

# INDIAN STATISTICAL INSTITUTE

## Students Brochure

### PART I

General Information, Rules and Regulations  
for

The Bachelors and the Masters Degree Programmes  
(including the M.Tech. Programmes)

Effective from 2017 - 2018 Academic Year



The Headquarters is at  
203 BARRACKPORE TRUNK ROAD  
KOLKATA 700 108



# INDIAN STATISTICAL INSTITUTE

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# 1 Introduction

The Indian Statistical Institute, known widely as ISI, was founded in 1931 by Professor Prasanta Chandra Mahalanobis. Growing out of a small Statistical Laboratory set up by Professor Mahalanobis in the Presidency College in Kolkata, the Institute soon moved into its present campus at Baranagar on the northern outskirts of Kolkata. Ever since that humble beginning, over the past eight decades, the Institute has undergone phenomenal growth and is now widely regarded as one of the leading institutions in the world as a centre for research and training in Statistics and related sciences.

In recognition of the importance of the Institute in the development and application of Statistics, the Parliament of India, in 1959, enacted the Indian Statistical Institute Act, declaring it an Institution of National Importance and empowering it to grant degrees and diplomas in Statistics. In 1995, this Act was further amended, empowering the Institute to grant degrees and diplomas also in Mathematics, Quantitative Economics, Computer Science and other subjects related to Statistics as may be determined by the Institute from time to time.

The headquarters of the Institute is located in Kolkata. However, centres of the Institute have come up over the years in other major cities. At present, the Institute has four centres operating at Delhi, Bengaluru, Chennai and Tezpur. In addition, the Institute has a branch at Giridih devoted to agricultural and sociological research and also a network of units at Coimbatore, Hyderabad, Mumbai and Pune, that are involved in activities related to Statistical Quality Control and Operations Research.

Most of the research and teaching activities of the Institute take place in its headquarters in Kolkata and the four centres. In Kolkata, Delhi, Bengaluru and Hyderabad, the Institute has its own campus and they are equipped with adequate hostel facility for students, residential quarters for the faculty and guest houses, and also recreational and medical facilities. The campus at Giridih has a small guest house and rudimentary hostel facilities. The relatively new centres at Chennai and Tezpur are still operating from temporary locations. However, at these centres too, the Institute is providing hostel facility for students and residential facility for faculty members. At each of these five locations, there are a large number of scientists in Theoretical and Applied Statistics, Mathematics and Economics. In Kolkata, Chennai and Bengaluru, there is also a large group of scientists in Computer and Communication Sciences, Statistical Quality Control and Operations Research and other branches of natural and social sciences.

A sizable proportion of the students passing out of the Institute go on to build remarkably successful careers in research and academics. Some of the most eminent and leading researchers and academics in the fields of Statistics, Mathematics, Computer Science and Economics are alumni of the Institute. At the same time, students of the Institute who have gone into industry have also been extremely successful. A number of top and well-accomplished leaders in industry are also alumni of the Institute.

For many years now, the Institute has been running a very proactive on-campus placement programme. Under the supervision of a member of the teaching faculty, this programme has been

very successful in providing the aspiring students, in the final years of their respective programmes, excellent placement opportunities in some of the leading organisations in various sectors of the industry. Some of the companies that have visited the Institute campus for recruitment in the past few years are: AIG, American Express, ANZ, Axis Bank, AB InVeb, AXA Life Insurance, BARC India, BCS Technology, BlackRock, Barclays Shared Services, Capital One, Citibank, Credit Suisse, Crisil, CIBIL, Citi Corp., Cummins India, Deloitte, Dr. Reddy's Lab, Dunia Finance LLC, Ernst & Young, Envestnet-Yodlee, FICO, Goldman Sachs, HSBC Technology & Services, IBM, ICICI, JP Morgan, KPMG, Mahindra Comviva, Mckinsey, Media.net, Metro, Microsoft, Narayana Hrudayalaya, Novartis, Nielsen, Petrabytes Corporation, RedBus, Reliance, Samsung, Standard Chartered, TCS Analytics, TCS Innovation Lab, United Health Group, Walmart Lab, ZS, Zendrive, etc.

Over the last several years, the Institute has been very actively pursuing institution-level collaboration that has led to Memoranda of Understanding (MOUs) with a number of universities/academic institutions as well as industrial organisations. These MOUs range from collaborative research to research grants for students/faculty as well as student/faculty exchange programmes. At present, the Institute has MOUs signed with, among others, the following institutions/organisations: National Highway Authority of India, Tata Consultancy Services Ltd., eFd Secretariat at UGOT, Silicon Valley Com Foundation, Airport Authority of India, Networks Specified, Ericsson India, American Society for Quality India, IIT Madras, Szechenyi Istvan University, Hitachi India Pvt. Ltd., Bridge and Roof Company Ltd., Infosys Ltd., National Research University, Eastern Africa Statistical Training, State University of New York, London School of Economics, BRAC-University, Tata Institute of Social Sciences, City University of Hong Kong, University of Warwick, Yokohama National University.

