. Tech. Final Project (Thesis)		0	0	0	22	0	400
2.	Thesis seminar and viva voce		0	0	0	8	0	200
	Practical Sub-total		0	0	0	24	0	600
	Tenth Semester Total					24	0	600

DD are PG subjects for Dual Degree students.

Core theory are UG subjects – common with 4 year BTech

Open Electives are also common with BTech students.

## Semester-wise Course Structure

5 year BArch Programme from 2019-20 session

First Year (1<sup>st</sup> and 2<sup>nd</sup> Semester)

First Year: First Semester						
Code	Subject	Periods/Week			Marks	Credit
Theoretical Subjects		L	T	S		
HU11ZZ	English Communication	2	0	0	50	2
MA11ZZ	Mathematics IA (in lieu of Mathematics I)	3	0	0	100	3
AM11ZZ	Engineering Mechanics	3	0	0	100	3
AP1101	Design Fundamentals	3	0	0	100	3
AP1102	Materials & Methods of Construction I	3	0	0	100	3
	Sub total	14	0	0	450	14
Sessional Subjects						
HU11ZZ	English Lab	0	0	3	50	2
WS11ZZ	Workshop Practice	0	0	3	50	2
AP1180	Basic Design	0	0	6	150	4
AP1181	Architectural Delineation	0	0	3	100	2
AP1182	Descriptive Geometry I	0	0	6	150	4
	Sub total	0	0	21	500	14
TOTAL		35			950	28
SA 191A	Additional Elective NCC / NSS / Physical Training / Yoga	0	0	2	50	

First Year: Second Semester						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
MA12ZZ	Mathematics IIA (in lieu of Mathematics II)	3	0	0	100	3
CS12ZZ	Introduction to Computing	3	0	0	100	3
CE12ZZ	Environment and Ecology	2	0	0	50	2
AM12ZZ	Strength of Materials	3	0	0	100	3
AP1201	Evolution of Architecture I	3	0	0	100	3
AP1202	Materials and Methods of Construction II	3	0	0	100	3
	Sub total	17	0	0	550	17
Sessional Subjects						
CS12ZZ	Computer Lab	0	0	3	50	2
AP1280	Architectural Design Studio I	0	0	6	150	4
AP1281	Descriptive Geometry II	0	0	6	150	4
AP1282	Details of Construction Practice I	0	0	3	100	3
	Sub total	0	0	18	450	12
TOTAL		35			1000	29

**Second Year (3rd and 4th Semester)**

<i>Second Year: Third Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
CE21ZZ	Theory of Structures	3	0	0	100	3
CE21ZZ	Surveying	2	0	0	50	2
AP2101	Evolution of Architecture II	3	0	0	100	3
AP2102	Materials and Methods of Construction III	3	0	0	100	3
AP2103	Plumbing Services	3	0	0	100	3
AP2104	Climatology	2	1	0	50	2
	Sub total	16	1	0	500	16
Sessional Subjects						
AR 351	Architectural Design Studio II	0	0	9	200	6
AR 352	Details of Construction Practice II	0	0	3	100	2
AR 353	Computer Aided Design and Drawing	0	0	3	100	2
	Sub total	0	0	15	400	12
TOTAL		32			900	26

<i>Second Year (Part II): Fourth Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
CE22ZZ	Design of Structures I	3	0	0	100	3
EE22ZZ	Building Services I: Electrical Installations and Architectural Illumination	3	0	0	100	3
AP2201	Evolution of Architecture III	3	0	0	100	3
AP2202	Materials and Methods of Construction IV	3	0	0	100	3
AP2203	Introduction to Landscape Architecture and Site Planning	3	0	0	100	3
	Sub total	15	0	0	500	15
Sessional Subjects						
CE22ZZ	Surveying Practice	0	0	3	50	2
AP2280	Architectural Design Studio III	0	0	9	200	6
AP2281	Details of Construction Practice III	0	0	3	100	2
AP2282	Landscape and Site Planning Practice	0	0	3	50	2
AP2290	Educational TourI <sup>1</sup>	~12 days			50	2
	Sub total	0	0	18	450	14
TOTAL		33			950	29

<sup>1</sup>Educational Tour will be conducted in the month of December after completion of 3<sup>rd</sup> semester.



**Third Year (5th and 6th Semester)**

<i>Third Year: Fifth Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
CE31ZZ	Design of Structures I	3	0	0	100	3
ME31ZZ	Building Services II: HVAC, Lifts and Escalators	2	0	0	50	2
AP3101	Building Services III: Architectural Acoustics	2	0	0	50	2
AP3102	Evolution of Architecture IV	3	0	0	100	3
AP3103	Estimation and Specification	2	0	0	50	2
AP3130	Elective I : Core	2	0	0	50	2
	Sub total	14	0	0	400	14
Sessional Subjects						
AP3180	Architectural Design Studio IV	0	0	12	250	8
AP3181	Working Drawing I	0	0	3	100	2
AP3182	Estimation Practice	0	0	3	50	2
	Sub total	0	0	18	400	12
	TOTAL	32			800	26

<i>Third Year: Sixth Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
AP3201	Evolution of Architecture V	3	0	0	100	3
AP3202	Disaster Resistant Architecture	3	0	0	100	3
AP3203	Energy Efficient Architecture	3	0	0	100	3
AP3230	Elective II: Core	2	0	0	50	2
	Sub total	11	0	0	350	11
Sessional Subjects						
CE32ZZ	Structure Project	0	0	3	100	2
AP3280	Architectural Design Studio V	0	0	12	250	8
AP3281	Working Drawing II	0	0	3	100	2
AP3282	Interior Design Practice	0	0	3	100	2
AP3290	Educational Tour II <sup>2</sup>	~ 12 days			50	2
	Sub total	0	0	21	600	16
TOTAL		32			950	27

<sup>2</sup>Educational Tour will be conducted in the month of December after completion of 5<sup>th</sup> semester.

**Fourth Year (7th and 8th Semester)**

<i>Fourth Year: Seventh Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
AP4101	Theories of Architecture	3	0	0	100	3
AP4102	Project Management	3	0	0	100	3
AP4103	Professional Practice and Entrepreneurship Development	3	0	0	100	3
AP4104	Valuation of Real Properties	2	0	0	50	2
AP4130	Open Elective - I	3	0	0	100	3
	Sub total	14	0	0	450	14
Sessional Subjects						
AP4180	Architectural Design Studio VI	0	0	12	300	10
AP4181	Built Environment Monitoring Lab	0	0	3	100	2
	Sub total	0	0	15	400	12
	TOTAL	29			850	26

Fourth Year: Eighth Semester				
Code	Subject	Contact Periods	Marks	Credits
Sessional Subjects				
AP4290	Professional Training (Internship)	24 weeks duration	100	4
AP4291	Training Report	Examination only	50	2
AP4292	Training Viva-Voce	Examination only	50	2
	TOTAL		200	8

**Fifth Year (9th and 10th Semester)**

<i>Fifth Year: Ninth Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Theoretical Subjects		L	T	S		
AP5101	Principles of Human Settlements	3	0	0	100	3
AP5102	Housing	3	0	0	100	3
AP5103	Introduction to Urban Design	2	0	0	50	2
AP5104	Introduction to Architectural Conservation	2	0	0	50	2
AP5130	Open Elective - II	3	0	0	100	3
	Sub total	13	0	0	400	13
Sessional Subjects						
AP5180	Architectural Thesis Programming	0	0	3	100	2
AP5181	Architectural Design Project	0	0	12	300	10
AP5190	Grand Viva-Voce	Examination only			50	2
AP5131	Elective V: Core	0	0	3	100	2
	Sub total	13	0	18	550	16
	TOTAL	31			950	29

<i>Fifth Year: Tenth Semester</i>						
Code	Subject	Periods / Week			Marks	Credit
Sessional Subjects						
AP5280	Architectural Thesis I (1 <sup>st</sup> Review:100; 2 <sup>nd</sup> Review: 150; 3 <sup>rd</sup> Review: 200)	0	0	16	450	12
AP5290	Architectural Thesis II	Examination only			300	8
AP5291	Architectural Thesis Viva-Voce	Examination only			150	4
	TOTAL	0	0	16	900	24

## Indian Institute of Engineering Science &amp; Technology, Shibpur

## A Sample Grade Card

## THE GRADE CARD

Date: .....

Student Name :

Department Name:

Enrolment No. :

Following are the Marks and Grades obtained by the student in the ... **Semester/Summer Term** of the **Academic session 20.....-20.....** for which the examination was held in....., 20.....

Sl.	Paper Code	Subject name	Credit earned	Letter Grade
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
		Total credit earned		

SGPA:

CGPA:

Dy. Registrar (Academic)

# ORDINANCES FOR POSTGRADUATE PROGRAMMES

MTech/MSc/MPlan/MBA/DD/MS Programmes

FROM 2019 ONWARDS



July 2019

## Contents

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1. Introductory .....	1
2. The Postgraduate Programmes .....	6
3. Admission .....	8
4. Academic Session .....	10
5. Curriculum .....	11
6. Registration for Courses .....	13
7. Teaching .....	14
8. Evaluation System.....	15
9. Requirements for the Degree .....	19
10. Scholarships, Medals, Awards and Prizes .....	21
11. End Note.....	22

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The provisions contained in these ordinances govern the policies and procedures on the admission of students, imparting instructions of courses, conducting of examinations and evaluation and certification of student's performance.

These ordinances, on approval by the Board of Governors, shall be applicable to the students taking admission in 2019 and onwards.

For students admitted in earlier years, these ordinances are also applicable wherever eligible. But such applications shall be dealt with appropriately and carefully, so as to ensure that these students are not subjected to any unfair situation whatsoever. In case of any conflict with the present regulations and earlier regulations, rules those are in favour of these students shall be applicable.

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# Ordinances for Postgraduate Programmes

## (MTech/MSc/MPlan/MBA Programmes)

### 1. Introductory

In exercise of the powers conferred by section 28 of the National Institutes of Technology, Science Education and Research Act, 2007 (29 of 2007), the Senate of the Indian Institute of Engineering Science and Technology, Shibpur, hereby frames the following Ordinances for the conduct and regulation of postgraduate programmes of the Institute and for matters connected therewith.

#### 1.1 Short Title and Commencement

- 1) These Ordinances may be called the Ordinances for Postgraduate Programmes, 2019.
- 2) These shall come into force on such date as the Chairman, Senate, may appoint and different dates may be appointed for different provisions of these Ordinances and for different programmes.

#### 1.2 Application

These Ordinances shall apply to the following programmes of the Institute:

- 1) Master of Technology (MTech) programme
- 2) Master of Planning (MPlan) in Architecture, Town and Regional Planning,
- 3) Master of Science (MSc)
- 4) Master of Business Administration
- 5) Dual Degree (BTech – MTech)
- 6) Master of Technology Programme for Industry sponsored Candidates
- 7) Master of Science (MS) by Research
- 8) Any other programme to which the Senate, through a resolution, decides to apply these Ordinances.

Details of these programmes are mentioned in Section 2.

#### 1.3 Definitions

In these Ordinances, unless the context otherwise requires: -

**Academic Session** means academic session of the Institute Referred to in section 8 of these Ordinances;

**Act** means the National Institutes of Technology, Science Education and Research Act, 2007;

**Authorities, Officers and Faculty Members**, in relation to the Institute, respectively mean, the authorities, officers and faculty members of the Institute;

**Board** means the Board of Governors of the Institute;

**Central Government** means the Government of India;

**Degree** means the Degree of the corresponding Postgraduate Programme;



**Department or School or Centre** means an Academic Department or School or Centre, as the case may be, established to impart instruction or for carrying out or facilitating the academic and research activities relating to any particular area or discipline or areas of inter-disciplinary nature;

**Director** means the Director of the Institute referred to under Statute 17 of the Statutes;

**Head or Chair** in relation to a Department or School or Centre, as the Case may be, means the Head thereof;

**Institute** means the Indian Institute of Engineering Science and Technology, Shibpur;

**Notification** means any notification published under the authority of the Senate and includes all such notifications published under these Ordinances;

**Ordinances** means These Ordinances, i.e., The Ordinances for Postgraduate Programmes, 2019

**Programme** means an academic programme of the Institute;

**Regulations and bye-laws** means respectively regulations and byelaws made under these Ordinances.

**Rules** means the rules made under the Act;

**Senate** means the Senate of the Institute referred to under Statute 7 of the Statutes;

**Statutes** means the Statutes of the Indian Institute of Engineering Science and Technology, Shibpur, 2017 and shall include all the amendments made thereto;

**Student** means a student of the Institute pursuing any of the programmes to which these Ordinances apply;

**Supervisor** means a person appointed to supervise a Master's Thesis. A **Co-supervisor** means a person appointed to supervise a Master's Thesis in addition to a **Supervisor**.

Unless repugnant to the context, all other terms used in these Ordinances shall have the same meaning as defined in the Act and/ or Statutes.

#### 1.4 Abbreviations and Acronyms

In these Ordinances the following abbreviations and acronyms have been used to mean the expression mentioned against each of them:

- a) BOAC Board of Academics
- b) DD Dual Degree (BTech – MTech)
- c) DPGC Department Postgraduate Committee
- d) MBA Master of Business Administration
- e) MHRD Ministry of Human Resources Development
- f) MPlan Master of Planning
- g) MSc Master of Science
- h) MS Master of Science by Research
- i) MTech Master of Technology
- j) PG Postgraduate
- k) SPGC Senate Postgraduate Committee
- l) UG Undergraduate

## **1.5 Power of the Senate**

### **1.5.1 To Take Measures for Conduct and Regulation of the Postgraduate Programmes**

- 1) Subject to the provisions of these Ordinances, the Senate shall have the power to take all such measures as it deems necessary or expedient for the purpose of conducting and regulating the Postgraduate programmes of the Institute.
- 2) The Senate may, if it considers it necessary or expedient so to do for the purpose of these Ordinances, by a resolution adopted in a meeting of the Senate, constitute a standing committee or committees by such name or names as may be specified in the resolution, for the purpose of exercising and performing such of the powers and functions (including the power to issue directions) of the Senate under these Ordinances and for taking measures with respect to such of the matters referred to in sub-section (1.5.2) as may be mentioned in the resolution and subject to the supervision and control of the Senate and the provisions of such resolution, such standing-committee or standing-committees may exercise the powers or perform the functions or take the measures so mentioned in the resolution as if such standing-committee or standing-committees had been empowered by these Ordinances to exercise those powers or perform those functions or take such measures.

### **1.5.2 To Make Regulations**

For conduct and regulations of the programmes mentioned in Section (1.2) of these Ordinances, the Senate may make regulations consistent with these Ordinances for all or any of the following purposes, namely -

- 1) the admission of the students to any or all of the programmes mentioned in sub-section (1.2) of these Ordinances;
- 2) the courses of study to be laid down for the programmes mentioned in sub-section (1.2) of these Ordinances;
- 3) the conditions under which students shall be admitted to the degree programmes mentioned in Section(1.2) of these Ordinances and to the examinations of the Institute, and shall be eligible for degrees and diplomas;
- 4) the conditions of award of the fellowships, scholarships, exhibitions, medals and prizes;
- 5) the conditions and mode of appointment and duties of examining bodies, examiners and moderators;
- 6) the conduct of examinations;
- 7) the maintenance of discipline among the students of the Institute; and
- 8) any other matter which by the Act or the Statutes is to be or may be provided for by the Ordinances.

## **1.6 Committees and Officials**

The academic programmes of the Institute shall be governed by Rules and Regulations approved by the Senate from time to time. The Senate is the highest statutory and the supreme academic body of the institute that governs all academic matters of the Institute, and the rulings of Senate Chairman (Director of the Institute) are final in regard to all academic issues. A definite time schedule is set by the Senate for various academic activities, through an Academic Calendar issued at the beginning of each academic year. The Senate continuously assesses the academic programmes and makes appropriate revisions/ modifications/ improvements as and when required through different Standing Committees of the Senate.

### **1.6.1 Senate Postgraduate Committee (SPGC)**

The Senate Postgraduate Committee (SPGC) shall be a standing committee constituted by the Senate to coordinate and supervise all Doctoral, Postgraduate and Dual Degree programmes of the Institute. The SPGC

shall work under the overall guidance, supervision and control of the Senate, and the decision of the Senate shall be final in all matters.

The SPGC shall make such recommendations on academic matters, including policy matters, for conduct of the programmes listed in Section (1.2), as it may deem necessary or expedient to the Senate, provided that no recommendation on policy matters shall be made without consulting Dean (Academic).

In particular, the powers, functions, duties and responsibilities of the SPGC shall be as below:

- 1) To consider the recommendations of BOACs for introduction of new courses and/ or modification/ revision of course contents or credits of existing courses, and recommend suitable action to the Senate;
- 2) To propose modifications of the criteria for admission to any or all of the postgraduate programmes of the Institute;
- 3) To Propose modification of the format for presentation and preparation of Masters' thesis and mode of evaluation of oral and written examination;
- 4) To Consider cases of irregularities or grievances of Masters' students referred to it by a DPGC;
- 5) To Consider any other issue referred to it by a DPGC or the Senate.

The SPGC shall meet as often as necessary, but ordinarily not less than twice during a semester. The SPGC shall be assisted by the various DPGCs.

Constitution of SPGC is mentioned in Annexure – I.

#### **1.6.2 Departmental Postgraduate Committee (DPGC)**

For every Department, there shall be a committee named the Departmental Postgraduate Committee (DPGC). The DPGC shall work under the Senate Postgraduate Committee (SPGC). The duties and responsibilities of the DPGC shall include the following.

- 1) To provide academic guidance to the students pursuing a master degree programme that falls in its ambit. Such guidance may include providing counsel to the students in academic matters like selection of courses in a Semester etc.
- 2) To Assist the Head in allotment of Masters' Open Electives/ selection of Project Supervisors.
- 3) To Introduce/ revise courses in a course offered in a specialization area with prior approval of the Board of Academics (BOAC) and the Senate.
- 4) To address/ redress problems of postgraduate students as and when referred to it by the Head of Department or School or Centre as the case may be, or by the DFC concerned.

A DPGC may refer any issue to SPGC, if necessary. The Composition of every DPGC shall be as prescribed in Annexure – I.

#### **1.6.3 Departmental Faculty Committee (DFC)**

For every Department, there shall be a committee, namely, the Departmental Faculty Committee (DFC) consisting of all the regular faculty members of the Department/ School/ Centre concerned.

#### **1.6.4 Board of Academics (BOAC)**

Each Department shall have a Board of Academics (BOAC) consisting all faculty members of the Department and Experts from Industries and Premier Academic Institutes. Course curriculum and syllabi of the courses of any programme offered by the Department will be examined and duly recommended by the BOAC for

subsequent approval by the Senate. Any new course or programme to be offered by the Department should also be examined and recommended by the BOAC before submission through SPGC to the Senate for approval.

#### **1.6.5 Academic Section**

The office of the Dean (Academic), hereinafter called the **Academic Section**, shall act on the followings as per the advice of the Senate and the SPGC.