The Central Library of the Institute, located at Kolkata (with a network extending to two major libraries at Delhi and Bengaluru Centres and other locations of the Institute), has one of the richest collections in the country, particularly in the fields of Statistics and allied disciplines, namely, Mathematics, Economics, Computer Science, Earth Science, Life Science, Physics, Quality Control, etc. In addition to a total volume of more than three lakhs, comprising books, bound journals, official reports/data-books, dissertations and theses, reprints, non-print materials such as CDs/floppies, microfilms and microfiches, it maintains online access to journals and all the major scientific publication databases. It has also a separate NBHM collection funded by National Board for Higher Mathematics, Department of Atomic Energy, Government of India. It is making endeavours to create institutional repositories using open-source software, facilitating access to indigenous resources across regions and increasing the visibility of such resources. As a part of the Central Library, the renovated Amrapali building which was the residence of the founder of the Institute, now houses the P C Mahalanobis Memorial Museum and Archives.

The Institute also runs the International Statistical Education Centre (ISEC), established in 1950, under the auspices of the Government of India. This Centre has been providing training in Statistics to sponsored students mainly from the developing countries of the Middle-East, South and South East Asia and the Far East and from the Commonwealth countries of Africa. The Centre also offers various short-term courses in Statistics and related subjects.

## 2 A Brief History of the Institute

The Indian Statistical Institute had its beginning in a small statistical laboratory set up by Professor Prasanta Chandra Mahalanobis in the Presidency College at Kolkata, where he was then a professor of Physics. In a meeting held on 17<sup>th</sup> December 1931 and presided over by Sir R. N. Mookerjee, the first President of the Institute, the Indian Statistical Institute (ISI) was formally established and Prasanta Chandra Mahalanobis was appointed the Honorary Secretary. The Institute was registered on 28th April, 1932, as a non-government and non-profit learned society under the Societies' Registration Act No. XXI of 1860. The Institute is now registered under the West Bengal Societies Registration Act XXVI of 1961, amended in 1964. The major objectives of the Institute, as stated in its Memorandum of Association, are:

- (i) to promote the study and dissemination of knowledge of Statistics, to develop statistical theory and methods, and their use in research and practical applications generally, with special reference to problems of planning for national development and social welfare;
- (ii) to undertake research in various fields of natural and social sciences with a view to the mutual development of Statistics and these sciences;
- (iii) to provide for, and undertake, the collection of information, investigations, projects, and operational research for purposes of planning and the improvement of efficiency of management and production.

With its humble start in a laboratory in the Presidency College, the Institute soon embarked upon a remarkable journey with enduring support from a number of distinguished personalities and devoted scholars in Kolkata. In the first two decades of its existence, which was a glorious chapter in the annals of Indian science and institution building, the ISI undertook a series of pioneering programmes involving application of Statistics in search of solutions to some of the urgent and live problems of the country. Such programmes included innovative projects on sample surveys of yield and land utilisation of crops, socio-economic after-effects of Bengal famine (1943-44) and problems of flood research, to name a few. Simultaneously, led by Professor Mahalanobis, path-breaking theoretical research was carried out by a very able group of young statisticians including R C Bose, S N Roy and C R Rao. These innovations and methodological research have since become classics in Statistics. All these activities brought laurels for the Institute in India as well as abroad.

Over a period of several decades since its inception, the Institute made steady strides to establish its identity as a pioneering organisation nationally as well as internationally. Some of the principal achievements of this period include

- (i) the establishment of a full-fledged research and training school in Statistics and Probability with applications in natural and social sciences,
- (ii) the publication of *Sankhyā*, the first international journal of Statistics in India,
- (iii) the inception of a National Sample Survey wing, engaging in comprehensive socio-economic



data collection for the nation,

- (iv) the creation of a string of Statistical Quality Control units for promoting the quality movement at various industrial centres in the country, and
- (v) collaboration with the International Statistical Institute to train Government statisticians from Asia and Africa.

One of the most significant contributions of the institute in India's nation-building came when, in 1954, Pandit Jawaharlal Nehru, the then Prime Minister of India, entrusted Professor Mahalanobis and ISI with the responsibility of preparing the draft Second Five-Year Plan for the country. The institute established a planning wing dedicated to the formulation of the Second Five-Year Plan of India. The draft submitted by Prasanta Chandra Mahalanobis and the planning models formulated by him and his colleagues have since been regarded as major contributions to economic planning in India.

As another remarkable achievement, the Institute, in 1956, installed the first electronic computer in the country. In 1961, the ISI, in collaboration with Jadavpur University, undertook the design, development and fabrication of a fully transistorised digital computer, called ISI-JU-1, which was commissioned in 1966. The institute had established an Electronic Computer Laboratory that was responsible for developing

- (a) the first mechanical hand computing machine,
- (b) the first Analog computer,
- (c) the first Punched Card storing machine, and
- (d) the first Solid State Computer in India.