- 1) To receive and process records related to the postgraduate programmes including a list of such Programmes offered, the respective programme curricula, data and information relating to student registration, leave documents etc.;
- 2) To maintain students' roll in respect of the programmes listed in sub-section (2) of section- 1.
- 3) To receive and compile information from the Examination Section about examination results and grades and award of degrees and medals/ prizes;
- 4) To disseminate information pertaining to the programmes to appropriate students;
- 5) To issue specific orders as and when necessary;
- 6) To coordinate actions among students, particularly in relation to the multidisciplinary and interdisciplinary programmes;

The academic section shall also render ministerial assistance and such other services to the SPGC as may be requisitioned by the SPGC.

#### **1.6.6 Academic Counsellor**

Every student pursuing an academic programme listed in Section (1.2), shall be allotted to an academic counsellor suited to the programme pursued by her/ him. The Academic Counsellors help the students in selection of their courses and monitor their academic performances. Initially, the DFC shall allot an Academic Counsellor for each PG specialization. Once a Supervisor is appointed for the postgraduate student, the Supervisor will act as the Academic Counsellor. A student may approach the administrative structure, through the DPGC with advice and recommendations from his/her Academic Counsellor.

## 2. The Postgraduate Programmes

The postgraduate programmes of the Institute shall be offered under the aegis of the different Departments as mentioned below.

### 2.1 Master of Technology (MTech)

<b>MTech Programme in</b>	<b>Offered by</b>
a) Aerospace Engineering	Department of Applied Mechanics and Aerospace Engineering
b) Civil Engineering	Department of Civil Engineering
c) Computer Science and Technology	Department of Computer Science and Technology
d) Electrical Engineering	Department of Electrical Engineering
e) Electronics and Telecommunication Engineering	Department of Electronics and Telecommunication Engineering
f) Information Technology	Department of Information Technology
g) Mechanical Engineering	Department of Mechanical Engineering
h) Metallurgy and Materials Engineering	Department of Metallurgy and Materials Engineering
i) Mining Engineering	Department of Mining Engineering
j) Green Energy and Sensor Systems	Centre of Excellence for Green Energy and Sensor Systems
k) Healthcare Science and Technology	Centre for Healthcare Science and Technology
l) Materials Science and Engineering	Dr. M.N. Dastur School of Materials Science and Engineering
m) Mechatronics and Robotics	School of Mechatronics & Robotics
n) VLSI technology	School of VLSI Technology

### 2.2 Master of Planning (MPlan)

This programme is offered by the Department of Department of Architecture, Town and Regional Planning.

### 2.3 Master of Science (MSc)

<b>MSc Programme in</b>	<b>Offered by</b>
a) Applied Mathematics	Department of Mathematics
b) Applied Geology	Department of Earth Science
c) Chemistry	Department of Chemistry
d) Physics	Department of Physics
e) Food Processing and Nutrition Science	School of Community Science and Technology

### 2.4 Master of Business Administration (MBA)

This programme is offered by the School of Management Sciences.

### 2.5 Dual Degree (BTech - MTech)

<b>Dual Degree (BTech-MTech) Programme in</b>	<b>Offered by</b>
a) Aerospace Engineering	Department of Applied Mechanics and Aerospace Engineering
b) Civil Engineering	Department of Civil Engineering
c) Computer Science and Technology	Department of Computer Science and Technology
d) Electrical Engineering	Department of Electrical Engineering
e) Electronics and Telecommunication Engineering	Department of Electronics and Telecommunication Engineering
f) Information Technology	Department of Information Technology
g) Mechanical Engineering	Department of Mechanical Engineering

h) Metallurgy and Materials Engineering

Department of Metallurgy and Materials Engineering

i) Mining Engineering

Department of Mining Engineering

## **2.6 Master of Technology Programme for Industry sponsored Candidates**

The Institute may offer three-Year Master Degree Programmes in Engineering/ Technology. The programmes shall be open to industry sponsored candidates only.

## **2.7 Master of Science (MS) by Research**

The Institute will offer Master of Science (MS) by Research Programme in the future.

## **2.8 Duration of Programmes**

Unless otherwise decided by the Senate, durations of the various postgraduate programmes will be as follows–

<b>Programme</b>	<b>Duration</b>
Master of Technology	Two years
Master of Science	Two years
Master of Planning	Two years
Master of Business Administration	Two years
Dual-Degree (BTech – MTech)	Five years
Master of Technology Programme for Industry sponsored Candidates	Three years
Master of Science (MS) by Research	Two years

## **2.9 Introduction of New Programmes**

On the recommendation of the Senate and final approval by the Board, the Institute may introduce such other postgraduate degree or diploma programme(s).

### 3. Admission

#### 3.1 Admission Office

The institute shall have a Postgraduate Admission Office (under the Dean-Academic) that will look after the entire admission procedure for the Postgraduate programmes.

#### 3.2 Admission Criteria

The admission criteria for admission to the postgraduate programmes of the Institute shall be decided, and, as and when necessary be modified by the Senate. For stipulating the criteria, the Senate shall take into cognizance the guidelines, if any, issued by the Ministry of Human Resource Development (MHRD), Government of India (GoI).

#### 3.3 Admission Procedure

The procedure to getting admission to the various postgraduate programmes are outlined below.

Programme	Procedure
MTech, MPlan	The students in the respective disciplines who have already graduated or have freshly passed out of their graduation studies are selected through the Centralized Counseling for MTech/ MPlan (CCMT) screenings on the basis of their GATE score/rank.
MSc	The students completing a Three-year B.Sc. Programme are selected through the Centralized Counseling for MSc (CCMN) on the basis of their JAM scores.
MBA	Students having a bachelor's degree in engineering, science, humanities, arts, commerce, business administration with requisite CGPA/marks as decided by the Senate, and a valid MAT/CMAT/CAT/XAT/GMAT score, are selected through a written test followed by interview.
Dual Degree (DD)	Graduate students fulfilling the eligibility criterion in (section 4.2 of UG Regulation) are selected through a written test and/or interview as decided by the authority from time to time.

#### 3.4 Direct Admission

On the recommendation of the SGPC and subject to approval of the Senate, a limited number of students may be offered direct admission to the academic programmes governed under these ordinances. Direct admission may be offered to the following category of candidates.

- 1) The candidates selected by the All India Council for Technical Education (AICTE) under its Quality Improvement Programme (QIP) Scheme.
- 2) Foreign nationals recommended for admission to a postgraduate programme at the Institute by the Indian Council for Cultural Relations, Government of India.
- 3) Foreign nationals or persons of Indian origin or overseas citizens of India, recommended for admission to a postgraduate programme at the Institute under a scheme of the Ministry of External Affairs (MEA), Government of India or by any other ministry of the Government of India.
- 1) Such other category of candidates as may be decided by the Senate from time to time.

#### 3.5 Availability of Seats

Each year, before admission to the postgraduate programmes, the actual number of seats available in each of the programmes mentioned in Sections (2.1 to 2.5) will be decided by the SPGC following MHRD / other

Council instructions, and will be subsequently approved by the Senate. The Institute will follow policies of reservation of seats in various categories as per the existing instructions of the Central Government.

### **3.6 Provisional admission**

A student who qualifies for admission to a programme following the procedure outlined in Section 3.3, gets a provisional admission to the said programme, subject to the availability of seats as mentioned in Section 3.5. The student can be admitted to the programme after depositing the requisite amount of fees. The candidate needs to register for the first semester after depositing the fees, otherwise the offer of admission will be invalid.

### **3.7 Cancellation of Admission**

- 1) All students admitted provisionally or otherwise to any programme shall submit prescribed documents by the last date specified for the purpose by the Academic Section. If any student fails to submit the prescribed documents by the specified date or to meet other stipulated requirement(s), his/her admission shall be cancelled.
- 2) If it is detected at any stage of the programme that the candidate resorted to falsehood or adopted any unfair means for securing admission to a programme the admission shall stand cancelled.

Whenever a *prima facie* case of such a falsehood or unfair means is known, the matter shall be referred to the SPGC. On its being satisfied about the offence committed, the SPGC shall recommend cancellation of the admission to the Senate, which shall take a final decision on the matter.

All admissions and cancellation of admissions to the programmes shall be reported by the SPGC to the Senate for approval.

### **3.8 Withdrawal from Programme**

A student may discontinue her/ his study in a Programme at any point of time by making an application for the same in the prescribed format (**Annexure II**) and by completing such other official procedure as may be prescribed by the Dean (Academic).



## **4. Academic Session**

### **4.1 Duration**

The academic session normally runs from mid-July in one year to the mid-July in the next year. It is divided into three parts:

- a) Odd semester Middle of July to middle of December
- b) Even semester End of December/beginning of January to middle of May
- c) Summer Term Middle of May to middle of July

### **4.2 Semester Weeks**

Each of the two semesters (Odd and Even) consists of about eighteen weeks including i) class-weeks (13 weeks) devoted to teaching and continuous evaluation of theory and practical subjects, ii) examination (2 weeks), iii) publication of results (2 weeks) and iv) Fests, Sports and Holidays (1 week). All such activities throughout the semester will be displayed in the **Academic Calendar**.

### **4.3 Summer Term**

The duration of the summer term shall be of eight weeks from the middle of May to the middle of July. The dates of the Summer Term in an academic-session shall be decided by the Senate and shall be shown in the Academic Calendar. Students with backlog theory papers from previous odd and/or even semester(s) may appear in the supplementary examination in the summer term.

There shall be no vacation period for the postgraduate students. Unless otherwise stated, the students will work for their project work or other assignments during the Summer Term.

### **4.4 Regular Examinations**

For programme mentioned in Section 1.2, there shall be both mid-semester and end-semester examinations.

### **4.5 Supplementary Examinations**

Supplementary Examinations shall be held only in the Summer-Term. A student may be allowed to clear her/his backlog papers of both odd-semester and even-semester in a session by appearing in the supplementary examinations.

### **4.6 Academic Calendar**

The dates of all academic activities including semester registration, the first and the last days of classes, mid-term break, mid-term examination, end semester examination, Fest days, holidays and vacations, are published in the Academic Calendar every year by the Academic Section as approved by the Senate. The Academic calendar will be available on the Institute website.

## 5. Curriculum

Every Department has a prescribed course structure which, in general terms is known as the Curriculum. It prescribes all the Theory courses/Laboratory courses/Projects and other requirements for the degree. It also gives the syllabus and a list of text/ reference books for each course. These courses/syllabi are updated regularly and are made available at the Institute Website.

Any faculty member can offer a new course by submitting a new course proposal to the concerned DPGC chairman. The course is to be recommended by the BOAC for approval of the senate.

### 5.1 Courses

The courses in a discipline are broadly classified as Theory Courses and Laboratory Courses. Theory courses consist of lecture (L) and tutorial (T) hours and may have attached practical (P) hours in special cases while Laboratory courses may have only practical (P) class hours.

Each department offers several specializations in the corresponding Master's programme.

The entire curriculum is divided into various set of courses: –

- a) **Core Courses (CC):** This is a compulsory set of courses in a particular specialization.
- b) **Departmental Electives (DE):** These are elective courses that students have to take from within their parent department.
- c) **Open Electives (OE):** These are elective courses that students have to take from outside their parent department.
- d) **Laboratory:** The laboratory papers are based on some of the theory papers for which experimental, design or other field support is required.
- e) **Project/Seminar:** Students are to take some projects as practical work in different stages of their curriculum.
- f) **Master's Thesis:** In the thesis, a student, under the guidance of a faculty member, is required to do some innovative/practical work individually. This is normally done in the last three semesters and exact duration may slightly differ across the programmes.
- g) **Additional Courses:** A student may take additional courses over and above the curriculum requirement, either available as Institute/Departmental courses or online courses (NPTEL/MOOCs, etc). Credits earned by the student from such courses will not be used to calculate the CGPA/SGPA of the student, but will be shown in the Grade Card as additional credits earned.

The list of subjects (as per the course structure in Annexure-III) to be offered by a Department will be finalized by the Academic Section in consultation with the respective DPGC well before the date of registration.

#### 5.1.1 Master's Thesis

Normally the last year of a 2-year Master's Programme is devoted on project/thesis work working towards innovative research. This work is submitted as an original document prepared by the student known as "Master's Thesis". The duration of the project work in a programme is guided by the respective course structures.

- a) The respective Department/DPGC will allot a supervisor from the faculty members of the Department to every student at the beginning of the second Semester through a transparent procedure. The student continues to work under guidance of his/her allotted supervisor during the subsequent semesters.

- b) Normally a student will be allotted one supervisor. However, if the DPGC feels, a Joint Supervisor may be allotted.
- c) The student is allowed to appeal to the DPGC for a change of Supervisor for any valid reason. However, the decision of the DPGC will be final.
- d) In case the selected supervisor is absent for more than three months or is unable to continue to work/resigns/retires, the DPGC will appoint another supervisor from the Department so that the Master's Thesis of the student is not discontinued.
- e) The student is expected to acknowledge works taken from the existing literature.
- f) A postgraduate student submits an original document in the form of a "Term Paper" report, duly endorsed by his/her supervisor(s), at the end of the second Semester which may be related to his/her project. He/she is evaluated for his/her Term Paper on the basis of the submitted report along with a seminar and viva voce before the Board of Examiners of each specialization as decided by DPGC.
- g) A postgraduate student submits an original document in the form of a "Progress Report", approved by his/her supervisor, at the end of the third Semester of his/her Master's Programme. He/she is evaluated for his/her "Progress Report" on the basis of the submitted report along with a seminar and viva voce before the Board of Examiners of each specialization as decided by DPGC.
- h) At the end of the last semester of the programme, a postgraduate student submits her/his "Master's Thesis", endorsed and approved by her/his supervisor(s), in a standard format approved by the Senate. After submission of the Thesis, the student should present the "Master's Thesis" before a Board of Examiners of each specialization as decided by DPGC which must consist of one external expert, and the project supervisor(s).
- i) Marks/Grades will be awarded for "Term Paper", "Progress Report" and "Master's Thesis" by the respective Examination Boards and the same will be duly forwarded to the Academic Section.
- j) If the progress made by a student in his Project/Thesis, as judged by his/her supervisor, is found to be unsatisfactory, he/she may not be allowed to submit any report/thesis and may have to extend his/her work as decided by the DPGC.
- k) In case of Two-years Master's Programmes, if a student gets offer of a job from a reputed organization after successful completion of third semester and if he/she having CGPA more than 7.0, he/she may appeal to Head of Department to continue his / her study for thesis work of the fourth semester externally, provided a qualified domain expert is available in that organization who will be able and agreed to guide the student for the thesis work as a joint supervisor. The DPGC and thereafter SPGC will review the application on case to case basis. If the DPGC and SPGC feel that it would be possible to continue without full time involvement in the Institute and the supervisor(s) strongly recommends the same, he/she may be permitted to work externally. The student will have to apply for external registration, and he/she will not be eligible to draw any scholarship further. The student will have to submit the thesis within next one year.

## **6. Registration for Courses**

### **6.1 Registration during Admission**

All admitted students must register for all the specified courses on payment of requisite fees within the scheduled date as mentioned in the admission brochure/ notified on the Institute website.

### **6.2 Semester Registration**

- a) For every student, registration for the courses before the beginning of each semester is mandatory till he/she completes his/her entire course of study.
- b) The registration is done on remittance of the requisite fees within the prescribed dates announced in the Academic Calendar/Institute website.
- c) The subjects to be pursued will be suggested by the Academic Counsellors from the respective departments.
- d) If a student does not register in a particular semester without prior permission of the SPGC, his/her studentship is liable to be cancelled.
- e) Without registration, a student will be debarred from all academic activities (courses/ seminars /projects etc.) in a semester and the student will be declared failed in all the courses of that semester.

### **6.3 Procedure for Registration**

The registration schedule will be mentioned in the Academic Calendar. The registration process generally starts before the commencement of each semester. However, registration after the last date may be allowed with a 'Late Fee'. In all circumstances, semester registration must be completed on or before the prescribed last date for registration.

The registration process is to be followed as per the existing practice of the Institute – either online or manual. The student has to fill a Course Registration Form (CRF) for the courses that the student is required to pursue in that semester. The Common Course Registration Form is shown in **Annexure-VIII**.

### **6.4 Late Registration**

In special cases, on the ground of severe illness or some exigencies in the family of the student, if a student fails to contact the academic counsellor and/or avail the online facility/ institute portal in due time, the student may apply to the Chairman, DPGC through his/her academic counsellor with supporting documents/ medical certificates for late registration. The application will be processed through the Academic Section and sent to the SPGC for approval. In such cases, the student may be allowed by the SPGC to register late even after the commencement of semester classes (latest by one month) with payment of a late registration fee.

### **6.5 Cancellation of Registration**

A teacher of a course may recommend cancellation of registration of any student in that course for inadequate attendance without proper authorization.

## **7. Teaching**

### **7.1 Medium of Instruction**

The medium of instruction and examination will be English for all students admitted to the various postgraduate programmes.

### **7.2 Class Timings**

The Institute follows a 5 days per week schedule. Regular classes are held from Monday through Friday from 9 am to 4:35 pm. No classes are scheduled beyond this time period on a regular basis. Lecture/Tutorial classes are usually scheduled in 55-minute slots and lab classes are usually scheduled in 3 class-hours (165 minutes) slots. No classes are usually held on Saturdays and Sundays, unless announced by the Institute on recommendation of the Senate to make up for some holidays due to exigent conditions.

### **7.3 Extra Classes**

Extra classes may be scheduled by the teacher of a course, in case he/she cannot complete the allotted number of lecture-hours for the course, if he/she misses the scheduled classes due to repeated holidays on class-days or due to his/her leave or any other exigencies. Extra classes should be scheduled in consultation with the students registered in the course at a time mutually convenient to everyone.

### **7.4 Attendance**

- a) The attendance of a student in a course should not fall below 75% of total number of classes held for that course in the semester.
- b) The teacher of a course will inform the students about the status of their attendance in a subject after the mid-semester examination. The teacher will send the list of students having attendance less than 75%, one week before the end-semester examination, to the Academic Section for necessary action.
- c) Students having attendance below 75% in a course will be de-registered for that course. He/she will be debarred from appearing in the semester examination for that course and will be awarded a **DR** grade for that course.

### **7.5 Absence due to any Genuine Reason**

If a student's attendance in one or more of the courses falls below 75% because of her/his inability to attend the classes owing to reasons acceptable to the SPGC, the SPGC may, subject to such conditions as it may specify, condone the absence and allow the student to sit for the semester examinations. The reasons that may be considered by the SPGC for excusing the absence may include, but need not be limited to, the following.

- a) Prolonged illness or serious accident suffered by the student
- b) Some assignments vested on the student by the Institute during the class-days to participate in any inter-institute sports, tech-fests, campus interviews etc.
- c) Any other reason that the SPGC may consider condonable.

A student who seeks condonation of her/his absence on any of the above grounds may apply for the same to the Chairperson, DPGC through the Academic Counsellor/ Institute Infirmary/ Dean of Students Welfare/ Head of HRM Dept, as the case may be, with proper supporting documents. The Chairman DPGC may forward the application, along with her/ his comments and observations to the SPGC for consideration. The SPGC shall take an appropriate decision before the commencement of the semester examinations.