The Institute, from its formative period till the recent time, received as guests many eminent scientists, including Nobel Laureates. Besides Sir Ronald A Fisher, JBS Haldane and Walter A Shewhart, the luminaries included Frederic and Irene Curie, Neils Bohr, AN Kolmogorov, PMS Blackett, JD Bernal, Joan Robinson and Genechi Taguchi. In recent times, the visits of Joseph E Stiglitz, James A Mirrlees, Eric S Maskin, Ei-Ichi Negishi and SRS Varadhan, the 2007 Abel Prize winner for his contributions to probability theory and an alumnus of the institute, may be specially mentioned.

The Institute has always had its headquarters in Kolkata since its inception. Later, the Delhi Centre, initially housed within the Planning Commission premises, was started in 1974, and shifted to its present campus in 1975. The Bengaluru Centre was conceived by Professor P C Mahalanobis during the 1960s. With the Statistical Quality Control unit functioning in Bengaluru from 1956, and Documentation Research and Training Centre from 1962, Professor Mahalanobis thought of starting a centre of ISI at Bengaluru around the mid-1960s. However, the process got delayed after Professor Mahalanobis' death in 1972 and the activities of the Bengaluru Centre started in September 1978 in a rented building under the Directorship of Professor G Kallianpur. The Bengaluru Centre was formally declared as a centre of ISI in September 1996. The newly created

Chennai Centre of the Institute, which came into being on July 26, 2008, and the North-East Centre at Tezpur, Assam, which was inaugurated on July 23, 2011, are expected to carry out research in theory and applications of Statistics in the new areas of natural and social sciences. The NE Centre is also committed to cater to the statistical needs of the North-Eastern states, including training statistical personnel.

The formal empowerment of the Institute for awarding of degrees came in December 1959 when Pandit Jawaharlal Nehru piloted in the Parliament the enactment of the Indian Statistical Institute Act of 1959, which designated ISI as an **Institution of National Importance**. Its activities steadily grew, existing interests became more broad-based and a number of science units were created in the interest of live interaction between Statistics and natural and social sciences. Empowered by the Act to award degrees, the Institute introduced the Bachelor of Statistics (Honours) and Master of Statistics courses in 1960 under the guidance of Professor Mahalanobis and stalwarts like JBS Haldane and Satyendra Nath Bose who was the President of the Institute for a long period of time, with the philosophy that the academic training of a statistician should encompass the basic principles of Statistics along with its theoretical and methodological development, not merely in abstract formulation, but also in relation to concrete problems arising from natural and social sciences. The Institute also introduced research programmes leading to the Ph D degree from the Institute. After the subsequent amendment of the Indian Statistical Institute Act in 1995, broadening its scope of degree-awarding, the institute introduced other degree programmes, namely, Master of Science (Quantitative Economics) (in 1996-97), Bachelor of Mathematics (Honours) (in 2000-01), Master of Mathematics (in 2003-04).

A one-year Diploma in Computer Science was started in the Institute in 1966. This was upgraded to a two-year Diploma in 1978, which evolved into the current M Tech programme in Computer Science in 1981, the first such programme in the country.

The Institute initiated the use of Statistical Quality Control & Operations Research in India in the early fifties and started developing these fields through theoretical and applied research, practical training in industry and consultancy assignments. To meet the growing needs from the industry, the institute offered a PG Diploma course in SQC & OR and also offered SQC & OR (later ISOR) as a specialization in the M. Stat. programme. The increased awareness since the late eighties, that SQC & OR techniques are of immense help in the development of the industrial sector, has led to the introduction of a two-year full-time M Tech programme in Quality, Reliability & Operations Research in Kolkata in 1989.

The Institute has also been offering a course leading to Associateship in Documentation & Information Science at the Bengaluru Centre since 1965-66. This course has been upgraded to a Master's level programme, called the Master of Science in Library & Information Science [MS (LIS)], since 2008-09.

### 3 Bachelors and Masters Degree Programmes

The following bachelors and masters programmes are offered in the Institute:

Degree Programme	Duration	Current Venue
B.Stat.	3 years	Kolkata
B.Math.	3 years	Bengaluru
M.Stat.	2 years	Kolkata, Delhi & Chennai
M.Math.	2 years	Kolkata & Bengaluru
MS(QE)	2 years	Kolkata & Delhi
MS(LIS)	2 years	Bengaluru
MS(QMS)	2 years	Bengaluru & Hyderabad
M.Tech.(CS)	2 years	Kolkata
M.Tech.(QROR)	2 years	Kolkata

### 4 Academic Authorities and Statutory Bodies

#### 4.1 Class Teacher

Normally, in a semester, one of the instructors of a class, teaching a compulsory course or a course credited by all students in the class is designated as the *Class Teacher* for that class. Students are required to meet their respective Class Teachers periodically to get their academic performance reviewed, and to discuss their problems regarding courses. All communications on academic matters with other authorities or statutory bodies of the institute by a student should be submitted through the Class Teacher.