## 8. Evaluation System

### 8.1 Evaluation for Theory Courses

The evaluation of students' performance in a theory course is a continuous process. A Student's performance in theory papers will be evaluated through Internal Assessment and an End-Semester Examination.

#### 8.1.1 Regular Examinations

In any semester, for theory courses there will be mid-semester examinations and end-semester examinations, conducted centrally by the Academic Section. Mid-semester examinations will be held in the middle of a semester, generally after completion of the first six to seven weeks of study. End-semester examinations will be held after the completion of the course. The dates of such examinations will be displayed in the Academic calendar.

#### 8.1.2 Internal Assessment

- a) The Internal Assessment has two components – i) performance in mid-semester examination and Teacher's assessment.
- b) The Teacher's assessment may have the following components – class tests, quizzes, home assignments, group assignments, viva-voce etc. as per the teacher's discretion.

#### 8.1.3 Weightages

A typical distribution of relative weightage for the various modes of assessments is mentioned below. The course teacher will inform the students about these weightages at the start of the semester.

- |  |     |
|--|-----|
| a) Internal Assessment   |     |
| i) Mid-semester examination  | 30% |
| ii) Class Test/ Quiz/ Viva-voce/ Assignments/<br>Presentation etc. as per Teacher's discretion | 20% |
| b) End-semester Assessment   | 50% |

For any student, appearing in the end-semester examination is mandatory.

To ensure the principle of continuous evaluation, it is recommended that the Teacher will conduct at least two quizzes/ class tests, one before the mid-term examination and other between the mid-term and the end-semester examination. If a student fails to appear in a mid-semester examination or class test or quiz, or submit an assignment etc., it is entirely up to the Teacher to judge about validity of the reason and decide whether or not to provide a make-up opportunity.

### 8.2 Evaluation for Laboratory Courses

The assessment in a laboratory course will be based on continuous evaluation of the student's weekly performance in laboratory experiments/ work, quality of their reports and a final performance in a semester-end test that contains experiment/quiz/test/viva-voce. The semester-end test on laboratory course will normally be held a week before the end-semester theory examinations. For any student, appearing in the end-semester test is mandatory.

#### 8.2.1 Weightages

A typical distribution of the relative weightage for these modes of assessments may be as follows.

- |  |     |
|--|-----|
| a) Regular performance in laboratory works | 30% |
| b) Quality of laboratory reports           | 30% |
| c) Semester-end test                       | 20% |
| d) Viva-voce/Teacher's Assessment          | 20% |

The course teacher will inform the students about these weightages at the start of the semester.

### 8.3 Evaluation of Projects and Seminars

Projects will be evaluated based on the performance of a student throughout the semester. These projects are performed by the students and need regular interaction (at least once a week) with the supervisor. At the end of the semester the student should submit a project report duly approved by the supervisor, and present the same through a seminar cum viva-voce before a board duly constituted by the department. In the report, the student should duly acknowledge the sources of any existing literature to avoid plagiarism.

#### 8.3.1 Weightages

A typical distribution of relative weightage may be as follows.

- a) Supervisor's Assessment (Project work + Report + Seminar) 60%
- b) Supervisor's Assessment (Report + Seminar) 40%

### 8.4 Display of In-Semester Performance

In-semester performances in Mid-semester exam, quiz/ class test/ viva etc. of all students must be displayed/ communicated by the course teacher to the students before the commencement of the end-semester examination.

### 8.5 Disclosing the Evaluated Answer Scripts

The evaluated answer scripts of the end-semester examination of a subject have to be displayed to the students within the date, as mentioned in the Academic Calendar.

### 8.6 Retention of Answer Scripts

Evaluated answer scripts are to be preserved by the Teacher/ Departmental Office at least for one year.

### 8.7 Grade Card

- a) At the end of a semester examination, or supplementary examination, the teacher of a theory course will evaluate the end-semester answer-scripts and make online entry of the internal assessment marks and end-semester marks. For laboratory and other courses also, the concerned teacher will make online entry of marks obtained by the students in such courses. The teacher will also send a signed award sheet to the Academic Section within the scheduled date.
- b) The Academic Section will compile the marks and a letter grade will be awarded to the student for each course. A Grade Card will be prepared for each student showing the grades obtained by the student in each course and corresponding credit for the course. The Grade Card will also show the semester grade point average (SGPA) value and semester grade point average (CGPA) value obtained by the student.

#### 8.7.1 Letter Grade

- a) As a measure of students' performance, a 10-scale grading system using the following letter grades and corresponding grade points per credit will be followed for theory courses.

Performance	Marks Obtained (%)	Letter Grade	Grade Point Credit
Excellent	90 to 100	A+	10
Very Good	80 to 89	A	9
Good	70 to 79	B	8
Fair	60 to 69	C	7
Average	50 to 59	D	6
Pass	40 to 49	P	5
Fail	< 40	F	0
Incomplete	–	I	–
De-registered	–	DR	–

- b) For practical courses including laboratory courses, projects, seminars, viva-voce, etc., the 'P' grade is at 50%. Students who obtain marks less than 50% will be awarded 'F' grade. Definition of all other grades remains same.
- c) A student shall be awarded the grade 'I' (Incomplete) in a course if she/he fails to attend the end-semester examination. The candidate has to appear in supplementary examination for converting it into quantifiable letter grade.
- d) The course in which a student obtains 'F' or 'DR' grade will be a 'Backlog' course for the student. A backlog can be cleared by appearing in a supplementary examination. The internal assessment marks obtained by the student for the course will be retained. A student shall not be allowed to appear for more than two backlog courses in the supplementary examinations held in a summer term.
- e) If a student has missed, for a genuine reason, a minor part of the course requirement but has done satisfactorily in all other parts, he/she may be awarded the grade 'I' (Incomplete) in that course. An 'I' must, however, be converted by the Teacher into an appropriate letter grade and communicated to the Academic Section Office by the last date specified in the Academic Calendar. Any outstanding 'I' after this date shall be converted automatically into an 'F' grade.

### 8.7.2 Change of an Already Awarded Grade

The marks and the letter grades once awarded shall not be changed unless a request for change of marks is made by the teacher of the course, and is accepted by the Chairman-SPGC. Any such request for a change of grade must be made within two weeks from the publication of results.

### 8.7.3 Semester/Summer term Grade Point Average (SGPA)

A Semester Grade Point Average (SGPA) will indicate the performance of the student in a semester and the summer term to which it refers. It will be computed as follows.

$$SGPA = \frac{\sum_{i=1}^n c_i g_i}{\sum_{i=1}^n c_i}$$

where  $n$  is the number of courses the student registered in the semester/summer term,  $c_i$  is the number of credits allotted to the  $i$ -th course and  $g_i$  is the grade points awarded to the student for the  $i$ -th course. The calculated SGPA will be rounded off to the second place of decimal and recorded as such.

### 8.7.4 Cumulative Grade Point Average

Starting from the second semester, the Cumulative Grade Point Average (CGPA) would indicate the cumulative performance of the student from the first semester up to the semester/summer term to which it refers and will be computed as follows.

$$CGPA = \frac{\sum_{i=1}^m c_i g_i}{\sum_{i=1}^m c_i}$$

where  $m$  is the number of courses the students registered from first semester up to and including the semester/summer term concerned,  $c_i$  is the number of credits allotted to the  $i$ -th course and  $g_i$  is the grade points awarded to the student for the  $i$ -th course. The calculated CGPA will be rounded off to the second place of decimal and recorded as such. The CGPA, SGPA and the grades obtained in all the subjects in a semester will be shown in the Grade Card to be delivered to every student at the end of every semester.

## 8.8 Conversion of CGPA into Percentage Marks

In case of a specific query by a student/employer/any other Institute regarding conversion of CGPA into percentage marks, the following formula may be adopted for notional conversion of CGPA into percentage marks.



$$\% \text{ Marks} = (\text{CGPA} - 0.5) \times 10$$

### 8.9 Declaration of the Result

- a) The Academic Section will place the results of the examinations in a meeting of SPGC to decide about declaration. The grades earned by a student in a semester/summer term shall be communicated to him/her in the form of a printed copy of Grade Card. A sample Grade Card (sheet) is shown in **Annexure- V**. The rank of a student will be decided based on CGPA obtained by him/her.
- b) Grade Card of a student may be withheld if he/she has not paid his/her dues, or if there is a pending disciplinary action against her/him, or for any other appropriate reason as per the directives of the Senate.

### 8.10 Provisional Certificate

The Academic Section will duly issue a certificate to declare that the student is provisionally admitted to the degree of MTech/ MPlan/ MSc/ MBA/ MS with effect from the date of the publication of result for the final examination provided the rest of the official procedure is completed by the student.

### 8.11 Degree Certificate

The name of the student admitted to the Degree of the MTech/ MPlan/ MSc/ MBA/ MS is to be approved by the Senate for conferring the formal degree in the next convocation of the Institute. A degree certificate duly signed by the competent authority will be awarded to the student.

### 8.12 Transcripts

Students may apply for the transcripts for the courses pursued in different semesters, if required by other Institutes. The transcript will show the final grades and credits obtained in all courses, semester-wise, showing the date on which the credit was actually credited.

## **9. Requirements for the Degree**

### **9.1 MTech, MPlan, MSc, MBA, Dual-Degree (BTech – MTech), MS**

In order to qualify for an MTech, MPlan, MSc, or MBA Degree of the Institute covered under this Regulations a student must:

- a) Complete all the credit requirements for the degree as laid down in the prescribed curriculum of the discipline.
- b) Obtain a CGPA of 5.00 or higher at the end of the semester in which he/she completes all the requirements for the degree.
- c) Have cleared all dues to the Institute, the Halls of Residence, the Library, other facilities and the Department.

### **9.2 Course Completion Time**

A student should complete all the requirements for an MTech, MPlan, MSc, MBA, Dual-Degree (BTech – MTech) or MS Degree within the specified durations of the Programmes mentioned in section 2.8. However, under exceptional cases, as per the discretion of the Senate, the student may be allowed to complete all the requirements within next one year after completion of the specified duration of the Programme.

### **9.3 Discontinuation of Study**

- a) If a student does not register and defaults in paying the dues for a semester, without the approval of the SPGC or any other competent authority, he/she shall have to discontinue studies and leave the Institute.
- b) A student, whose cumulative academic records at the end of any semester clearly indicate that he/she will not be able to qualify for the degree for which he/she had been admitted within the specified maximum time limits, may be asked to discontinue studies and leave the Institute.
- c) A student shall not be allowed to continue in the programme and her/his name shall be struck off the rolls, if he/she is having more than two courses with 'F' or 'DR' grade.
- d) If a student is absent for more than a month in a semester without sanctioned leave, he/she shall have to discontinue studies and leave the Institute.
- e) A student having faced a disciplinary action for some of his/her act(s), which is detrimental to the student life and may pollute the academic environment in the Institute, the Institute may cancel his/her admission and the student may be asked to leave the Institute at any time at the discretion of the SPGC/Senate.

The Academic Section will issue a termination letter to the respective student. This information will also be sent to the Head of the Department and other concerned offices. The student will have to vacate his/her hostel accommodation and shall not be entitled to enjoy any other facility of the Institute.

### **9.4 Appeal against Discontinuation**

- a) A student whose Programme is terminated may appeal to the Chairperson, Senate, for re-reinstatement in the Programme.
- b) In cases of termination due to inadequate academic performance, the student should clearly explain causes for the poor performance, including how those causes will not adversely affect her/his performance in the future. The Senate shall take a final decision after considering all available inputs.

- c) A student may re-appeal even after a previous appeal has been rejected. However, the Senate may not entertain any re-appeal for review unless substantial additional information is brought to its notice.

### **9.5 Relaxation**

Under exceptional circumstances, if a student has a severe deficiency in any of the requirements stated in these Regulations due to psychological or other medical conditions, the SPGC/Senate may relax the relevant provisions of these Ordinances based on the merit of the case. The grounds on which such relaxation is granted shall invariably be recorded and cannot be cited as precedence.

### **9.6 Temporary Withdrawal from the Course of Study**

Students are expected to complete their Course of Study without any break. However, for bonafide reasons like prolonged illness or acute problems or exigencies happening in his/her family, Senate may grant leave of absence (temporary withdrawal) from the Course of Study. But such absence(s) shall ordinarily not exceed one semester with or without break.

- a) The student should apply to the DPGC within 15 days of the commencement of the semester or the incident or from the date he/she last attended his/her classes whichever is later, stating fully the reasons for such withdrawal together with supporting documents and endorsement of the parent/guardian.
- b) The Institute has to be satisfied that, inclusive of the period of withdrawal, the student is likely to complete his requirements for the degree within the time limits specified in Section 9.2.
- c) There are no outstanding dues or demands on him/her.
- d) A student who has been granted temporary withdrawal from the Institute will be required to pay the tuition fee and other essential fees/late fees/ other charges for the intervening (withdrawal) period while joining for the course later.
- e) He/she cannot draw scholarship (if any) for the period of absence.
- f) A student will be granted only one such temporary withdrawal during his/her entire tenure as a postgraduate student of the Institute.
- g) A student who has been granted a temporary withdrawal on medical grounds will be allowed to rejoin and resume his/her studies only after being declared medically fit by the Institute Hospital.
- h) The grounds on which such withdrawal is granted shall invariably be recorded and cannot be cited as precedence.

### **9.7 Code of Conduct**

A student should maintain the code of conduct prescribed to him/her at the time of admission. In case of any violation of the code of conduct committed by the student, disciplinary action may be taken by the Authority which may even result in termination of the Programme.

## **10. Scholarships, Medals, Awards and Prizes**

### **10.1 Institute Scholarships, Medals and Prizes**

The Institute awards a number of medals and prizes to students with excellent academic records, from the Institute fund. List of such medals and prizes are available from the Academic Office as well as in the Institute website.

### **10.2 Basic Eligibility Criteria for all Institute Medals, Awards and Prizes**

A student is eligible for the award of any medals or prize if

- a) He/she has passed in all the prescribed subjects in the programme and cleared all other requirements, if any, obtaining a CGPA not lower than 8.0 in the semester after which the Medal or Prize is to be awarded.
- b) He/she has not failed in any subject at any stage during his/her academic career till the time of the award.
- c) No disciplinary action has been taken against him/her for any offence at any time prior to the award.
- d) He/she has not been punished under examination malpractice and involved in violation of code of conduct at any stage of the course in the Institute.

Specific rules that govern any particular medal/award/prize, are mentioned against each such award in the List. In case of a tie between two or more students, the prize will be awarded jointly, the value of prize shall be equally shared amongst the awardees and the award certificate will mention 'jointly awarded'.

### **10.3 Endowment Medals, Prizes and Scholarship**

A number of medals and prizes are awarded through endowment fund. Lists and the rules that govern such awards are mentioned in the list of Endowment Awards, available in the Academic Section. The Institute awards endowment medals, scholarships, awards and prizes to the students on the basis of merit or means as specified in each case separately. The following basic rules govern the conditions for such awards.

All Endowment Scholarships will be awarded from the income of endowments received by the Institute from Industries, Institutions, R & D Organizations, Alumni and other individuals for this purpose.

- a) The students i) who have failed in any subject at any stage during his/her academic career till the time of the award, ii) undergone disciplinary action for any offence at any time prior to the award, iii) punished under examination malpractice and involved in violation of code of conduct at any stage of the course in the Institute; are not eligible for such award.
- b) The Institute may decide to discontinue the award of any endowment medal, prize or merit certificate at any moment of time, if it so desires and feels fit. The same be communicate in writing, citing the reasons to the donor/society granting such funds or endowments.
- c) The conferment of award, medals, prizes & merit certificate shall be made during the Annual Convocation of the Institute/or on any other occasion decided by the Senate, following the announcement of the results on which the prize is based.

### **10.4 Conduct of an Awardee**

An awardee of a medal, award or prize under these rules is expected to maintain, besides satisfactory academic progress, regularity in attendance and good conduct, behaviour and discipline in the Department and in the Institute/Halls of Residence. In the event of an awardee being found to be involved in any act of misconduct, misbehavior, indiscipline or adopting unfair means at an examination, the award or prize is liable to be cancelled with immediate effect, before its disbursement.

### **10.5 MTech Scholarship**

- a) Regular MTech students admitted on the basis of their GATE score/rank are entitled to receive GATE scholarship for 24 months as per MHRD norms.
- b) Dual Degree (BTech – MTech) students are also eligible to receive GATE scholarship on the basis of their GATE score/rank, if produced, as per MHRD norms.

### **10.6 Leave Rules**

Postgraduate students are entitled to avail leaves as per MHRD norms.

### **11. End Note**

The rules and regulations mentioned in this document are to be applicable from 2019 onwards. However, some propositions mentioned here are new compared to the prevailing rules/norms and are dependent on the appropriate/adequate infrastructure available in the Institute. It is suggested to have gradual implementation of such rules/propositions in commensurate with the improvements in the infrastructure. However, the basic spirit of quality teaching, opportunities for students, and improving the academic ambience should continuously be adhered to.

## Constitutions of Various Committees

### A. Senate Post-Graduate Committee (SPGC)

The Senate Postgraduate Committee (SPGC) will have the following members –

- 1) Chairperson
- 2) Members–
  - a) Conveners of various DPGCs
  - b) Last SPGC Chairperson (Ex-officio)
  - c) One Senate Nominee
  - d) Two PG students and two research scholars nominated by the student senate

The Chairperson shall be nominated by the Senate from amongst the members of the Senate. The tenure of the Chairman and the Senate nominee shall be normally of two years. Student representatives as nominated by the postgraduate and PhD students will change every year. One member will be nominated by the Chairman to act as convener.

The SPGC must meet as frequently as essential, but at least two times in every Semester.

### B. Departmental Post-Graduate Committee (DPGC)

Each academic department constitutes this committee which consists of the following –

- |                        |  |
|------------------------|--|
| Chairperson            | : Head of the Department/School/Centre   |
| Convener               | : A faculty member of the department, nominated by the DFC   |
| Members                | : At least three members nominated by the DFC, including one member from each PG specialization and one member from earlier DPGC |
| Student Representative | : One postgraduate student and one research scholar of the department (one preferably a female student).                         |

The tenure of DPGC is for two years; student representatives as nominated by the postgraduate and PhD students will change every year.

Note: Dual Degree students will come under the purview of DPGC and SPGC, from the beginning of their seventh semester.

### C. Departmental Faculty Committee (DFC)

The Departmental Faculty Committee will have the following structure –

- |             |   |
|-------------|---|
| Chairperson | : Head of the Department                                    |
| Convener    | : A faculty member of the department, nominated by the Head |
| Members     | : All faculty members of the Department                     |

Tenure of the Convener will be normally of two years.

### D. Board of Academics (BOAC)

Each Department should have a Board of Academics comprising the following members –

- |                  |  |
|------------------|--|
| Chairperson      | : Dean Academic  |
| Convener         | : Head of the Department   |
| Members          | : All faculty members of the Department                                  |
| External Members | : Eminent experts from Industry and Premier Academic/Research Institutes |

Names of the External Members will be nominated by the DFC through the Head to the Senate for approval.

Tenure of the External Members will normally be of two years.