#### 4.2 Teachers' Committee

For each semester of a degree program, the *Teachers' Committee* will normally consist of all instructors of all courses (including elective and optional courses, which are been credited or taken as a non-credit course by at least one student) and all project/dissertation/thesis supervisors. The Dean of Studies/Associate Dean/Students' Academic Affairs In-charge of the respective centres will be the Chair the Teachers' Committees. Every decisions related to the academic performance by the students of a degree program must first be deliberated by the respective Teachers' Committee and a decision can be taken by any higher authority/statutory body only after the recommendations of the relevant Teachers' Committee have been taken into cognizance.

### **4.3 Associate Deans/Students' Academic Affairs In-charges**

The Associate Dean(s)/Students' Academic Affairs In-charge(s) have similar responsibilities as that of the Dean of Studies in the Centres other than the Headquarters in Kolkata.

### **4.4 Dean of Studies**

The Dean of Studies is a permanent faculty member of the Institute, who organize the teaching and training activities of the Institute for a period of two years. (For more details, see Section 8 of the Regulations of the Indian Statistical Institute.)

### **4.5 Director**

The Director is the principal executive officer of the Institute and the head of all its academic and administrative activities. (For more details, see Section 6 of the Regulations of the Indian Statistical Institute.)

### **4.6 Academic Council**

The Academic Council primarily consists of all the Professors and other scientific workers of equivalent rank or above. The Director is the Chair of the Academic Council and the Dean of Studies is the Convener of the Academic Council. The Academic Council makes recommendations to the Council of the Institute regarding teaching and training programmes and promotes research activities of the Institute. (For more details see Section 9 of the Regulations of the Indian Statistical Institute.) (For More details see Section 9 of the Regulations of the Indian Statistical Institute.)

## **5 Rules and Regulations**

### **5.1 Academic Year and Semesters**

An *Academic Year* consists of two *semesters*, beginning with the *First Semester* from July till December and followed by the *Second Semester* from January till June. For each degree programme a semester consists of a total of fourteen weeks of classes, one (or two) weeks of midterm, two (or three) weeks of final examination (including study leave). There are seven weeks of classes before and after the Midterm examinations. Some programmes may have an internship/training programme assigned to a semester during other months of the calendar year.

## 5.2 Attendance

Every student is expected to attend all the classes. If a student is absent for medical reasons of personal/family emergencies, he/she must apply for leave with supporting documents to the Dean of Studies or to the respective Associate Dean/Students' Academic Affairs In-charge. Failing to do so may result in disciplinary action as given in Section 5.4. Inadequate attendance record in any semester would lead to reduction of stipend in the following semester (see Section 5.12 for details).

## 5.3 Credit and Non-Credit Courses

**Credit Course:** In a semester, for any degree programme, students need to take a certain number of *credit courses*. The courses which can be taken as credit courses are all the compulsory courses and the elective/optional courses, which are prescribed for that semester for the relevant degree programme (see PART II of the Student Brochure for the prescribed courses and other details). A student is given up to four weeks to decide whether he/she wants to take a particular elective/optional course as a credit course.

**Non-Credit Course:** In a semester, for any degree programme other than M.Tech.(QROR) (for which currently all courses are credit courses) a student may take **one** additional elective/optional course from the prescribed list of courses of the degree programme he/she is enrolled in, as a *non-credit course*. It is not mandatory to take a non-credit course. A student is given up to four weeks (from the start of the semester) to decide whether he/she wants to take a particular elective/optional course as a non-credit course.

If a student decides to take any non-credit course, he/she has to attend that course regularly and obtain at least the pass mark (35%). A student who fails to score 35% in a non-credit course is required to clear a backpaper and if he/she cannot do so, is expected to repeat the year (see 5.8 for more details). The compensatory examination rule (see 5.5.4 for more details) is not applicable for non-credit courses.

All non-credit courses taken by a student are also recorded and mentioned in his/her mark-sheet. However, the score(s) obtained in the non-credit course(s) will not contribute to the aggregate score in the degree programme.

A non-credit course is allowed to be used as a "pre-requisite" for a course and/or specialization.

## 5.4 Satisfactory Conduct

Every student of the Institute is expected to observe the discipline of the Institute and shall observe all rules (including that of the hostel and the mess rules) of the Institute. Attendance requirements in classes (see Section 5.2 for details) should be met. Violations of the above will be treated as

breach of discipline and unsatisfactory conduct. Violations of these are likely to attract punishments such as

- (i) suspension from the Institute for a limited period,
- (ii) suspension from classes for a limited period,
- (iii) withholding Stipend/Fellowship or other benefits,
- (iv) withholding results,
- (v) suspension or expulsion from the hostel and the likes,
- (vi) expulsion from the Institute.

Ragging is strictly prohibited in the Institute. If any incident of ragging comes to the notice of the Institute authorities, the concerned student will be given an opportunity to explain his/her action(s), and if the explanation is not found to be satisfactory, he/she may be expelled from the institute. The punishments may also include one or more items listed above. General laws governing ragging are also applicable to the students of the Institute. Incidents of ragging will be reported to the police.

## **5.5 Examinations and Scores**

### **5.5.1 Midterm and Final Examinations**

There are two formal examinations in every course in each of the degree programmes. They are, namely, Mid-Semestral/Midterm and Semestral/Final. The composite score in a course, is a weighted average of the scores in the mid-semestral and semestral examinations, homeworks and other assignments, quizzes/classes tests/surprize tests, practical record book and/or project work in that course. The weights of examinations in a course are announced before the mid-term examination of the semester. In the case of courses involving field work, some weightage may be given to the field reports also. The semestral examination will have a minimum weight of 50%.

### **5.5.2 Pass Marks**

The minimum composite score to pass a credit or non-credit course is 35%, except for the core courses in M.Tech.(QROR)<sup>1</sup> and MS(QMS)<sup>2</sup>, where the minimum composite score to pass is 45%

1. The five core courses for the M.Tech.(QROR) programme are: Operational Research I, SQC, Reliability I, Summer Internship and Project and/or Dissertation.
2. For the details about the core courses of the MS(QMS) programme see Students Brochure PART II [MS(QMS)].

### 5.5.3 Back Paper Examination

If the composite score of a student in a course (other than the Statistics Comprehensive course of B.Stat. and the core courses in M.Tech.(QROR)<sup>1</sup> and MS(QMS))<sup>2</sup> is above 35% but falls short of 45%, she/he will have one option to take a back-paper examination to improve the score to a maximum of 45%. This is called an *optional back-paper*. However, a student with composite score less than 35% (other than the core courses in M.Tech.(QROR) and MS(QMS), where this rule applies for composite course less than 45%; and the Statistics Comprehensive course in B.Stat., where no backpaper is allowed) in any course must take a backpaper examination to improve the score to a maximum of 45%. Such a back-paper is called a *compulsory back-paper*. When a student takes a back-paper examination in a course, his/her new composite score in that course will be the higher of the back-paper score and the earlier composite score, subject to a maximum of 45%.

In a year, at most one back-paper examination is allowed in any course, other than the Remedial English Course for the first year of the B.Stat.(Hons.) programme. If the score of a student in the back-paper examination of Remedial English course in the first year of the B.Stat.(Hons.) programme is below 35%, then he/she is allowed to repeat the course in the following year along with the new first year students. A student is not allowed to continue in the B. Stat.(Hons.) programme if he/she fails the Remedial English course even after these three attempts.

The ceilings on the total number of backpaper examinations a student can take in the various degree programmes are as follows:

Degree Programme	Maximum Number of Back Paper Examination Allowed		
	First Year	Second Year	Third Year
B.Stat.(Hons.)	4	3	3
B.Math.(Hons.)	4	3	3
M.Stat.	4	4	–
M.Math.	4	4	–
MS(QE)	4	4	–
MS(QMS)	4	4	–
MS(LIS)	4	2	–
M.Tech.(CS)	4	4	–
M.Tech.(QROR)	4	2	–

Note that these ceilings are for the entire academic year. If a student takes more than the allotted quota of backpaper examinations in a given academic year, then at the end of that academic year the student should decide which of the *optional back-paper examination* scores should be disregarded. In such a case, the marks of those particular courses will be reverted to their original scores.

**Note:** For the *Statistics Comprehensive* course in the Semester VI of the B.Stat. Programme, no backpaper examination is allowed.

#### **5.5.4 Compensatory Examination**

The following rule applies to a student who obtains less than the respective passing mark (see Section 5.5.2 for details) in at most one credit course even after the compulsory back paper examination, but scores 60% or more in average in the other credit courses of that academic year. If such a student is not in the final year of the programme, she/he may be provisionally promoted without stipend or contingency grant to the following year, subject to the requirement that the paper is cleared through an examination, called *compensatory examination*, which is a regular (semestral) examination in the corresponding semester of the following year, along with the regular courses for that semester in the current year. Only the score in the semestral examination need be considered for the purpose of evaluation. The student is not expected to attend the course, or to take the mid-semestral examination or to do assignments, projects, etc. even if these are prescribed for the course in that semester. The student can score at most 35% in such an examination, except for the core courses in M.Tech.(QROR)<sup>1</sup> and MS(QMS)<sup>2</sup>, where he/she can score at most 45%. A student scoring less than 35% in a compensatory examination on a course (other than core courses in M.Tech.(QROR)<sup>1</sup> and MS(QMS)<sup>2</sup>, where this rule applies for scoring less than 45%) will have to discontinue the programme, regardless of the year of study in the programme. In case the student in question is in the final year of the programme, the Dean of Studies/Associate Dean/Students' Academic Affairs In-charge, in consultation with the concerned Teachers' Committee, may decide on the mechanism of conducting a special examination of that particular course along the lines suggested above, within six months of the end of that academic year.