## Indian Institute of Engineering Science &amp; Technology, Shibpur

## Application for Withdrawal from Programme

Department of \_\_\_\_\_

Student Name : Session : 20....-....

Enroll./Reg. no. : ..... Semester : Odd/Even 20...

Student e-mail :

Reason for withdrawal : \_\_\_\_\_

\_\_\_\_\_

Scholarship drawn till(if any) : MM/YY

Last Registration fees paid : INR..... Paid on : dd/mm/yyyy

\_\_\_\_\_  
Signature of the student

.....

Clearance obtained from : Library ..... Library-in-Charge

: Computer Center ..... Prof.-in-Charge

: Hall of Residence ..... Warden

: Mess ..... Mess-in-Charge

: Examination Section ..... Dy Registrar (Exam)

Comments by DPGC: .....

- 1.
- 2.

Recommended /Not Recommended:

Chairman, SPGC

### Unique Coding of a Course, Contact Hours and Credit

The name of a course will follow the identification pattern with Alpha-Numeric code.

Procedure for Subject Coding:

Code: WWXYZZ

WW: Department Code (e.g., EE/CE/ME etc.)

X: Year (1,2,3,4 for BTech; 5,6 MTech, MSc, MBA; 8 for PhD)  
(1,2,3,4,5 for BArch.; 6,7 for MPlan)

Y: Sem Code – 1 for odd semester and 2 for even semester

*Theory Courses*

ZZ: 01 – 20 – for Core Courses

21 – 60 – for Dept. Electives

61 – 70 – for Open Electives

*Laboratory / Practical / Project*

71 – 90 – Laboratory courses with weekly class loads

91 – 99 – Thesis/Project/internship/Viva etc., without weekly class loads

The contact hours and credits are also expressed in numeric. Contact hours may be for purely Lecture (L), Tutorial (T), and purely practical (P). viz. for a Civil Engineering UG 4<sup>th</sup> semester theory course: **Soil Mechanics** with 3 Lecture classes/week and a credit of 3 the code is **CE 2205** derived as follows:

Dept. Code		Year	Semester	Serial No		Title	L	T	P	C
A	A	N	N	N	N	C	N	N	N	N
C	E	2	2	0	5	Soil Mechanics	3	0	0	3

In the course curriculum, the class-hr & credit for the above course will be mentioned as: **3 0 0 3**.

Similarly, for a Civil Engineering UG 5<sup>th</sup> semester laboratory/practical course **Structural Engineering Lab** is shown as: **CE 3107** and its class-hr & credit will be mentioned as **0 0 3 2**.

Dept. Code		Year	Semester	Serial No		Title	L	T	P	C
C	E	3	1	0	7	Structural Engineering Lab	0	0	3	2

Similarly, for an Electrical Engineering MTech1<sup>st</sup> semester Theory subject: **Energy System Planning and Management** is shown as: **EE5105** and its class-hr & credit will be mentioned as **3 0 0 3**.

Dept. Code		Year	Semester	Serial No		Title	L	T	P	C
E	E	5	1	0	5	Energy System Planning and Management	3	0	0	3

The DD students will have some MTech subjects in their course structure (common with 2-year MTech course structure) and coding for those subjects will be same as the MTech courses.



## Proposed Course Structure for Two-Year M. Tech Programme

(From 2019 Onward)

## A. First Semester

Sl. No	Course	Credit
1	Course-I (Dep. Core)	3
2	Course-II (Dep. Core)	3
3	Course-III (Dep. Core)	3
4	Course-IV (Dep. Elec)	3
5	Course-V (Open Elective – I)	3
	<b>Theory Subtotal</b>	<b>15</b>
6	Lab - I/ Mini Project – I	2
7	Lab - II/Mini Project – II	2
8	Lab - III/Mini Project – III	2
	<b>Practical Subtotal</b>	<b>6</b>
	<b>Total Credit</b>	<b>21</b>

## Note:

The credits mentioned above are indicative and are as such to be followed. However, in cases, where it is essential to include a Tutorial or to increase the lab hours, credits may be increased to 4 (Theory)/3(Practical). In such cases, the total credit should not exceed 23.

Table - 1

Specialization:

a) Departmental Core Courses for the Specialization (Course – I, II, III)

Sl. No	Course Code	Course Name	Class Load/Week			Total load (h)	Credit	Marks
			L	T	P			
1	WWXYZZ						3	100
2							3	100
3							3	100

b) Departmental Elective Courses for the specialization (Course – IV)

Sl. No	Course code	Course Name	Class Load/Week			Total load (h)	Credit	Marks
			L	T	P			
1	WWXYZZ						3	100
2							3	100
...							3	100

c) Open Elective Course: Course – V

d) Departmental Labs for the specialization (Lab – I, II, III)

Sl. No	Course code	Course Name	Class Load/Week			Total load (h)	Credit	Marks
			L	T	P			
1	WWXYZZ						2	100
2							2	100
3							2	100

e) Departmental Mini Projects for the specialization

Sl. No	Course code	Related Course Code and Name	Total load (h)	Credit	Marks
1	WWXYZZ			2	100
2				2	100
3				2	100

## B. Second Semester

Sl. No	Course	Credit
1	Course - VI (Dep. Core)	3
2	Course - VII (Dep. Core)	3
3	Course - VIII (Dep. Core)	3
4	Course-IX (Dep. Elec)	3
5	Course-X ( Open Elec. II)	3
	<b>Theory Subtotal</b>	<b>15</b>
6	M. Tech Project Part - I (Term Paper)	4
7	Term Paper Seminar & Viva-voce	2
8	<b>Practical Subtotal</b>	<b>6</b>
	<b>Total Credit</b>	<b>21</b>

### Note:

The credits mentioned above are indicative and are as such to be followed. However, in cases, where it is essential to include a Tutorial credits may be increased to 4 (Theory). In such cases, the total credit should not exceed 23.

**Table - 2**

Specialization:

a) Departmental Core Courses for the specialization (Course – VI, VII, VIII)

Sl. No	Course code	Course Name	Class Load/Week			Total load (h)	Credit	Marks
			L	T	P			
1	WWXYZZ						3	100
2							3	100
3							3	100

b) Departmental Elective Courses for the specialization (Course – IX)

Sl. No	Course code	Course Name	Class Load/Week			Total load (h)	Credit	Marks
			L	T	P			
1	WWXYZZ						3	100
2							3	100
...							3	100

c) Open Elective Course: Course – X

d) M. Tech Project Part - I

Sl. No	Course code	Course Name	Total load (h)	Credit	Marks
1	WWXYZZ	M. Tech thesis Part - I (Term Course)	8	4	200
2		Term Course Seminar & Viva-voce		2	100

**Third Semester**

Sl. No	Course	Credit
1	M. Tech Thesis Part - II (Progress Report)	12
2	Progress Report Seminar & Viva-voce	6
	<b>Total Credit</b>	<b>18</b>

**Note:**

- For M. Tech Thesis Part - II (Progress Report), the student will submit the details of work done for the M.Tech Thesis during the third semester, and findings (if any). Submission will be followed by a seminar and viva-voce.

M. Tech Project Part - II

Sl. No	Course code	Course Name	Total load (h)	Credit	Marks
1	WWXYZZ	M. Tech Thesis Part - II (Progress Report)	24	12	300
2		Progress Report Seminar & Viva-voce		6	100

**Fourth Semester**

Sl. No	Course	Credit
1	M. Tech Final Thesis	22
2	Thesis Seminar & Viva-voce	8
	<b>Total Credit</b>	<b>30</b>

**Note:**

- For M. Tech Final Thesis, the student will compile the entire work done for the M. Tech Project, along with the findings, in the form of a Thesis and submit at the end of the semester. Thesis submission will be followed by a Thesis seminar and viva-voce.

M. Tech Final Thesis

Sl. No	Course code	Course Name	Total load (h)	Credit	Marks
1	WWXYZZ	M. Tech Final Thesis	30	22	400
2	WWXYZZ	Thesis Seminar & Viva-voce		8	200

**Total Credit: 21 + 21 + 18 + 30 = 90**

**Proposed Course Structure for Two-Year M. Plan Programme  
(Specialization in Urban and Regional Planning)  
(From 2019 onwards)**

**Basic Contact hour, Credit and Marks**

Sl. No.	Subject Typology	Contact hour (period)	Credit	Marks
1	Theory (Full Paper)	3	3	100
2	Theory (Half Paper)	2	2	50
3	Sessional /Lab	3	2	100
4	Field visit/ Sessional viva-voce examination/ Thesis viva-voce examination	-	2	50

**Summary of Contact hour, Credit and Marks**

Sl. No.	Semester	Contact hour (period per week)			Credit			Marks		
		Lecture	Sessional /exam	Total	Lecture	Sessional /exam	Total	Lecture	Sessional /exam	Total
1	First Semester (Part I)	15	12	27	15	10	25	500	400	900
2	Second Semester (Part II)	14	12	26	14	10	24	450	450	900
3	Third Semester (Part III)	3	15	18	3	14	17	100	600	700
4	Fourth Semester (Part IV)	-	9	12	-	14	24	-	500	500
Grand Total					32	48	90	1050	1950	3000

**Course Structure: First Semester [Part I]**

Sl.	Subject Name	Code	Contact hours per week		Marks				Credit
			L	S	Exam	IA <sup>[1-1]</sup>	S	Total	
Theoretical Subjects									
1	Planning Theory	AP6101	3	-	70	30	-	100	3
2	Transportation Planning	AP6102	3	-	70	30	-	100	3
3	Infrastructure, Network and Services	AP6103	3	-	70	30	-	100	3
4	Statistical Methods and Planning Techniques	AP6104	3	-	70	30	-	100	3
5	Elective I: Core <sup>[1-2]</sup>	AP6130	3	-	70	30	-	100	3
		AP6131							
		AP6132							
	Total		15					500	15
Sessional Subjects									
6	Planning Project I <sup>[1-3]</sup>	AP6150	-	9	-	-	300	300	6
7	GIS and Remote Sensing	AP6151	-	3	-	-	50	50	2
8	Planning Viva Voce I <sup>[1-4]</sup>	AP6180	-	-	50	-	-	50	2
	Total			12				400	10
	Grand Total		15	12				900	25

**Note:**

L: Lecture; S: Sessional; Exam: End Semester Final Examination; IA: Internal Assessment

[1-1] : Marks distribution for IA: Mid Semester Exam/Class Test + Assignment: 15+15=30.

[1-2] : Elective Ia: **AP6130: Socio-economic Basis of Planning;**

Elective Ib: **AP6131: Disaster Mitigation Planning;**

Elective Ic: **AP6132: Climate Change and Human Settlements**

[1-3] : Students will be required to visit study areas anywhere in India for data collection through primary survey for a maximum period of two weeks under the supervision of Planning Studio Coordinator.

Evaluation for the subject will consist of **two Interim Reviews of 100 marks each** and **100 marks for End Semester presentation** of Drawing and Report to a Jury of at least three Examiners consisting of the Subject Teacher/s, one External Examiner and one Internal Examiner nominated by the Departmental Academic Committee.

[1-4] : Viva Voce Examination to be conducted by a Jury of at least three Examiners as indicated in [1-3].

### Course structure: Second Semester [Part II]

Sl.	Subject Name	Code	Contact hours per week		Marks				Credit
			L	S	Exam	IA <sup>[2-1]</sup>	S	Total	
Theoretical Subjects									
1	Metropolitan and Regional Planning	AP6201	3	-	70	30	-	100	3
2	Environmental Planning	AP6202	2	-	35	15	-	50	2
3	Planning Legislation and Professional Practice	AP6203	3		70	30	-	100	3
4	Housing and Urban Renewal	AP6204	3		70	30	-	100	3
5	Elective II: Core/Open <sup>[2-2]</sup>	AP6230	3		70	30	-	100	3
		AP6231							
		AP6232							
	Total		14					450	14
Sessional Subjects									
7	Planning Project II <sup>[2-3]</sup>	AP6250	-	12	-	-	400	400	8
8	Planning Viva Voce II <sup>[2-4]</sup>	AP6280	-	-	50	-	-	50	2
	Total			12				450	10
	Grand Total		14	12				900	24

### Note:

L: Lecture; S: Sessional; Exam: End Semester Final Examination; IA: Internal Assessment

[2-1] : Marks distribution for IA: Mid Semester Exam/Class Test + Assignment: 15+15=30 / 10+5=15

[2-2] : Elective IIa: **AP6230: Urban Design and Conservation;**

Elective IIb: **AP6231: Smart City Planning;**

Elective IIc: **AP6232: Rural Development and Planning;**

[2-3] : Students will be required to visit study areas anywhere in India for data collection through primary survey for a maximum period of two weeks under the supervision of Planning Studio Coordinator.

Evaluation for the subject will consist of **two Interim Reviews of 150 marks each** and **100 marks for End Semester presentation** of Drawing and Report to a Jury of at least three Examiners consisting of the Subject Teacher/s, one External Examiner and one Internal Examiner nominated by the Departmental Academic Committee.

[2-4] : Viva Voce Examination to be conducted by a Jury of at least three Examiners as indicated in [2-3].

### Course structure: Third Semester [Part III]

Sl.	Subject Name	Code	Contact hours per week		Marks				Credit
			L	S	Exam	IA <sup>[3-1]</sup>	S	Total	
Theoretical Subjects									
1	Urban Governance and Finance	AP7101	3	-	70	30	-	100	3
	Total		3					100	3
Sessional Subjects									
5	Planning Project and Thesis I <sup>[3-2]</sup>	AP7150	-	9	-	-	300	300	6
6	Detailed Project Report	AP7151	-	6		-	200	200	4
7	Planning Project and Thesis Viva Voce I <sup>[3-3]</sup>	AP7180	-	-	50	-	-	50	2
8	Fieldwork Training and Viva voce <sup>[3-4]</sup>	AP7181	Not exceeding 6 weeks				50	50	2
	Total			15				600	14
	Grand Total		3	15				700	17

#### Note:

L: Lecture; S: Sessional; Exam: End Semester Final Examination; IA: Internal Assessment

[3-1] : Marks distribution for IA: Mid Semester Exam/Class Test + Assignment: 15+15=30.

[3-2] : Consists of **two interim reviews of 150 marks each**, by a Jury of **at least three Examiners** consisting of the Supervisor/s, PG Thesis Coordinator, and one External Examiner nominated by the DAC who will be the common External Examiner for all candidates and who will further continue to act as one of the two external examiners in Planning Project and Thesis Viva-voce (AP7180).

[3-3] : End Semester presentation of drawings and report to a Jury of **at least two External Examiners** nominated by the DAC who will be the common External Examiners for all candidates. Viva Voce Examination to be conducted by the Jury as indicated above.

[3-4] : Fieldwork Training and Viva Voce involves field training not exceeding **six weeks** to practical exercises independently or jointly with external planning organizations/Institutions addressing study of real world situations related to planning, and the Viva Voce examination will be conducted at the end of the training programme by a jury of at least three examiners amongst which the Head examiner will act as the coordinator.

### Course structure: Fourth Semester [Part IV]

Sl.	Subject Name	Code	Contacts hours per week		Marks				Credit
			L	S	Exam	IA	S	Total	
Sessional Subjects									
1.	Planning Project and Thesis II <sup>[4-1]</sup>	AP7250	–	12	–	–	300	300	12
2.	Planning Project and Thesis Report I <sup>[4-2]</sup>	AP7280	–	–	100	–	–	100	6
3.	Planning Project and Thesis Viva Voce II <sup>[4-3]</sup>	AP7281	–	–	100	–	–	100	6
	Grand Total			12				500	24

**Note:**

- [4-1] Consists of **three interim reviews of 100 marks** each, by a Jury of at least **three Examiners** consisting of the Supervisor/s, MURP Thesis Coordinator, and one External Examiner nominated by the DAC, who will be the common External Examiner for all the candidates and who will further continue to act as one of the two External Examiners in Planning Project and Thesis Report (AR7280) and Planning Project and Thesis Viva Voce (AP7281).
- [4-2] End Semester presentation of drawings and report to a Jury of at least **two External Examiners** nominated by the DAC, who will be the common External Examiners for all candidates. Viva Voce Examination to be conducted by the Jury as indicated above.
- [4-3] Viva Voce Examination will be taken by a Jury as indicated in [4-2].

## Proposed Course Structure for Two-Year MBA Programme (From 2019 onwards)

**Note:**

1. Core Courses are Compulsory
2. Specialization in Human Resource Management, Marketing Management, Finance, and Operations Management
3. Dual Specialization Structure

**1<sup>st</sup> Year (Semester – I)**

Sl. No	Course Code	Title	Marks	L-T-P	Credits
1	MB5101	Core I: Principles of Management and Organisational Behaviour	100	3-0-0	3
2	MB5102	Core II: Managerial Economics	100	3-0-0	3
3	MB5103	Core III: Quantitative Methods in Management	100	3-0-0	3
4	MB5104	Core IV: Managerial Accounting	100	3-0-0	3
5	MB5105	Core V: Marketing Management-I	100	3-0-0	3
6	MB5106	Core VI: Information Technology Management	100	3-0-0	3
	Lab				
7	MB5181	Business Communication	100	0-0-2	2
Total			<b>700</b>	<b>18-0-2</b>	<b>20</b>

**1<sup>st</sup> Year (Semester – II)**

Sl. No	Course Code	Title	Marks	L-T-P	Credits
1	MB5201	Core VII: Human Resource Management	100	3-0-0	3
2	MB5202	Core VIII: Operations Research	100	3-0-0	3
3	MB5203	Core IX: Marketing Management-II	100	3-0-0	3
4	MB5204	Core X: Financial Management	100	3-0-0	3
5	MB5205	Core XI: Operations and Productions Management	100	3-0-0	3
6	MB5206	Core XII: Business Environment and Legal System	100	3-0-0	3
	<b>Project</b>				
7	MB5281	Project-I (Term Paper)	100	0-0-2	2
Total			<b>700</b>	<b>18-0-2</b>	<b>20</b>

**2<sup>nd</sup> Year (Semester – III)****Note:**

1. 2 Core Courses
2. 1 Open Elective
3. 2 Electives in each of the two Specialization – total 4courses

Sl. No	Course Code	Title	Marks	L-T-P	Credits
Core Courses					
1	MB6171	Open Elective -I	100	3-0-0	3
2	MB6101	Core XIII: Management Information Systems	100	3-0-0	3
3	MB6102	Core XIV: Introduction to Entrepreneurship Development	100	3-0-0	3
Elective Courses: Financial Management					
4.1	MB6121	Elective: Financial Markets, Financial Institutions & Services	100	3-0-0	3
5.1	MB6122	Elective: Strategic Financial Management and Security Analysis and Portfolio Management	100	3-0-0	3
Elective Courses: Marketing Management					
4.2	MB6123	Elective: Services Marketing	100	3-0-0	3
5.2	MB6124	Elective: Consumer Behaviour & Marketing Research	100	3-0-0	3
Elective Courses: Human Resource Management					
4.3	MB6125	Elective: Performance, Compensation and Reward Management	100	3-0-0	3
5.3	MB6126	Elective: Industrial Relations and Labour Laws	100	3-0-0	3
Elective Courses: Operations Management					
4.4	MB6127	Elective: Supply Chain Management	100	3-0-0	3
5.4	MB6128	Elective: Quality Management Systems	100	3-0-0	3



Lab/ Project/Internship					
6	MB6181	Project-II (Progress Report)	100	0-0-2	2
7	MB6182	Society, Ethics and Sustainability	100	0-0-2	2
8	MB6183	Summer Internship	100	0-0-4	4
Total					
Total			1000	21-0-4	29

## 2<sup>nd</sup> Year (Semester – IV)

### Note:

- 1 Core Course
- 1 Open Elective
- 2 Electives in each of the two Specializations - total 4 courses
- 1 Dissertation

Sl. No	Course Code	Title	Total	L-T-P	Credits
Core Courses					
1	MB6270	Open Elective –II	100	3-0-0	3
2	MB6201	Core XV: Strategic Management	100	3-0-0	3
Elective Courses: Financial Management					
3.1	MB6220	Elective: Company Accounts and Corporate Taxation and Tax Planning	100	3-0-0	3
4.1	MB6221	Elective: International Financial Management	100	3-0-0	3
Elective Courses: Marketing Management					
3.2	MB6222	Elective: Advertising, Sales and Distribution Management	100	3-0-0	3
4.2	MB6223	Elective: Advanced Marketing Management	100	3-0-0	3
Elective Courses: Human Resource Management					
3.3	MB6224	Elective: Advanced Human Resource Management	100	3-0-0	3
4.3	MB6225	Elective: Corporate Human Resource Management and HRD Audit	100	3-0-0	3
Elective Courses: Operations Management					
3.4	MB6226	Elective: Technology Management	100	3-0-0	3
4.4	MB6227	Elective: Service Operations Management	100	3-0-0	3
Dissertation & Viva					
5	MB6281	Thesis	100	0-0-8	8
6	MB6282	Comprehensive Viva-Voce	100	0-0-0	6
Total					
Total			800	18-0-8	32

### Summary of Marks and Credits

Semester	I	II	III	IV	Total
Marks	700	700	1000	800	3200
Credits	20	20	29	32	101

## Proposed Course Structure for Two-Year MSc Programme

(From 2019 onwards)

## A. First Semester

Sl. No	Course Code	Course Name	Class Load/Week			Total load/week (h)	Credit	Marks
			L	T	P			
1	WWXYZZ	Course - I (Dept. Core)	3	1	0	4	4	100
2		Course - II (Dept. Core)	3	1	0	4	4	100
3		Course - III (Dept. Core)	3	1	0	4	4	100
4		Course - IV (Dept. Elective - I)	3	0	0	3	3	100
5		Course - V (Open Elective - I)	3	0	0	3	3	100
6		Laboratory - I/Mini Project - I	0	0	3	3	2	50
7		Laboratory - II/Mini Project - II	0	0	3	3	2	50
Total			15	3	6	24	22	600

## B. Second Semester

Sl. No	Course Code	Course Name	Class Load/Week			Total load/week (h)	Credit	Marks
			L	T	P			
1	WWXYZZ	Course - VI (Dept. Core)	3	1	0	4	4	100
2		Course - VII (Dept. Core)	3	1	0	4	4	100
3		Course - VIII (Dept. Core)	3	1	0	4	4	100
4		Course - IX (Dept. Elective - II)	3	0	0	3	3	100
5		Course - X (Open Elective - II)	3	0	0	3	3	100
6		Laboratory - III/Mini Project - III	0	0	3	3	2	50
7		Term Paper	0	0	8	8	4	100
8		Term Paper Viva-voce					2	50
Total			15	3	11	29	26	700

## C. Third Semester

Sl. No	Course Code	Course Name	Class Load/Week			Total load/week (h)	Credit	Marks
			L	T	P			
1	WWXYZZ	Course - XI (Dept. Core)	3	0	0	4	3	100
2		Course - XII (Dept. Core)	3	0	0	4	3	100
3		Course - XIII (Dept. Core)	3	0	0	4	3	100
4		Laboratory -IV	0	0	3	3	2	100
5		MSc Thesis Part - I (Progress Report)	0	0	16	16	8	100
6		Progress Report Viva-voce	0	0	0	0	2	100
Total			9	0	19	31	21	600

**D. Fourth Semester**

Sl. No	Course Code	Course Name	Class Load/Week			Total load/week (h)	Credit	Marks
			L	T	P			
1	WWXYZZ	Course - XIV (Dept. Core)	3	1	0	4	4	100
2		Course - XV (Dep. Elec. - III/ Open Elec. - III)	3	0	0	3	3	100
3		Laboratory - V	0	0	3	3	2	100
4		MSc Thesis	0	0	16	16	8	200
5		Thesis Seminar & Viva-voce	0	0	0	0	4	100
Total			6	1	19	26	21	600

**Total Credit: 22 + 26 + 18 +21 = 90**

**Note:**

The credits mentioned above are indicative and are as such to be followed. However, in cases, where it is essential to include a Tutorial or to increase the lab hours, credits may be increased to 4 (Theory)/3(Practical). In such cases, the total credit should not exceed 94.

## Common Course Registration Form

Student Name : Academic Session : 20....-....

Department : Semester No.....

Enrollment no. : Semester : Odd/Even/Summer

Student registered e-mail : CGPA till last Semester : .....

Backlog, if any: .....

Registration for Courses /Supplementary Examination (separate forms should be submitted)

Core Theory (with code)	
Elective (with code)	
Open Elective(with code)	
Project/ Seminar, etc.	
Laboratory (with code)	

\_\_\_\_\_  
Signature of the Student

Endorsement by:

Academic Counsellor

Chairman DPGC

Dy Registrar (Academic)

THE ORDINANCES  
FOR  
DOCTORAL PROGRAMME

FROM 2019 ADMISSION ONWARDS



July 2019

The provisions contained in these ordinances govern the policies and procedures on the admission of students, imparting instructions of courses, conducting of examinations and evaluation and certification of student's performance.

These ordinances, on approval by the Board of Governors, shall be applicable to the students taking admission in 2019 and onwards.

For students admitted in earlier years, these ordinances are also applicable wherever eligible. But such applications shall be dealt with appropriately and carefully, so as to ensure that these students are not subjected to any unfair situation whatsoever. In case of any conflict with the present regulations and earlier regulations, rules those are in favour of these students shall be applicable.

## Contents

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1.	Short Title and Commencement.....	1
2.	Application.....	1
3.	Definitions.....	1
4.	Abbreviations and Acronyms. —.....	2
5.	Objectives of the Programme.....	3
6.	General outline.....	4
7.	The Doctoral Programme.....	4
8.	Eligibility Criteria.....	5
9.	Selection, Admission and Enrolment.....	8
10.	Semester Registration.....	8
11.	Withdrawal from the Programme.....	8
12.	Post Graduate Committees.....	9
13.	Thesis Supervisor.....	10
14.	Allotment of Thesis Supervisor.....	10
15.	Research Progress Evaluation Committee (RPEC).....	11
16.	Academic Session.....	12
17.	Preliminary Milestones.....	12
18.	Registration to the Programme.....	14
19.	Thesis Registration, Progress Report and Seminar.....	14
20.	Pre-Submission Seminar.....	15
21.	Submission of Thesis.....	15
22.	Adjudication of the Thesis.....	16
23.	<i>viva-voce</i> Examination.....	17
24.	Leave Rules.....	18
25.	Privileges and Obligations of a Research Scholar.....	19
26.	End Note.....	19
	APPENDIX-I.....	20
	APPENDIX-2.....	21
	APPENDIX-3.....	22
	APPENDIX-4.....	23
	APPENDIX-5.....	24
	APPENDIX-6.....	26
	APPENDIX-7.....	27
	APPENDIX-8.....	28
	APPENDIX-9.....	29

# **The Ordinances for Doctoral Programme**

In exercise of the powers conferred by section 28 of the National Institutes of Technology, Science Education and Research Act, 2007 (29 of 2007), the Senate of the Indian Institute of Engineering Science and Technology, Shibpur, hereby makes the following Ordinances for the conduct and regulation of Doctoral Programme of the Institute and for matters connected therewith.

## **1. SHORT TITLE AND COMMENCEMENT**

- (1) These Ordinances may be called the Ordinances for Doctoral Programme, 2019.
- (2) These shall come into force on such date as the Chairman, Senate, may appoint and different dates may be appointed for different provisions of these Ordinances and for different programmes.

## **2. APPLICATION**

- (1) These Ordinances shall apply to the doctoral programme of the Institute leading to the degree of Doctor of Philosophy.

## **3. DEFINITIONS**

- (1) In these Ordinances, unless the context otherwise requires: -
  - (a) “Academic Session” shall mean academic session of the Institute.
  - (b) “Act” shall mean the National Institutes of Technology, Science Education and Research Act, 2007;
  - (c) “Authorities”, “Officers” and “Faculty Members”, in relation to the Institute, respectively mean, the authorities, officers and faculty members of the Institute;
  - (d) “Board” shall mean the Board of Governors of the Institute;
  - (e) “Candidate” shall mean a person applying or intending to apply for enrolment in the PhD programme.
  - (f) “Central Government” shall mean the Government of India;
  - (g) “Co-supervisor” shall mean any person appointed to supervise, - in addition to the supervisor, the doctoral research of a scholar.
  - (h) “Course Work” shall mean credit courses of study prescribed by a Department/School/Centre of the Institute, to be undertaken by a candidate enrolled for the PhD programme.
  - (i) “Degree” shall mean a doctorate degree of the Institute awarded after successful completion of a doctoral programme.
  - (j) “Department” or “School” or “Centre” shall mean an Academic Department or School or Centre, as the case may be, established to impart instruction or for carrying out or facilitating the academic and research activities relating to any particular area or discipline or areas of inter-disciplinary nature;
  - (k) “Director” shall mean the Director of the Institute referred to under Statute 17 of the Statutes;
  - (l) “Enrolled candidate” shall mean any person who has been enrolled in the PhD programme;



- (m) “Head” or “Chair” in relation to a Department or School or Centre, as the Case may be, shall mean the Head thereof;
  - (n) “Institute” shall mean the Indian Institute of Engineering Science and Technology, Shibpur;
  - (o) “Notification” shall mean any notification published under the authority of the Senate and includes all such notifications published under these Ordinances;
  - (p) “Ordinances” shall mean These Ordinances, *i.e.*, The Ordinances for Doctoral Programme, 2019;
  - (q) “Prescribed” shall mean prescribed by these Ordinances;
  - (r) “Programme” shall mean an academic programme of the Institute;
  - (s) “Registration Period” shall mean the length of the time span commencing from the date of registration at the Institute to the date of its expiry as stipulated hereinafter, and, in the case where the extension of the stipulated period is granted, the expiry of such period.
  - (t) “Research Scholar” shall mean a person registered for the PhD programme of the Institute.
  - (u) “Scholar” shall mean a person either enrolled or registered in the PhD programme of the Institute;
  - (v) “Senate” shall mean the Senate of the Institute referred to under Statute 7 of the Statutes;
  - (w) “Statutes” shall mean the Statutes of the Indian Institute of Engineering Science and Technology, Shibpur, 2017 and shall include all the amendments made thereto.
  - (x) “Student” shall mean a student of the Institute pursuing any of the programmes to which these Ordinances apply.
  - (y) “Supervisor” shall mean any person appointed to supervise the research work of an enrolled candidate/research scholar. A “Co-supervisor” shall mean any person appointed to supervise the research work of an enrolled candidate/ research scholar in addition to the “supervisor”.
- (2) Unless repugnant to the context, all other terms used in these Ordinances shall have the same meaning as defined in the Act and/ or the Statutes.

#### **4. ABBREVIATIONS AND ACRONYMS**

- (1) In these Ordinances the following non-standard abbreviations and acronyms have been used to mean the expression mentioned against each of them:
- (a) AICTE            All India Council for Technical Education
  - (b) BArch            Bachelor of Architecture
  - (c) BE                Bachelor of Engineering
  - (d) BoAC            Board of Academics
  - (e) BPlan            Bachelor of Planning
  - (f) BTech            Bachelor of Technology
  - (g) CGPA            Combined Grade Point Average

(h)	CSIR	Council of Scientific and Industrial Research
(i)	DA	Differently-able
(j)	DD	Dual Degree
(k)	DPGC	Departmental Postgraduate Committee
(l)	ICCR	<i>Indian Council for Cultural Relations</i>
(m)	ICMR	Indian Council of Medical Research
(n)	INSPIRE	Innovation in Science Pursuit for Inspired Research
(o)	MArch	Master of Architecture
(p)	MBA	Master of Business Administration
(q)	MHRD	Ministry of Human Resource Development
(r)	MPlan	Master of Planning
(s)	MSc	Master of Science
(t)	MOOC	Massive open online course
(u)	MTech	Master of Technology
(v)	MURP	Master of Urban and Regional Planning
(w)	NET	National Eligibility Test
(x)	NOC	No Objection Certificate
(y)	NPTEL	National Programme on Technology Enhanced Learning
(z)	OBC(NCL)	Other Backward Community (Non-Creamy Layer)
(aa)	PG	Postgraduate
(bb)	PhD	Doctor of Philosophy
(cc)	PSU	Public Sector Unit
(dd)	QIP	Quality Improvement Programme
(ee)	R&D	Research and Development
(ff)	RPEC	Research Programme Evaluation Committee
(gg)	SC	Scheduled caste
(hh)	SPGC	Senate Postgraduate Committee
(ii)	ST	Scheduled Tribe
(jj)	UGC	University Grants Commission

## 5. OBJECTIVES OF THE PROGRAMME

Consistent with the available research facilities, the Institute intends to provide opportunities for academic research in various areas of Architecture, Engineering, Humanities, Management, Science, Technology, and other areas of interdisciplinary and multidisciplinary studies, leading to the award of the Degree of Doctor of Philosophy, hereinafter abbreviated as PhD, of the Institute. The PhD programme is recommended for persons with industrious habits and inquisitive minds. Hopefully pursuing this programme will help achieve the career objectives of those who are interested in leadership careers in academia, research institutions, R&D sections of industries and important decision making bodies. After completion of the programme they may be expected to possess necessary attitude and acumen required for engagement in activities oriented towards advancing the frontiers of knowledge.

## 6. GENERAL OUTLINE

- (1) The Senate can modify or change the structure, the governing regulations and the byelaws from time to time. A scholar shall be required to abide by the relevant regulations framed/ amended by the Senate. Admission of all categories of candidates to the PhD programme shall be made following a selection process mentioned in Section 9 and Section 10 of these Ordinances. The admission procedure may be so changed or amended, as may be decided by the Senate from time to time.
- (2) The Institute shall award the degree of Doctor of Philosophy to a registered scholar after she/he satisfactorily completes all the requirements laid down herein within the time stipulated in these Ordinances.
- (3) In order to be considered for conferment of the PhD degree, a research scholar shall submit a thesis presenting her/his research findings under this programme. The thesis should make an original contribution, of high quality, towards the advancement of knowledge/ development of new technology as adjudged by the process laid down hereinafter

## 7. THE DOCTORAL PROGRAMME

- (4) The Institute shall offer Doctoral Programme in the following broad areas of Study
  - (a) Architecture;
  - (b) Engineering;
  - (c) Humanities and Social Sciences;
  - (d) Management;
  - (e) Science; and
  - (f) other areas interdisciplinary and multidisciplinary studies
- (5) Successful completion of the doctoral programme will lead to award of the degree of Doctor of Philosophy in the appropriate area of study in which the doctoral research is carried out.
- (6) Unless exempted specifically on a case to case basis, the doctoral programme of the Institute shall be a full time academic research programme involving course work, research work, work involving academic assistance *etc* in the manner prescribed.
- (7) Subject to availability of fund and subject to a scholar fulfilling certain academic and other requirements as may be prescribed, the Institute may, in its own discretion, offer to her/ him an Institute Fellowship on such terms and conditions as it may decide.
- (8) The institute may, at its own discretion allow a scholar to draw fellowship from an external agency under an extramural funding scheme like CSIR-NET/ UGC-NET/ INSPIRE/ ICMR/ QIP/ ICCR fellowships etc. Normally for an extramural fellowship the terms and conditions of the extramural funding scheme shall apply. But the Institute may, in its own discretion, put such additional terms and conditions for award or renewal of the extramural fellowship as it may decide. Whenever there is a conflict between the terms and conditions of a funding scheme and the ordinances or the regulations or the code of conduct of the Institute the corresponding Institute provisions shall have overriding effect.
- (9) Subject to fulfilment of eligibility criteria provided in section 9, a candidate being a project fellow having full-time appointment in a sponsored project or being a faculty member of the Institute, may be allowed to pursue doctoral research at the Institute.
- (10) A candidate employed in a Government/ Semi-Government/ PSU/ R&D unit of a reputed industry may, If sponsored by her/his employer may be considered for admission provided the sponsoring agency, *viz.*, the Government/ Semi-Government/ PSU/ R&D unit concerned, is recognised by the senate as an approved research organisation.
- (11) The Degree of Doctor of Philosophy, in the areas of study mentioned in subsection (1) above, will be awarded to a research scholar on the basis of successful completion of the required coursework

and the research work carried out by the candidate in a particular field/ discipline. The performance of the scholar will be adjudged through continual evaluation of her/ his research progress, final submission of the thesis describing such work, examination of the thesis and successful defence in a *viva-voce* examination of such work.

- (12) The thesis for a PhD Degree must demonstrate that the candidate has acquired thorough knowledge in the field and is capable of undertaking advanced research independently and has made some commendable contributions towards the extension of knowledge in the field.
- (13) For admission to the doctoral programme of the Institute, the reservation policy of the Government of India shall be applicable.

## **8. ELIGIBILITY CRITERIA**

### **(1) *Non-Discrimination Policy and Minimum Eligibility***

Admission to the doctoral programme of the Institute shall be open to all candidates, irrespective of sex, race, creed, caste or class, provided they satisfy the minimum educational and other requirements as prescribed in these ordinances. A candidate with the following qualification shall be eligible to seek admission to the doctoral programme of the Institute:

(i) A Master's degree in Engineering/ Technology/ Architecture/ Planning/ Science/ Humanities/ Management or in a related discipline from a recognized University/ Institute with minimum 60% marks (6.5 CGPA on a ten point scale) throughout from class X to the qualifying degree.

(ii) Notwithstanding anything contained in paragraph (a) above, a candidate belonging to SC/ ST/ OBC(NCL)/ DA category with minimum 55% marks (6.0 CGPA on a ten point scale) throughout from class X to the qualifying degree, shall be eligible for seeking admission to PhD programme.

(iii) Seats in the PhD programme shall be reserved as per the MHRD guidelines issued in this regard from time to time.

### **(2) *Regular Candidates with Institute Fellowship***

(a) **Eligibility:** The candidate should have the requisite qualifications, as mentioned in Section 8(1) above. However, a candidates possessing a bachelor's degree in engineering/ technology or architecture/ planning in a relevant branch from a recognized University/ Institute with outstanding academic credentials with a minimum of 80% aggregate marks (or 8.5 CGPA on a ten point scale) throughout from class X to the qualifying degree and a valid GATE score with a minimum of 80 percentile are eligible to apply for admission in the relevant departments/ schools/ centres.