A student can appear in at most one compensatory paper in an academic year. The student can either appear in the compensatory paper, if the conditions stated above are met, or repeat the year if the existing rules so allow; and can not do both. The student must inform the Dean of Studies/Associate Dean/Students' Academic Affairs In-charge in writing in advance regarding his/her choice.

No compensatory paper will be allowed in a course where backpaper is not allowed.

No compensatory examination is given for a non-credit course.

#### **5.5.5 Supplementary Examination**

If a student misses an examination due to medical or family emergencies, he/she can appear in the supplementary examination. Supplementary examinations will be held for mid-semestral, semestral, back-paper and compensatory examinations within a month of the examination. The student should submit a written application with all supporting documents to the Dean of Studies/Associate Dean/Students' Academic Affairs In-charge duly forwarded by the Class Teacher for appearing in the supplementary examination. On receipt of such application from a student the Dean of Studies/Associate Dean/Students' Academic Affairs In-charge will decide, in consultation with the relevant Teachers' Committee, on whether such examination will be allowed. The student can score at most 60% in the supplementary examinations to mid-semestral and semestral examina-



tions. For the back-paper or the compensatory papers, the maximum the student can score in the supplementary examination, is 45% or the pass mark (see Section 5.5.2) respectively.

## 5.6 Examination Guidelines

Followings are the guidelines for all examinations in all degree programs of the Institute.

1. Students are required to take their seats according to the displayed seating arrangement. If any student takes a seat not allotted to him/her, he/she may be asked by the invigilator to hand over the answer script (i.e., discontinue the examination) and leave the examination hall.
2. Students are not allowed to carry inside the examination hall any mobile phone or other electronic devices with them, even in switched-off mode. Calculators, books and notes will be allowed inside the examination hall only if these are so allowed by the teacher(s) concerned (i.e., the teacher(s) of the course), or if the question paper is an open note/book one. Even in such cases, these articles cannot be shared.
3. No student is allowed to leave the examination hall without permission from the invigilator(s). Further, students cannot leave the examination hall during the first 30 minutes of any examination. Under no circumstances, two or more students writing the same paper can go outside together.
4. Students should ensure that the main answer booklet and any extra loose sheet bear the signature of the invigilator with date. Any discrepancy should be brought to the notice of the invigilator immediately. Presence of any unsigned or undated sheet in the answer script will render it (i.e., the unsigned or undated sheet) to be canceled, and this may lead to charges of violation of the examination rules.
5. Any student caught cheating or violating examination rules for the **first time** will get **Zero** in that paper. If the first offense is in a backpaper examination the student will get **Zero** in the backpaper. (The other conditions for promotion, as mentioned in Section 5.7 will continue to hold.
6. Any student caught cheating or violating examination rules for the **second time** will be **denied promotion in that year**. This means that
  - (i) a student not already repeating, will have to repeat the corresponding year without stipend;
  - (ii) a student already repeating, will have to discontinue the programme.
7. Any student caught cheating or violating examination rules **more than two times** will be **asked to discontinue the programme and leave the Institute**.
8. Any student caught cheating or violating examination rules is not eligible for direct admission to any other programme of the Institute.

9. A student is required to furnish proper notice in time to the Class Teacher and provide satisfactory explanation, if he/she fails to take an examination.

## **5.7 Promotion**

A student passes a semester of the programme only when he/she secures pass marks (see Section 5.5.2 for details) or above in every course (including any non-credit course) and his/her conduct has been satisfactory.

If a student passes both the semesters in a given year and his/her average composite score in all the credit courses taken in a year is at least 45% and that the score(s) in the non-credit course(s) is/are at least 35%, then he/she is declared to have passed in that year and may then be promoted to the subsequent year or be considered for the award of the degree on recommendation of the relevant Teachers' Committee.

## **5.8 Repeating a Year**

A student fails a year if he/she is not eligible for promotion. If a student fails a year then he/she can repeat the year on recommendation of the relevant Teachers' committee provided he/she has scored at least 35% in the aggregate in that year.

For the B.Stat. and B.Math. programmes, a student can repeat only one of the first two years and the final year. A student who secures B.Stat. or B.Math. degree without Honours (see Section 5.10 for the details) and has at most eight composite scores (in the credit courses), which are less than 45% in the first two years, is allowed to repeat the final year to improve his/her performance.

For the M.Stat., M.Math., MS(QE), MS(LIS), MS(QMS), M.Tech.(CS) and M.Tech.(QROR) programmes, a student can repeat the first year, as well as, the second year, but not the both.

For all degree programmes, the repeat year must be the academic year immediately following the year being repeated. A repeating student will not get any stipend or contingency grant or prizes during the repeat year. However, if the student is from such an economically underprivileged background that this step will force the student to discontinue, then the student can appeal to the Dean of Studies through the respective Class Teacher for financial support. A student repeating a year must be assessed for all courses even if the student has passed them in the original year, and the student must obtain a minimum of the respective pass marks in such courses in the repeat year. The final score in a course being repeated will be the maximum of the scores obtained in the respective two years.