(b) **Age:** In order to be eligible to be considered for admission to PhD programme of the Institute with a research fellowship a candidate must not be over 30 years of age on the last date of application for the programme in that cycle. A relaxation of five years shall be applicable for candidates belonging to SC/ ST/ DA/ Category. A female applicant shall also be eligible for an age relaxation of five years.

(c) **Admission Test:** A candidate shall have to qualify in a competitive admission test to be conducted by the Institute. Such a competitive test may involve written test and/ or interview, as may be decided by the Senate. To be eligible for Institute Fellowship, the applicants must possess a valid GATE/ NET score as applicable for admission to doctoral programmes in various disciplines.

### **(3) *Candidates who Qualify for Research Fellowship from External Agencies***

(a) **Funding Agencies:** Candidates who are qualified for research fellowship from agencies like CSIR/ UGC/ ICMR/ DST etc. shall be eligible to apply for admission to the doctoral

programme of the Institute. They must have valid offer letters of research-fellowship issued by the offering agency.

- (b) **Eligibility:** Candidates must fulfil the minimum eligibility criteria as prescribed in Section 8(1) above.
- (c) **Age:** The maximum age will be considered as per the prevailing norms of the fellowship offering agency.
- (d) **Admission test:** Candidates under this category will be exempted from appearing in the written test and interview but they will have to appear in the counselling process.

Candidates admitted under this category shall not be entitled for the award of Institute Fellowship.

**(4) Candidates Selected under the QIP Scheme of AICTE**

Candidates willing to pursue doctoral study at this Institute under the QIP scheme of the AICTE, shall apply to the Dean (Academic) at least one year in advance. Admission and continuation of doctoral study of the candidates will be as per the norms of the QIP scheme of AICTE.

**(5) Candidates from Sponsored Research Project**

A candidate in fulltime employment, as a research/ project fellow or above, in an externally funded sponsored research project at the Institute, may apply for pursuing doctoral research under this category. Such a candidate will, however, have to fulfil the minimum eligibility criteria as prescribed before in Section 8(1) and shall have to apply through the Principal Investigator of the project.

- (a) A candidate under this category shall be exempted from appearing in the admission test but shall have to appear in the counselling process.
- (b) If selected for admission to the doctoral programme, the candidate shall have to produce a no objection certificate (NOC) from the principal investigator (PI) of the sponsored project in which she/he is employed.
- (c) The minimum remaining period of the sponsored project as well as tenure of appointment of the said project employee must not be less than two years from the date of joining the PhD programme.
- (d) In case of premature termination of employment of the scholar from the project-post the enrolment/ registration of the candidate may be cancelled.
- (e) Under no circumstances, the Institute shall provide any assistantship/ fellowship to a scholar admitted under this category.

**(6) Other Candidates**

The following categories of candidates shall also be eligible for pursuing doctoral study at the Institute subject to the conditions mentioned hereunder.

- (i) A candidate who is a regular faculty/ staff member of this Institute, who fulfils the minimum eligibility criteria as prescribed in Section 8(1) and possesses a minimum of two years of work experience, shall be eligible to apply for admission to a PhD programme in the Institute. However, the candidate has to obtain an NOC from the competent authority.

- (ii) A candidate who is a regular faculty member of a government or semi-government or a reputed Academic Institute shall be eligible to apply for admission to a PhD programme in the Institute, provided she/ he:
  - (a) fulfils the eligibility criteria as prescribed in Section 8(1); and,
  - (b) possesses a minimum of two years of teaching experience.
- (iii) A candidate who is in regular employment in a Government Department/ Organisation or a Semi-Government Organisation or a reputed Industrial Organisation having adequate R&D facilities or a reputed Research Organization shall be eligible to apply for admission to a PhD programme in the Institute, provided she/ he:
  - (a) fulfils the eligibility criteria as prescribed in Section 8(1); and,
  - (b) possesses a minimum of two years of experience.
- (iv) When a candidate is sponsored by a reputed industrial organization, she/ he shall also be considered eligible for admission if she/he possesses a BTech/ BE/ BSc (Engineering)/ BArch/ BPlan degree or equivalent in a relevant branch from a recognized University/ Institute and has –
  - (a) an outstanding academic record with a minimum of 80% aggregate marks (or 8.5 CGPA on a ten point scale) throughout her/ his academic career from class ten onwards up to the bachelor's degree level; or
  - (b) more than six years but less than ten years of experience and possesses a good academic record with a minimum of 70% marks (or 7.5 CGPA on the scale of 10) throughout her/ his academic career from class ten onwards up to the bachelor's degree level; or
  - (c) Ten or more years of experience and possesses an academic record with a minimum of 60% marks (or 6.5 CGPA on the scale of 10) throughout her/ his academic career from class ten onwards up to the bachelor's degree level.
- (v) An applicant under this category shall be exempted from appearing in the written test, but she/ he will have to appear in the interview to be held for admission to doctoral programme and qualify in the same. The candidate shall also have to appear in the counselling process.
- (vi) A scholar admitted under this category shall not be eligible for any financial assistance or fellowship from the Institute.
- (vii) In order to get an admission, a candidate belonging to this category will have to produce an NOC from her/his employer stating clearly that, in the event of her/his being offered an admission, she/he shall be granted a leave of appropriate kind at least for a period of three years to enable her/him to undertake doctoral research at the Institute.
- (viii) Notwithstanding anything contained in paragraph (vii) above, the Institute may, in its own discretion, permit a candidate belonging to this category to take admission in the PhD programme if she/he is granted a minimum of six months' study leave to enable her/him to complete such part or parts of the course requirement as the SGPC may decide. Under such a case the employer concerned should be a senate-approved research organisation and the employer should provide an assurance that necessary permission shall be granted and facilities shall be extended to the candidate to carry out and complete her/his doctoral research at the parent organisation. Under such a case, a co-supervisor from the employing

organisation may be assigned. The scholar may be permitted to complete the remaining part of the course requirement by taking such online courses as may be permitted by the SPGC.

- (ix) After necessary coursework requiring regular attendance at the Institute is completed, a scholar admitted under this category may be allowed to work from her/ his parent organisation, i.e. the organisation where he holds a regular substantive appointment.

Total seats for admission under this category shall not be more than 25% of the seats advertised for regular candidates with institute fellowships.

## **9. SELECTION, ADMISSION AND ENROLMENT**

- (1) If not otherwise decided by the Senate, in every academic year, there shall be admission to the PhD programme of the Institute in two cycles, viz., the July Cycle and the December cycle. For every cycle the Institute shall invite application for admission to its PhD Programme by advertising in its website and also in such newspapers as it may decide. The admission process will be initiated sufficiently ahead of the commencement of the odd semester (for July cycle) and even semester (for December cycle).
- (2) In order to be considered for admission every candidate, excepting the candidates seeking admission under QIP programme, will have to apply against the advertisement mentioned in paragraph (1) above; every such application shall be in a prescribed format.
- c) A candidate seeking admission with institute fellowship as regular candidate shall necessarily be enrolled in a department/School/Centre through a written entrance test and/or interview.
- d) The Institute shall arrange to conduct the entrance test/interview for each Department/School/Centre and publish the category wise merit list. On the day of interview, the candidate shall submit choices for department/school/centre for admission, if she/he is appearing for interview in multiple departments/schools/ centres.
- e) The Institute shall notify the final date of completion of the enrolment procedure.
- f) After qualifying in the test/ interview, the selected candidates shall be admitted/enrolled to the PhD programme on remittance of appropriate fees (including the refundable caution money) to the Institute within the scheduled date.
- g) The admission office shall issue an enrolment certificate to the admitted candidates. The candidates enrolled as full time Institute scholars shall be eligible to receive Institute fellowship from the date of her/his enrolment.
- h) Candidates with individual fellowships can join the Institute anytime after availing the fellowship, but shall be enrolled at the time of regular admission described above

## **10. SEMESTER REGISTRATION**

- (1) After admission, the enrolled candidates shall automatically be registered for the first semester. The enrolled candidates shall report to the Head of the concerned Department/ School/ Centre for selection of a supervisor(s).
- b) In every following semester, till the submission of the thesis, the enrolled candidate/research scholar has to register himself/herself to continue in the programme on remittance of requisite fees within the scheduled date at the beginning of the semester as mentioned in the academic calendar/ notification. If a scholar does not register in the beginning of semester(without approved leave), her/his PhD admission is liable to be cancelled. In case, a scholar fails to register for two successive semesters, her/his admission shall be cancelled automatically.
- c) The scholar is also required to remit a 'submission fee' at the time of thesis submission.

## **11. WITHDRAWAL FROM THE PROGRAMME**

A scholar can apply (through the RPEC and DPGC) for withdrawal from the PhD programme to the SPGC showing proper reasons. In addition, Clearance certificates from respective offices

should be produced in a prescribed format. After examining the merit of the application for withdrawal, DPGC will forward it to the SPGC for its approval.

## **12. POST GRADUATE COMMITTEES**

### **(1) Senate Post Graduate Committee (SPGC)**

- (a) The Senate Post Graduate Committee, or SPGC for short, shall be a standing committee constituted by the Senate to look after all academic and research related issues involving the PG programmes and the PhD programme of the Institute. It shall make recommendations to the Senate on all academic and research issues including policy matters. Provided that no recommendations on policy matters shall be made without consultation with the Dean (Academic). The SPGC shall also take views on specific problems involving these programmes and make recommendations on the same. Specific issues involving one or more postgraduate students or PhD Scholars shall also be dealt by the SPGC.
- (b) In particular, the SPGC shall have jurisdiction in the following matters concerning the PhD programme of the institute:
  - (i) Considering the requests for a change of a supervisor or co-supervisor;
  - (ii) Approving the constitution of an RPEC on the recommendation of a DPGC;
  - (iii) Receiving the following from the DPGC and considering the same -
    - (a) reports of the comprehensive viva and state-of-the-art seminar of a candidate,
    - (b) applications for PhD registration, and
    - (c) applications for extension of PhD registration,
  - (iv) Considering applications for deputation/ full semester/ full year leave of a candidate;
  - (v) Considering report of indiscipline against a scholar and recommending suitable disciplinary measures;

### **(2) Departmental Committees**

- (a) For every academic unit, viz., Department/ School/ Centre, there shall be a unit level committee styled the Departmental Postgraduate Committee (DPGC). The powers and functions of the DPGC shall, include, the following.
  - (i) Assigning a supervisor for every PhD Scholar at the time of enrolment;
  - (ii) Assigning a co-supervisor for a PhD candidate on receipt of a request from the RPEC to include a co-supervisor for the scholar;
  - (iii) Assisting a candidate in the change of her/his supervisor;
  - (iv) Receiving proposals for RPEC from a supervisor and consider the same and make suitable recommendation;
  - (v) Forwarding to the SPGC the following:
    - (a) reports of the Comprehensive Viva and State-of-the-Art seminar of a candidate;
    - (b) applications for PhD registration; and
    - (c) applications for extension of PhD registration,
  - (vi) Forwarding submitted PhD theses to the Dean (Academic) for favour of adjudication;
  - (vii) Considering applications for leave of a candidate beyond seven days;
  - (viii) Examining cases of indiscipline reported against a candidate and forwarding the cases to the appropriate authority, if necessary, with such comments and findings as it may consider appropriate;



- (ix) Forwarding to the SPGC, applications for deputation/ full semester/ full year leave
- (b) The DPGC shall report and make recommendations to the SPGC as and when required. The SPGC, while making any recommendations may seek/ receive opinions/ recommendations, as and when required from any or all of the DPGCs.
- (c) Departmental Faculty Committee (DFC): For every academic unit, viz., Department/ School/ Centre, there shall be a unit level committee styled the Departmental Faculty Committee (DFC). It shall consist of all permanent faculty members of the Department. Every DPGC shall be a part of the larger general body DFC which nominates the members to the DPGC.
- (d) The composition of SPGC and DPGC shall be as provided in the Ordinances for Postgraduate Programmes.

### **13. THESIS SUPERVISOR**

- (1) Every regular faculty member of the Institute holding a PhD degree and having at least 3 years' of service remaining before superannuation, shall be eligible to act as a supervisor. Any person holding a PhD degree is eligible to act as a co-supervisor. The senate may allow any person of repute to act as a supervisor.
- b) A faculty member will cease to be the supervisor if she/he superannuates or leaves the job without a lien or after the lien period is over or, for some other reasons, becomes incapacitated to act as a supervisor. Under such circumstances the RPEC shall propose another regular faculty member, having at least 3 years' of service remaining, as the supervisor. In such cases, the original supervisor may be allowed to continue as the co-supervisor. The recommendations of the RPEC in this regard shall be communicated to the SPGC through the DPGC.
- c) A Professor/ Associate Professor acting as the supervisor should not have more than 8 registered scholars (with institute fellowship) at any point of time, including joint supervision for which the weightage per scholar shall be 0.5. An Assistant Professor acting as the supervisor should not have more than 6 registered scholars (with institute fellowship) at a point of time including joint supervision for which the weightage per scholar shall be 0.5.
- d) For a scholar admitted under Section 8(5) of these Ordinances, the Principal Investigator (PI) of the sponsored project concerned shall be the Supervisor.

### **14. ALLOTMENT OF THESIS SUPERVISOR**

- (1) A Supervisor shall be assigned to an enrolled candidate by the Department/ School/ Centre concerned in the following manner:
  - (a) From the options given by the enrolled candidate on the day of enrolment and depending on the field of research interest of the candidate and availability of potential supervisors in the Department/ School/ Centre, DPGC will assign a supervisor immediately after enrolment. For candidates from sponsored research, the PI of the particular project will be nominated as the supervisor. While allocating the supervisor, the DPGC shall accord due weightage to the preference expressed by the scholar.
  - (b) In addition to the supervisor from the Institute, there can be another co-supervisor having proven contribution in the proposed research domain and having a PhD degree, on the recommendation of the RPEC. A co-supervisor may be assigned by the SPGC on the recommendation of the supervisor through the RPEC and DPGC showing sufficient reasons for her/his inclusion in the proposed research work. Inclusion of a co-supervisor should be made after enrolment and preferably be made within one year after registration.
  - (c) In some special cases, a third supervisor may also be included with the approval of the Chairman, Senate.

- (d) Supervisor(s) once selected for a research scholar cannot be changed under normal circumstances. If for some genuine reason, the candidate wants a change of supervisor or the supervisor(s) is unable to act due to some exigencies, the student shall submit an application to the SPGC through the DPGC, which may assign a new supervisor(s), after the SPGC examines the merit of the case and receives mutual consent of the original and new supervisor(s).

## **15. RESEARCH PROGRESS EVALUATION COMMITTEE (RPEC)**

### **(1) Constitution of the RPEC**

- (a) There shall be a RPEC for each enrolled/ registered scholar comprising the following members:
- |       |  |             |
|-------|--|-------------|
| (i)   | The Supervisor   | Chairperson |
| (ii)  | Co-supervisor (if any)   | Member      |
| (iii) | One faculty member of the department/ school/ centre where the candidate is enrolled | Member      |
| (iv)  | One faculty member from any other department/ school/ centre of the Institute.       | Member      |
| (v)   | One faculty member nominated by the DPGC   | Member      |
- (b) While the members under serial no. (ii), (iii) and (iv) above, shall be proposed by the supervisor to the DPGC, the member under serial no. (v) shall be nominated by the DPGC. The composition of the RPEC so proposed shall be forwarded by the DPGC, -along with its recommendations, to the SPGC.

### **(2) Duties and Functions of the RPEC**

- (a) The RPEC shall act as the mentor of the enrolled candidate/ research scholar and guide her/him through all the phases of the doctoral programme. Moreover, the RPEC shall evaluate the performance of the candidate/ research scholar and recommend steps to improve the progress of the research programme. The RPEC shall meet as and when necessary to evaluate/ decide/ recommend events for which it is constituted. The supervisor is to convene the meetings and also chair the meetings.
- (b) The RPEC shall have the following responsibilities:
- To recommend the course work to be undertaken by a candidate from the Institute/ NPTEL/ MHRD approved MOOCS with appropriate credit points/ or from any other Institutes with which a MOU has been signed for credit transfer.
  - To duly conduct the comprehensive examination and arrange for the State-of-the-Art Seminar.
  - To evaluate the progress of work made by the scholar every semester through a presentation, till the pre-submission seminar.
  - To conduct the pre-submission seminar of the scholar and recommend the thesis for submission or suggest modifications of the work, if necessary, as well as to finalize the title of the thesis.
  - To recommend a panel of at least six examiners (out of which at least three should be from India) for the thesis and send the same along with the resolution of the pre-submission seminar confidentially to the Chairman, SPGC through the DPGC.

- (vi) To consider (in its extended form) the adjudication reports received from the examiners and decide if the thesis is to be accepted for the defence and viva voce/ to be revised/ resubmitted/ rejected. To recommend an extension of the period of registration of the scholar, if necessary.
- (vii) To decide on all other matters relating to registration, performance of the scholar and examination of the thesis and refer such cases to the SPGC through the DPGC, if necessary.

## 16. ACADEMIC SESSION

- (a) **Duration:** The academic session will normally run from mid-July in one year to the mid-July in the next year. It shall be divided into three parts, namely:
  - (i) Odd semester                      Middle of July to middle of December
  - (ii) Even semester                      End of December/beginning of January to middle of May
  - (iii) Summer term                      Middle of May to middle of July
- (b) **Academic Calendar:** The Academic Calendar showing the dates of all major academic activities, as approved by the Senate, shall be published every year by the Academic Section. The Academic calendar will normally also be available on the Institute website.
- (c) **Examinations:** There will be mid-term and end-Semester Examinations for the regular courses offered in the semesters. The dates of such examinations will be shown in the Academic calendar.
- (d) **Supplementary Examinations** for the Backlog theory papers of both the semesters in a session shall be held during the Summer Term. The dates of the supplementary examinations will be displayed in the Academic calendar.

## 17. PRELIMINARY MILESTONES

### (1) Coursework

In order to become eligible for PhD Registration a scholar must enrol, attend classes regularly, and pass in the examination, in the coursework prescribed for her/ him

- (a) Every enrolled scholar must enrol, attend classes regularly, and pass in the examination in a course on '*Research Methodology and Documentation*' to be prescribed by the Senate.
- (b) The Senate may, prescribe such other compulsory courses as it may deem necessary or expedient for all the enrolled scholars
- (b) The modules of other courses to be taken for PhD coursework shall be approved by the Senate. For sponsored scholars admitted under Section 8(6) of these Ordinances, appropriate online courses similar to the mandatory courses may be approved by the SPGC. If a scholar belonging to these categories wants to register for the classroom courses at IEST Shibpur, permission for leave during the semester from the current employer is to be produced.
- (c) An enrolled scholar with an MTech/ MSc degree will have to complete post-graduate level courses totalling a minimum of 12 credits. This will be inclusive of the mandatory courses mentioned in clause (a) above.
- (d) An enrolled scholar with a BTech Degree shall have to complete postgraduate level courses totalling a minimum of 24 credits. This will be inclusive of the mandatory courses mentioned in clause (a) above.

- (e) In case the enrolment is done in a branch/ discipline other than the discipline in which the scholar obtained her/ his qualifying degree, the scholar shall have to pursue at least two more additional postgraduate level courses of a minimum of total 6 credits.
- (f) The credit courses to be taken by the candidate during the coursework maybe from the Institute or from the MHRD approved MOOCs like NPTEL or from any other Institute with which MOU has been signed for credit transfer. However, an NPTEL (or similar) course can only be taken with prior approval by the DPGC on the recommendation of the RPEC concerned. The RPEC concerned shall recommend such a course for a scholar after being satisfied that the course is of duration of 12 or more weeks and the course is relevant to the area of research to be pursued by the scholar. A PG-level online course of 12-weeks duration will fetch 3 credits. The percentage marks obtained in NPTEL courses will be considered for awarding letter grade and CGPA calculation as per the post graduate regulation at IEST Shibpur. The student has to submit the grade card/mark sheet/certificate of the completed course to the RPEC, which will be sent to the Examination Section through DPGC for inclusion in the mark sheet. In the mark sheet, the name of the course along with NPTEL course identification code will be mentioned.
- (g) The above course work shall be the minimum requirement for registration to the PhD. However, the RPEC may require a scholar to undertake such additional course work as it may deem necessary.

## **(2) Performance Requirements in the Coursework**

All the credit courses are to be taken in the next two full semesters available from the date of enrolment. Each candidate needs to qualify the coursework within a maximum of two attempts and with a CGPA of at least 6.5 to continue with the PhD programme, otherwise the enrolment will be terminated. Assessment and awarding of grades shall be in a manner similar to that for postgraduate programmes.

## **(3) Comprehensive Examination**

- (a) To test the overall knowledge in the specialization and academic preparation of a candidate in the PhD Programme, a Comprehensive *viva-voce* Examination shall be arranged for all candidates after the completion of Course Work.
- (b) The comprehensive examination will be of oral type independently designed by each Department/ Centre/ School.
- (c) Each enrolled candidate will have to qualify in this examination within first two semesters after enrolment as duly notified by the RPEC.
- (d) The date of the Comprehensive Examination shall be informed to the enrolled candidate by the RPEC at least one month prior to the date of examination.
- (e) The DPGC will constitute a board in consultation with the RPEC comprising of the supervisor(s) and two other faculty members from the Institute for conducting the examination.
- (f) The board shall evaluate the comprehensive knowledge of the candidate in her/his field of specialization.
- (g) In case of unsatisfactory performance of the enrolled candidate in the comprehensive examination, she/he may be given one more chance within one month to appear before the same board.
- (h) If the enrolled candidate fails in the second attempt, she/ he shall not be allowed to continue in the PhD programme.

- (i) The board shall communicate the result in a prescribed format through the DPGC to the Chairman, SPGC.

**(4) State-of-the-Art Seminar**

- (a) It shall be obligatory on the part of every scholar to deliver a state-of-the-art Seminar before her/his application for registration is considered. The RPEC shall organize this Seminar before a scholar registers for the third semester.
- (b) After qualifying in the comprehensive examination mentioned in sub-section 17(3), the scholar shall submit a report outlining the focused area of the research problem along with the necessary literature survey to the RPEC at least one week before the date of the Seminar and shall have to present the same before the RPEC as the 'State-of-the-Art Seminar'.
- (c) The Seminar shall be open to all.
- (d) The RPEC shall communicate a report on the performance of the candidate in a prescribed format through the DPGC to the Chairman, SPGC.

**18. REGISTRATION TO THE PROGRAMME**

- (1) Within 15 working days from the date of successful completion of the prerequisites, namely, the coursework, the comprehensive examination and the state-of-the-art seminar, the scholar shall apply for registration in the PhD programme in an appropriate form to the Chairman, SPGC, through the DPGC with recommendations from RPEC. On its being satisfied about the eligibility of the scholar to get registered the Chairman, SPGC shall accept the request for Registration. A registration certificate shall be issued from the academic section.
- b) Registration to the PhD programme shall be cancelled in case the candidate is unable to clear the backlog papers (if any) within the third semester (including summer term) after enrolment.

**19. THESIS REGISTRATION, PROGRESS REPORT AND SEMINAR**

- (1) After enrolment, a scholar shall carry out research under the supervision and guidance of her/his supervisor(s).
- (2) A registered scholar shall discharge, in addition to her/his research, such additional academic responsibilities as may be assigned to her/ him by the Institute.
- c) The scholar will be allowed to register for her/his 'PhD thesis credit' from the first semester after enrolment
- d) Each unit of thesis shall be of four credits. The maximum credit that the scholar can register in a semester shall be 16 including course work. It may be proportionately reduced if the research scholar is on approved leave for part of the semester.
- e) Every semester, in which the scholar registers for thesis credits, the scholar shall be required to submit a progress report and present her/his work in a seminar before the RPEC.
- f) The RPEC will evaluate the progress of the scholar as satisfactory with 'S' grade(s) (each 'S' grade = 4 credit points) or unsatisfactory with 'X' grades (each 'X' grade = 0 credit points). The scholar will be awarded a maximum of 4 letter grades each semester (which may be the best as 'SSSS' (=16 credits) or the worst 'XXXX' (= 0 credits)). In case the scholar obtains 3 'X' in a semester, the performance will be judged as 'unsatisfactory'. If a scholar's performances in any two consecutive semesters are adjudged 'unsatisfactory' the registration of the scholar shall be terminated and her/his name shall be struck off the rolls.
- g) **Minimum Duration:** Before a scholar is permitted to submit her/his thesis a scholar will have to complete a minimum of 64 credit points with satisfactory grade points. Unless otherwise permitted a scholar shall pursue her/his research for the entire period of validity of her/his research registration without any break in the period.

- h) **Early Submission:** However, in extraordinary cases, the Senate may, on the recommendation of the RPEC, permit a scholar to submit her/his thesis earlier, if the RPEC recommends that the quality and quantum of the research work done by the scholar for submission of the thesis is satisfactory.
- i) **Maximum Duration:** The PhD Registration shall be valid for 5 years from the date of registration. Beyond this period, it may be extended by one year at a time (not exceeding two terms of one year each). For getting such an extension, the candidate must apply in writing with proper justifications to the Chairman, SPGC through the DPGC with recommendations of the RPEC. The application will be considered by the SPGC for approval.
- j) Under exceptional cases, the Chairman of the Senate may grant an extension for a further period (exceeding the two term extensions) of another six months for submission of the thesis.

## 20. PRE-SUBMISSION SEMINAR

- (1) The RPEC shall organize this seminar for a scholar not earlier than a period needed to obtain a minimum of 64 credit points after PhD enrolment (if special approval for early submission is not obtained). In this seminar, the scholar shall:
  - (a) present the highlights of his completed research work along with the main contributions,
  - (b) submit a Synopsis duly approved by the Supervisor(s),
  - (c) seek permission for submitting her/his thesis, and
  - (d) seek approval for the final title of the thesis.
- b) Before the RPEC grants permission to a scholar to submit her/ his PhD thesis it shall be satisfied that, in addition to fulfilling the other requirements the scholar has to her/ his credit:
  - (a) at least two journal papers on her/ his research topic in SCIE/ SSCI/ AzndHCI/ Scopus indexed journals, either published or accepted for publication, with her/ him as the first author; or,
  - (b) two awarded patents in her/his name.
- c) Once the RPEC is satisfied that the scholar has fulfilled all the requirements for submission of the thesis, it may
  - (a) allow the scholar to proceed for preparing the thesis for submission,
  - (b) intimate the same to the Dean (Academic) (through the DPGC) in a prescribed format, and
  - (c) prepare a panel of at least six examiners (out of which at least three should be from India) for the thesis and send the same confidentially along with the resolution of the pre-submission seminar to the Dean (Academic) through the DPGC.

## 21. SUBMISSION OF THESIS

- (1) A thesis shall contain a comprehensive report on the completed research work. It shall demonstrate that the scholar has acquired a thorough knowledge and made commendable contributions in that field.
- b) The research scholar should fill in a form to submit the thesis along with the synopsis within three months from the successful completion of the pre-submission seminar. Submission at a later date will need permission from the Chairman, SPGC.
- c) The hard copies of the thesis [(n+3) copies ('n' being the number of supervisors)] in fully bound form (with soft cover) along with the synopsis (6 copies) and the soft copies (.pdf) of both the thesis and the synopsis must be submitted to the Academic Section of the Institute through the DPGC. The attached guidelines should be followed in thesis preparation.

- d) The supervisor(s) shall also submit a certificate inside the thesis recommending that the thesis is worthy of submission for the partial fulfilment of the degree of Doctor of Philosophy (PhD).
- e) Every such thesis shall undergo plagiarism check through the IPR Cell of the Institute and the acceptance report/certificate obtained from the IPR Cell will have to be submitted with the thesis.
- f) Before submission of the thesis the scholar must clear all the dues of the Institute and submit a clearance certificate with the thesis. The Institute scholarship will be terminated from the date of submission of the thesis.

## **22. ADJUDICATION OF THE THESIS**

- (1) The PhD thesis submitted by a research scholar shall be adjudicated by two external examiners duly appointed by the Director.
- b) The Dean (Academic) shall seek the approval of the Director for two examiners out of the list proposed by the RPEC. The director, if not satisfied with the forwarded panel, may ask the RPEC concerned to submit a fresh panel.
- c) The Dean (Academic) will seek the consent of the external examiners so appointed by the Director. While seeking the consent a copy of the synopsis of the thesis will be enclosed.
- d) In case, the consent of the examiner(s) is not available within three weeks, the Dean (Academic) shall seek the approval of the Director for further names in the list or seek a new list of examiners from the RPEC.
- e) After getting the consent from the examiners, the Academic Section will send the thesis, in a suitable form (hard copy/ soft copy or both) to the examiners, with a request to send the duly signed adjudication report in the prescribed format, to the Academic Section within eight weeks from the date of receipt of the thesis. If the adjudication report is not received within eight weeks, reminders will be sent by the Academic Section.
- f) In case of non-receipt of the adjudication reports from either or both of the examiners within 6 months, the Dean (Academic) will seek the approval of the Director for new examiner(s) from the existing list or seek a new list of examiners from the RPEC.
- g) On receipt of all the adjudication reports from the examiners, the Dean (Academic) will inform the Chairman, DPGC, to arrange a meeting of an 'extended RPEC' consisting of the members of the RPEC, the concerned Head of the Department and the Dean, to open and consider the reports. The Head of the Department will be invited and the Dean (Academics) will chair this extended RPEC meeting. Normally all such meetings will be held in the Academic Section.
- h) If both the examiners recommend award of PhD Degree on the basis of the thesis submitted, the extended RPEC shall recommend holding of an open defence seminar and viva-voce examination. The Dean (Academic) will then seek the approval of the Director for the same and also for nomination of an external examiner to the *viva-voce* board.
- i) If one or more of the reports, contain conditional recommendations with suggestions for minor or major revisions or queries from the examiners, the extended RPEC will suggest how to comply with the suggestions and comments.
- j) If any of the adjudicator(s) does not recommend award of PhD degree on the basis of the thesis in its present form and suggests revision and resubmission, then the extended RPEC may suggest for re-submission of the thesis within a stipulated period (ordinarily within 3 months). On receipt of the revised/ modified thesis the same will be sent to the adjudicator(s) concerned.
- k) If both the examiners are of the opinion that the work is not fit for the award of a PhD Degree, the extended RPEC shall reject the thesis and communicate its decision to the Scholar. In such a case, the scholar will have to apply for a fresh semester registration, and will be allowed another six months for revising and resubmitting the thesis according to the guidance of the supervisor.
- l) If one examiner is of the opinion that the work is not fit for the award of a PhD Degree, while the other examiner recommends awarding of the degree, the matter shall be referred to the Director,

whose decision in this regard shall be final. For arriving at his decision, the Director may, in his own discretion, get the thesis examined by a third examiner and obtain her/ his views.

- m) If the extended RPEC recommends for open defence and viva voce, it will submit a panel of three names of Indian examiners to the Dean (Academic).

The Dean (Academic) shall submit to the Director the panel of examiners and the Director will, on his being satisfied with the suitability of the persons proposed, nominate one Indian examiner in the viva-voce board. The director, if not satisfied with the forwarded panel, may ask the RPEC concerned to submit a fresh panel.

### 23. VIVA-VOCE EXAMINATION

- (1) Before the defence seminar presentation and viva-voce examination, the scholar having 'n' number of supervisors, shall submit 'n+1' copies, both side printed (hard bound) and one archival soft copy (.pdf) of the final thesis (containing all corrections and modifications, if any) to the office of the Dean (Academic).
- b) The scholar will present the highlights of her/his research work and main contributions in the defence seminar before the *viva-voce* board. The scholar may be required to answer specific queries of the thesis examiners or state revisions carried out, if the revisions have been suggested by the thesis examiners.
- c) The viva-voce board will consist of:

i) Supervisor	Chairperson
ii) Co-Supervisor (if any)	Member
iii) Indian Examiner as nominated by the Director	Member

The Indian examiner will be nominated by the Director from the suggested panel. In case of non-availability of the External Expert Member within a maximum period of one month, the Dean (Academic) may request the Director to select any other name from the approved panel of the thesis examiners to be the External Expert Member for the open defence and viva voce examination.

- d) If for some exigency, the external examiner of the *viva-voce* board is not available at the Institute on the date of examination, the *viva-voce* may be arranged through 'Skype' or a similar video conferencing mode with due approval of the Chairman, SPGC.
- e) The thesis adjudication reports shall be shared with the *viva-voce* board.
- f) Based on the performance of the scholar in the defence seminar, the board of examiners shall submit a resolution to the Dean (Academic). The Dean (Academic) shall place it before the Director for his approval.
- g) *Provisional Certificate*: A scholar who successfully fulfils all the requirements of the degree of doctor of philosophy of the Institute, shall, upon approval of his PhD viva-voce examination results by the Chairman, Senate shall be issued a provisional certificate mentioning that the scholar has been provisionally admitted to the degree of Doctor of Philosophy (PhD) with effect from the date of the viva-voce examination. Issuance of such a certificate shall be subject to the scholar complying with the rest of the official procedure. On receipt of the Chairman, Senate's approval to admit the scholar to the degree, the Dean (Academic) shall intimate the same to the Deputy Registrar (Academic) or the officer holding the charge of the academic section, who shall publish the result and issue the provisional certificate to the scholar.
- h) The name of the research scholar admitted to the Degree of the Doctor of Philosophy is to be approved by the Director for conferring the formal degree of the PhD programme in the next



convocation of the Institute. The degree certificate shall be signed by the Chairman (Senate) and the Chairperson, Board of Governors.

## **24. LEAVE RULES**

### **(1) Ordinary Leave**

- (a) A full-time PhD research scholar shall be eligible for such leave as may be provided in the leave rules for research scholars to be framed by the Senate from time to time. Such leave rules shall, in general, be framed following the MHRD guidelines issued from time to time.
- (b) All full-time scholars shall be required to record their daily attendance in the respective departmental office.
- (c) A scholar shall apply to the Head of the Department to avail any leave in a prescribed format through the Supervisor.
- (d) If the scholar has any teaching assignment, a maximum of 3 days of leave may be availed at a stretch. However, in exceptional cases, like medical or accidental or similar other situations, the DPGC may approve additional leave.
- (e) Under special circumstances (mainly on medical ground), and with prior approval of the SPGC, a full Semester leave may be granted. Such leave may lead to loss of fellowship for the period of absence (*dies non*) without cumulative effect.
- (f) A scholar, proceeding/ remaining on leave without prior approval of the authority, shall be treated as absent and she/ he shall not be entitled to draw any fellowship during the period of her/ his absence. An unauthorised absence shall also attract such disciplinary action as may be decided by the DPGC/ SPGC on case to case basis.

### **(2) Maternity/ Paternity Leave/ Child Care Leave**

- (a) A female research scholar in the family way may be granted maternity leave for a period not exceeding 180 days. A married male fulltime research scholar may be granted not more than 15 days of paternity leave. The maternity/ paternity leave may be availed only once during the entire period of the PhD Programme.
- (b) The Head of the Department/ School/ Centre shall be the sanctioning authority for maternity/ paternity leave. Provided that no such leave shall be granted without the recommendation of the Supervisor. In order to be considered, an application for maternity/ paternity leave must be made along with necessary medical certificate(s). The Institute norms may be followed for granting Child Care leave.

### **(3) Academic leave**

- (a) A scholar, with due endorsement from the Supervisor and DPGC, attending a conference/ seminar/ short term course and for gaining hands-on experience in a research laboratory/ industry or field visits shall be considered to be on deputation leave/academic leave.
- (b) A scholar may avail deputation leave/academic leave with necessary permission from the DPGC/ SPGC.
- (c) The DPGC may, on specific recommendation of the Supervisor concerned, grant academic leave to a scholar, provided the cumulative total of such leave availed by the scholar in a calendar year does not exceed 30 days.
- (d) Academic leave exceeding 30 days but up to a maximum of 60 days in a calendar year may be approved by the SPGC on specific recommendation of the Supervisor and DPGC with due endorsement by the host Institute.
- (e) Academic leave of more than 60 days but up to a maximum of 365 days may also be permissible for carrying out part of the research work in another institute/ R&D

Laboratory/ industry in India or abroad. An application for academic leave of such duration must accompany a specific recommendation of the Supervisor and necessary endorsement of the host institute. A scholar availing any financial assistance of any form from the host institute shall not be entitled to any fellowship during the period in which such assistances are availed. An application for such a long duration academic leave shall be made by the scholar to the Chairman, SPGC through the Supervisor(s) and DPGC. For sanction of such a leave, the approval of the Senate shall be necessary.

- (f) Irrespective of the leave granted, a research scholar must pay her/ his semester registration fees as usual. If a semester registration date falls during the period of academic leave, the scholar must complete the registration procedures by on-line methods through institute website in due time.

## **25. PRIVILEGES AND OBLIGATIONS OF A RESEARCH SCHOLAR**

- (a) It shall be obligatory on the part of every scholar to abide by the code of conduct for students of the Institute and all other specific stipulations for the PhD scholars as may be prescribed by the Senate from time to time.
- (b) The scholars shall normally be permitted to use the central facilities like the library, laboratories, computer centre and other relevant academic and research facilities of the Institute.
- (c) Every scholar shall participate in and perform the academic duties assigned to them. A research scholar, without any kind of fellowship or working in other Institutes, may be exempted from participating in such assignments.

## **26. END NOTE**

The provisions of these Ordinances are to be applicable from 2019 onwards. However, some propositions mentioned here are new compared to the extant rules/norms and effective implementation and enforcement of the provisions shall depend, to a large extent, on the availability of adequate infrastructure and appropriate organisational structure at the Institute. As such the implementation/ enforcement of some of the provisions may be gradual and in consonance with the improvements in the infrastructure. However, the basic spirit of quality teaching, academic opportunities for students, and improving the academic ambience should be adhered to from the very beginning.