A student who is going to repeat the first year of the B.Stat.(Hons.)/B.Math.(Hons.) course should undergo counseling by the Dean of Studies/Associate Dean/Students' Academic Affairs In-charge, in the presence of his/her parents/guardians, to assess whether the student has an aptitude for the programme.

## 5.9 Discontinuing a Programme

A student who is enrolled in a degree programme of the Institute, is asked to discontinue the programme, if

- (a) he/she is not promoted or recommended for award of a degree and he/she does not satisfy the conditions for repeating a year (see Sections 5.7 and 5.8 for more details); or
- (b) he/she is repeating a year and does not pass in that year (see Section 5.7 for more details); or
- (c) he/she is caught cheating or violating examination rules more than two times (see Section 5.6 for more details); or
- (d) he/she has been given an expulsion from the Institute by an appropriate authority due to the breach of discipline and unsatisfactory conduct (see Section 5.4 for more details).

## 5.10 Final Result

At the end of the third academic year for the bachelor programmes and at the end of the second academic year for the master programmes the overall average of the percentage composite scores in all the credit courses taken is computed for each student. Each of the credit courses carries a total of 100 marks, (except the course Statistics Comprehensive in B.Stat.(Hons.) programme carries a total of 200 marks). The student is awarded the respective degree as per the following criteria in one of the following categories, provided his/her conduct is satisfactory, and he/she passes all the years. A student fails if his/her composite score (after all the examinations) in any credit or non-credit course is less than 35%.

- **B.Stat.(Hons.):**

- ★ **B.Stat.(Hons.) – First Division with Distinction:**

- (i) The overall average score is at least 75%,
- (ii) average score in the eighteen core<sup>3</sup> courses is at least 60%, and
- (iii) the number of composite scores less than 45% is at most one.

- ★ **B.Stat.(Hons.) – First Division:**

- (i) Not in the First Division with Distinction,
- (ii) the overall average score is at least 60%,
- (iii) average score in the eighteen core<sup>3</sup> courses is at least 60%, and

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3. The eighteen core courses of B.Stat.(Hons.) programme are: Analysis I, II & III, Probability Theory I, II & III, Statistical Methods I, II, III & IV, Vectors and Matrices I & II, Linear Statistical Models, Parametric Inference, Sample Surveys, Nonparametric and Sequential Methods, Design of Experiments, Statistics Comprehensive.

(iv) the number of composite scores less than 45% is at most four.

★ **B.Stat.(Hons.) – Second Division:**

- (i) Not in the First Division with Distinction or First Division,
- (ii) the overall average score is at least 45%,
- (iii) average score in the eighteen core<sup>3</sup> courses is at least 45%, and
- (iv) the number of composite scores less than 45% is at most six.

★ **B.Stat.(Pass):**

- (i) If a student has satisfactory conduct, passes all the courses but does not fulfill the requirements for the award of the degree with Honours, then he/she is awarded the B.Stat. degree without Honours.

● **B.Math.(Hons.):**

★ **B.Math.(Hons.) – First Division with Distinction:**

- (i) The overall average score is at least 75%,
- (ii) average score in the eighteen core<sup>4</sup> courses is at least 60%, and
- (iii) the number of composite scores less than 45% is at most one.

★ **B.Math.(Hons.) – First Division:**

- (i) Not in the First Division with Distinction,
- (ii) the overall average score is at least 60%,
- (iii) average score in the sixteen core<sup>4</sup> courses is at least 60%, and
- (iv) the number of composite scores less than 45% is at most four.

★ **B.Math.(Hons.) – Second Division:**

- (i) Not in the First Division with Distinction or First Division,
- (ii) the overall average score is at least 45%,
- (iii) average score in the sixteen core<sup>4</sup> courses is at least 45%, and
- (iv) the number of composite scores less than 45% is at most six.

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4. The sixteen core courses of B.Math.(Hons.) programme are: Algebra I, II, III & IV; Analysis I, II, III & IV; Probability I & II; Optimization, Complex Analysis, Graph Theory, Topology, Introduction to Differential Geometry and Introduction to Differential Equations.

★ **B.Math.(Pass):**

- (i) If a student has satisfactory conduct, passes all the courses but does not fulfill the requirements for the award of the degree with Honours, then he/she is awarded the B.Math. degree without Honours.

● **M.Stat., M.Math., MS(QE), MS(LIS) and M.Tech.(CS):**

★ **First Division with Distinction:**

- (i) The overall average score is at least 75%, and
- (ii) the number of composite scores less than 45% is at most one.

★ **First Division:**

- (i) Not in the First Division with Distinction,
- (ii) the overall average score is at least 60%, and
- (iii) the number of composite scores less than 45% is at most two.

★ **Second Division:**

- (i) Not in the First Division with Distinction or First Division,
- (ii) the overall average score is at least 45%.