**REQUEST FOR THESIS SUPERVISOR ALLOCATION**

Scholar's Name: \_\_\_\_\_ Enrolment No: \_\_\_\_\_

Programme (PhD/ MTech/ MURP, etc.) : \_\_\_\_\_

Department/ School/ Centre: \_\_\_\_\_

Area of specialization: \_\_\_\_\_

My preferences for the research areas/ faculty members are as below.

Preference.	Research Area	Choice of Supervisor
1	_____	_____
2	_____	_____
3	_____	_____

Date: \_\_\_\_\_ (Scholar's Signature)

Supervisor allotted: \_\_\_\_\_

Signature of Chairman, DPGC \_\_\_\_\_

I agree to supervise the work

Signature of supervisor

Approved/ Not Approved

Signature of Chairman, SPGC \_\_\_\_\_

CONSTITUTION OF RESEARCH PROGRAMME EVALUATION COMMITTEE (RPEC)

Department/ School/ Centre: \_\_\_\_\_

Scholar's Name: \_\_\_\_\_ Enrolment No: \_\_\_\_\_

Month and Year of enrolment: \_\_\_\_\_ (month) \_\_\_\_\_ (year)

Programme: **PhD** Area of specialization \_\_\_\_\_

Thesis Supervisor(s): \_\_\_\_\_

It is recommended that the RPEC for the above scholar may include the following faculty members:

Serial No.	Name	Department/ School/ Centre	Justification
1			
2			

Date \_\_\_\_\_ Supervisor(s) \_\_\_\_\_

The DPGC of the Department/ School/ Centre of \_\_\_\_\_ endorses the recommendations of the Supervisor(s) and nominates Prof/ Dr \_\_\_\_\_ as the DPGC nominee to the RPEC for the above scholar:

Serial No.	Name	Department/ School/ Centre

Comments of Chairman, DPGC \_\_\_\_\_

Signature of Chairman, DPGC

Approved/ Not Approved

Signature of Chairman, SPGC

**WITHDRAWAL FROM PHD PROGRAMME**Odd/ Even Semester      2      0      -    2      0      Academic Session

Dept/ School/ Centre: \_\_\_\_\_

Scholar's Name: \_\_\_\_\_

Cell Phone No. \_\_\_\_\_ email \_\_\_\_\_

Enrolment/ registration No \_\_\_\_\_ of \_\_\_\_\_  
(month) (year)Programme: **PhD** Area of specialization \_\_\_\_\_

Supervisor(s): \_\_\_\_\_

Reason for withdrawal \_\_\_\_\_

Scholarship drawn till \_\_\_\_\_  
(month) (year)Registration fees last paid \_\_\_\_\_  
(Amount in INR) (month) (year)

Paid on (dd/mm/yyyy) \_\_\_\_\_

\_\_\_\_\_  
Signature of the candidate/scholar.....  
.....

Clearance obtained from

: Library .....	Library-in-Charge
: Computer Centre .....	Prof.-in-Charge
: Hall of Residence .....	Warden
: Mess .....	Mess-in-Charge
: Examination Section .....	Dy Registrar(Exam)

Comments by RPEC/DPGC: .....

\_\_\_\_\_  
Permitted/Not permitted

Signature of Chairman, SPGC

**APPENDIX-4**

**REPORT OF COMPREHENSIVE EXAMINATION**

Scholar's  
Name: \_\_\_\_\_  
Enrolment No: \_\_\_\_\_ Date \_\_\_\_\_  
Programme: \_\_\_\_\_ Doctor of Philosophy  
Supervisor(s) \_\_\_\_\_  
Date of Examination \_\_\_\_\_  
Report on mode and procedure of Comprehensive Examination (including the written part, if any):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Overall Impression \_\_\_\_\_ Satisfactory/ Unsatisfactory

Sl No	Name	Department/ School/ Centre	Signature
1			
2			
3			
4			

**REGISTRATION TO PHD PROGRAMME**

Session: 20.....-.....		Semester : Odd/ Even	
Particulars of the Scholar			
Name: _____		Enrolment no.: _____	
Email: _____			
Particulars of the Supervisor(s)			
Name: _____		Designation: _____	
Department/ School/ Centre: _____			
Particulars of the Co-Supervisor(s)			
Name: _____		Designation _____	
Affiliation: _____		Address _____	
_____		_____	
Name: _____		Designation _____	
Affiliation: _____		Address _____	
_____			
Broad Topic of the Research: _____			
Coursework done/Grades :			
Sl No.	Course Undertaken (code: course name)	Credit Point	Grade Obtained
1.			
2.			
3.			
4.			
5.			
6.			
		CGPA obtained: _____	
Comprehensive examination held on _____ State-of-the-Art seminar held on _____			
_____			
Signature of the scholar			

(Continued overleaf.....)

Recommendations of RPEC:

Comments of the Chairman,  
DPGC:

←----- For office use only -----→

Permitted/Not permitted:

Registration. No \_\_\_\_\_ Date: \_\_\_\_\_

Unless renewed the validity of the Registration shall expire on: \_\_\_\_\_

Signature of Dean (Academic)



**REPORT OF (XX799) SEMINAR**

Session: 20.....-.....

Semester : Odd/ Even

## Particulars of the Scholar

Name:

Email:

Registration no.:

Date of  
Registration:

## Particulars of the Supervisor(s)

Name: \_\_\_\_\_

Designation:

Department/ School/  
Centre:

## Particulars of the Co-Supervisor(s)

Name:

Designation

Affiliation:

Address

Name:

Designation

Affiliation:

Address

Date of Presentation

Topic of  
Presentation:The candidate was awarded the  
grade: \_\_\_\_\_

Signature of RPEC members

Sl No.	Name	Designation and Department	Signature
1.			
2.			
3.			
4.			
5.			

**REPORT ON PRE-SUBMISSION SEMINAR**

Session: 20.....-.....

Semester : Odd/ Even

Particulars of the Scholar

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Registration no.: \_\_\_\_\_

Date of

Registration: \_\_\_\_\_

Particulars of the Supervisor(s)

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Department/ School/ Centre: \_\_\_\_\_

Particulars of the Co-Supervisor(s)

Name: \_\_\_\_\_

Designation

Affiliation: \_\_\_\_\_

Address

Name: \_\_\_\_\_

Designation

Affiliation: \_\_\_\_\_

Address

Date of Pre-Submission Seminar: \_\_\_\_\_

Final Title of the Thesis: \_\_\_\_\_

Papers published in SCIE/SSCI/AzndHCI/Scopus indexed Journals

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Observations of  
RPEC  
(if any)

Recommendation of RPEC

The scholar **may be/ may not be** permitted to submit the thesis

Signature of RPEC members

Sl  
No.

Name

Designation  
Department

and

Signature

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Comments of Chairman,  
DPGCSignature of Chairman,  
DPGC

**THESIS SUBMISSION**

Session: 20.....-.....

Semester : Odd/ Even

Name of the Scholar:

Email:

Registration no.:

Date of  
Registration:

Title of the Thesis:

I certify that

The work contained in the thesis is original and has been done by myself under the guidance and supervision of my research Supervisor(s).

The work has not been submitted to any other Institute for any degree or diploma.

I have followed the guidelines provided by the Institute in writing the thesis.

I have conformed to the norms and guidelines given in the Ethical Code of Conduct of the Institute.

The thesis has been prepared without resorting to plagiarism (IPR Cell Report submitted)

Whenever I have used materials (data, theoretical analysis and text) from other sources, I have given due credit to them by citing them in the text of the thesis and giving their details in the references.

Pre-Submission Seminar held on (dd/mm/yyyy):

No. of papers published in SCIE/SCOPUS/AzndHI indexed journals:

No. of copies of synopsis submitted:

No. of hard copies of thesis submitted:

Metadata submitted in (media)

Filename of the Soft copy of thesis:

Filename of the Soft copy of synopsis:

Date: \_\_\_\_\_

Scholar's Signature: \_\_\_\_\_

Endorsement by the  
Supervisor(s)

\_\_\_\_\_  
Signature of the Supervisor

\_\_\_\_\_  
Signature of the Chairman, DPGC

Permitted/Not permitted to submit the thesis:

\_\_\_\_\_  
Signature of the Chairman,  
SPGC

**ADJUDICATION REPORT**

1. Name of the Scholar:

2. Registration No.:

3. Title of the Thesis:

4. Submitted for the degree of : Doctor of Philosophy (PhD)

5. Please tick (✓) in the appropriate box  
YES or NO

5.1. Is the thesis of substantial nature making a distinct addition to knowledge in the subject? Yes ☐ No ☐

5.2. Has the thesis embodied any new ideas with original thoughts? Yes ☐ No ☐

5.3. Whether quality of work is comparable with other universities of repute? Yes ☐ No ☐

**6. Recommendations** [Tick (✓)any one]

- a) The thesis is recommended for the award of PhD degree, in its present form. ☐
- b) The thesis is accepted for the award of PhD degree, subject to some corrections to be incorporated in thesis as suggested, but the final thesis need not be sent to the examiner. The candidate should explain the corrections made and satisfy the viva-voce board. ☐
- c) The thesis is accepted for the award of PhD degree, subject to some revision(s) as suggested and the revised thesis is to be sent to the examiner for Re-adjudication. ☐
- d) The thesis in its present form is not acceptable for the award of PhD degree. ☐

Date: \_\_\_\_\_  
(dd/mm/yyyy)

\_\_\_\_\_  
Signature of the Adjudicator

Affiliation: \_\_\_\_\_

\_\_\_\_\_  
Telephone/Fax No. \_\_\_\_\_

\_\_\_\_\_  
e-mail ID: \_\_\_\_\_

7. Reasons in support of your recommendations (attach separate sheet if necessary)

8. Do you suggest any revision of the thesis? If so, please indicate the aspects to be covered under the revision (attach separate sheet if necessary)

9. If not recommended, state reasons (attach separate sheet if necessary)

Date: \_\_\_\_\_  
(dd/mm/yyyy)

\_\_\_\_\_  
Signature of the Adjudicator

## GUIDELINES FOR THESIS PREPARATION

### SPECIFICATIONS FOR THESIS FORMAT

#### (1) Preparation of Manuscript and Copies

The thesis needs to be prepared using a standard text processing software and must be printed in black text (color for images, if necessary) in standard typeface.

The thesis must be printed or photocopied on both sides of white paper. All copies of thesis pages must be clear, sharp and even, with uniform size and uniformly spaced characters, lines and margins on every page of good quality white paper of 75 gsm or more.

The thesis should be free from typographical errors.

##### Size and Margins

- (a) A4 is the recommended thesis size.
- (b) Content should not extend beyond the bottom margin except for completing a footnote, last line of chapter/subdivision, or figure/table caption.
- (c) A sub-head at the bottom of the page should have at least two full lines of content below it. If the sub-head is too short to allow this, it should begin on the next page.
- (d) All tables and figures should conform to the same requirements as text. Color may be used for figures. If tables and figures are large, they may be reduced to the standard size and /or folded just once to flush with the thesis margin (if the page size does not exceed 250x360 mm).

##### Page Numbering

- (a) Beginning with the first page of the text in the thesis (chapter 1), all pages should be numbered consecutively and consistently in Arabic numerals through the appendices.
- (b) Page numbers prior to Chapter 1 should be in lower case Roman numerals. The title page is considered to be page (i) but the number is not printed.

##### Multi-Volume Thesis

A thesis may be in two or more volumes, if required. The volume separation should come at the end(s) of major division(s). The preliminary pages prior to Chapter 1 are contained only in Volume I, except the title page.

#### (2) Tables, Figures and Equations

- (a) All tables (tabulated data) and figures (charts, graphs, maps, images, diagrams, etc.) should be prepared, wherever possible, on the same paper used to type the text and conform to the specifications outlined earlier. They should be inserted as close to the textual reference as possible.
- (b) Tables, figures and equations should be numbered sequentially either throughout the thesis or chapter-wise using Arabic numerals. They are referred to in the body of the text capitalizing the first letter of the word and number, as for instance, Table 17, Figure 24, Equation (33), or Table 5.3, Figure 3.11, Equation (4.16), etc.
- (c) If tables and figures are of only half a page or less, they may appear on the same page as text but separated by adequate line spacing.
- (d) Good quality Line Drawings/figures must be drawn using standard software.
- (e) *Images, Photographs, etc.* preferably be scanned in resolution exceeding 300dpi with 256grayscales for the monochrome images and 24 bit per pixel for the color images.

## Binding

The student should submit the copies of the thesis in fully bound form (soft cover) for PhD. Once the thesis is accepted, it is the student's responsibility to get it properly bound before depositing the required number of copies. The front cover of the bound copy may be the same as the title page of the thesis. The front cover should have printing on the side to include the author's name, abbreviated thesis title (optional), degree, department, and the year.

## GUIDELINES FOR STRUCTURING CONTENTS

### **Sequence of Contents**

Preliminaries:	Title Page	As per the format given	}
	Certificate		
	Acknowledgement and/ or Dedication (where included)		
	Abstract/Synopsis		
	Table of Contents		
	List of Figures, Tables, Illustrations, Symbols, etc (wherever applicable)		
	Text of Thesis:	Introduction, body of the thesis, summary and conclusions, scope for future work	
	Reference Material:	List of References, Bibliography (where included)	
	Appendices	where included	
	Index	where included	

### **Preliminaries**

#### Synopsis/Abstract

A PhD thesis should contain an abstract/synopsis not exceeding 1000 words.

Further, every PhD scholar should submit 2 copies of brief abstract not exceeding 250 words for record keeping in the Library.

A synopsis or abstract shall be printed with the heading "SYNOPSIS" or "ABSTRACT" followed by certain preliminary information and the text. For textual matter, refer to the suggested format which is placed at the end of the Thesis Guide.

Synopsis/Abstract should be self-complete and contain no citations for which the thesis has to be referred.

#### Table of Contents

The Table of Contents lists headings of all Chapters/Sections/Sub-sections that follows it. No preceding material is listed.

List of Figures with headings of all figures/illustrations, and List of Tables with headings of all tables, are listed separately. A list of symbols used and a list of abbreviations/acronyms may also be included.

### **Text of the thesis**

#### Introduction

Introduction may be the first chapter or its first major division. In either case, it should contain a brief statement of the problem investigated. It should outline the scope, aim, general character of the research and the reasons for the student's interest in the problem

### The body of Thesis

This is the substance of the dissertation inclusive of all divisions, subdivisions, tables, figures, etc.

### Summary and conclusions

If required, these are given as the last major division (chapter) of the text. A further and final sub-division titled “*Scope for Further Work*” may follow.

### Reference

The list of references should appear as a consolidated list with references listed either alphabetically or sequentially as they appear in the text of the thesis. Spacing and font size should be consistent inside a single reference.

### **Reference Format**

For referencing an article in a scientific journal, the suggested format should contain the following information: authors, title, name of journal, volume number, page numbers and year.

For referencing an article published in a book, the suggested format should contain, authors, the title of the book, editors, publisher, year, page number of the article in the book being referred to.

For referencing a thesis, the suggested format should contain, author, the title of thesis, where thesis was submitted or awarded, year.

A few examples of formats of references are given below and the student should be consistent in following the style. Referencing format used in widely referred and reputed international journals may also be used, consistently.

### **Journals**

Exner H.E., “Physical and Chemical Nature of Cemented Carbides,” *International Metals Review*, 1979, v. 24, pp. 149-173.

Spriggs G.E., “The Importance of Atmosphere Control in Hard Metal Production,” *Powder Metallurgy*, 1970, v. 13, n. 26, pp. 369-393.

### **Conference Proceedings**

Baek W.H., Hong M.H., Lee S., and Chung D.T., “A Study on the Shear Localization Behavior of Tungsten Heavy Alloy,” *Tungsten and Refractory Metals 2*, Bose A. and Dowding R.J. (eds.), Metal Powder Industries Federation, Princeton, NJ, USA, 1995, pp. 463-471.

Fischmeister H.F., “Development and Present Status of the Science and Technology of Hard Materials,” *Science of Hard Materials*, Viswanadham R.K., Rowcliffe D.J., and Gurland J. (eds.), Plenum Press, New York, NY, USA, 1982, pp. 1-45.

### **Books**

German R.M., *Powder Injection Moulding*, Metal Powder Industries Federation, Princeton, NJ, USA, 1990. 521p.

### **Thesis**

Johnson J.L., “Densification, Microstructural Evolution, and Thermal Properties of Liquid Phase Sintered Composites,” PhD Thesis, The Pennsylvania State University, University Park, PA, USA, 1994.

### **Technical Reports**

Zukas E.G., Rogers P.S.Z., and Rogers R.S., “Experimental Evidence for Spheroid Growth Mechanisms in the Liquid Phase Sintered Tungsten Based Composites,” Informal Report: Los Alamos Scientific laboratory, USA, 1976, 35p.



### **Patents**

Oenning V. and Clark I. S. R., U. S. Patent No. 4988386, 1991.

### **Journals in Non-English Language**

Weihong L. and Xiuren T., “Tungsten Matrix in Cu-W Contact Materials by Impregnation Process,” *Powder Metallurgy Technology*, 1988, v. 6, n. 8, pp. 1-4. (in Chinese)

### **Online resources**

Author Surname Author Initial, (Year Published). *Title*. [online] Available at: <http://Website URL> [Accessed Date Accessed].

### **Appendix or Appendices**

Supplementary illustrative material, original data, and quotations too lengthy for inclusion in the text or which is not immediately essential to an understanding of the subject can be presented in Appendix or Appendices (as Appendix A , Appendix B, etc.)

Each appendix with its title should be listed separately in the table of contents. Likewise, tables and figures contained in the Appendices are to be included in the lists of tables and figures, respectively.

### **CONCLUDING REMARKS**

This Thesis Guide lists only the basic requirements for preparing the thesis. Over and above the aforementioned points, a thesis should be reader-friendly in both its appearance and presentation. Several aspects of thesis preparation, particularly style of writing and presentation, have not been discussed in great detail. The student should follow appropriate ideas from standard literature of his/ her area of research, and adopt a uniform style and format throughout the thesis, such as in the structural divisions/subdivisions of the thesis, in the mode of citing references and footnotes in the text, in using dimensions, units and notations, and in preparing tables and figures, etc.

Sample Formats for Certificate, Abstract/Synopsis, and Title Page

Indian Institute of Engineering Science and Technology, Shibpur

**ABSTRACT/SYNOPSIS**

Name of Student.....Roll/Regn no. ....

Degree for which submitted .....Department.....

Thesis Title .....

.....

Name(s) of Thesis Supervisor(s)

1. ....

2. ....

Month and year of thesis submission.....

[Text of Synopsis/abstract begins here]

***CERTIFICATE***

It is certified that the work contained in the thesis titled “Title of the Thesis,” prepared by “Name of the Student,” has been carried out under my/our supervision in partial fulfillment of the requirements for the degree of Doctor of Philosophy and that to the best of my knowledge this work has not been submitted elsewhere for a degree.

Signature of Co-Supervisor

Name/Designation

Signature of Supervisor

Name/Designation

Month, Year

SAMPLE COVER PAGE FORMAT

(Title of the Thesis)

A Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of  
Doctor of Philosophy

Name of the Scholar



INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

Month, Year