● **MS(QMS) and M.Tech.(QROR):**

★ **First Division with Distinction:**

- (i) The overall average score is at least 75%, and
- (ii) the number of composite scores less than 45% in non-core<sup>1,2</sup> courses is at most one course.

★ **First Division:**

- (i) Not in the First Division with Distinction,
- (ii) the overall average score is at least 60%, and
- (iii) the number of composite scores less than 45% in non-core<sup>1,2</sup> courses is at most two.

★ **Second Division:**

- (i) Not in the First Division with Distinction or First Division,
- (ii) the overall average score is at least 45%.

## 5.11 Award of Certificates

A student passing a degree programme of the Institute is given a certificate mentioning the division. The Certificate is awarded in the annual Convocation of the Institute following the last semestral examination.

Along with the certificate a marksheet is also given, which includes a list of all the credit and non-credit courses taken along with the respective composite scores.

## 5.12 Stipend

Other than refundable Library and Hostel deposit (see Sections 6.2 and 6.3 for more details) and the recurring mess fees there are no fees charged by the institute for the bachelor and master programmes, including the M.Tech. programmes. A monthly Stipend of Rs. 3,000 in the bachelor programmes, Rs. 5,000 in the master programmes, and Rs. 8,000 in the M.Tech. programmes are awarded at the time of admission to each student, which is valid initially for the first semester only. Stipends are given after the end of each month for twelve months in each academic year. The first stipend is given two months after admission with retrospective effect provided the student continues in the programme he/she got enrolled, for at least two months.

The amount of stipend to be awarded in each subsequent semester depends on academic performance, conduct, and attendance, as specified below, provided the requirements for continuation in the academic programme (excluding repetition) are satisfied (also see Sections 5.7 and 5.4):

1. *Students having other scholarships:* If a student is getting a scholarship from another government agency then the stipend will be discontinued. If during a degree programme a student obtains any scholarship with retrospective effect then the student should return the stipend given by the institute. Failure to do so will be deemed as unsatisfactory conduct and corresponding rules shall apply (see Section 5.4 for more details).
2. *Performance in course work:* If, in any particular semester, (i) the composite score in any course is less than 35%, or (ii) the composite score in more than one course (two courses in the case of the first semester of the first year) is less than 45%, or (iii) the average composite score in all credit courses is less than 45%, no stipend will be awarded in the following semester.

If all the requirements for continuation of the programme are satisfied, the average composite score is at least 60% and the number of credit course scores less than 45% is at most one in any particular semester (at most two in the first semester of the first year), the full value of the stipend is awarded in the following semester.

If all the requirements for continuation of the programme are satisfied, the average composite score is at least 45% but less than 60%, and the number of credit course scores less than 45% is at most one in any particular semester (at most two in the first semester of the first year),

the stipend is halved in the following semester.

All composite scores are considered after the respective back-paper examinations. Stipend is fully withdrawn as soon as the requirements for continuation in the academic programme are not met.

3. *Attendance*: If the overall attendance in all courses in any semester is less than 75%, no stipend is awarded in the following semester.
4. *Conduct*: The Dean of Studies/Associate Dean/Students' Academic Affairs In-charge, at any time, in consultation with the respective Teachers' Committee, may withdraw the stipend of a student fully for a specific period if his/her conduct in the campus is found to be unsatisfactory (see Section 5.4 for more details).

Once withdrawn, stipends may be restored in a subsequent semester based on improved performance and/or attendance, but no stipend is restored with retrospective effect.

A repeating student will not get any stipend or contingency grant or prizes during the repeat year. However, if she/he is from such an economically underprivileged background that this step will force him/her to discontinue, then she/he can appeal to the Dean of Studies or the Students In-charge, for financial support.

### **5.13 Contingency Grant and Prize Money**

Each student receives an annual contingency grant of Rs. 3,000 in the bachelor programmes, Rs. 5,000 in the master programmes, and Rs. 8,000 in the M.Tech. programmes provided he/she is entitled to receive full stipends (see Section 5.12 for details). In addition to it, in each semester the Teachers' Committee may nominate few students for their outstanding performances for certain amount of cash awards as prize money.

The following guidelines are currently in place for the utilization of the of contingency grants and the prize money:

1. Expenditure related to the following will be reimbursed from the contingency grant/ prize money:
  - (a) Photocopying
  - (b) Printing
  - (c) Postage and courier charges
  - (d) Purchase of
    - i. books, including e-books related to course work (any book may be purchased with prize money);
    - ii. stationery items relevant to course work;

- iii. computer peripherals (revenue items only, like keyboard, mouse, headphone/microphone, speakers);
  - iv. portable storage media (for example, Pen Drive, External Hard Disk, Memory Card, DVD-R, DVD-RW, CD-R, CD-RW, DAT Cartridge);
  - v. software related to course work.
- (e) Membership Fees for professional organisations.
  - (f) Seminars/Workshop/Schools/Conferences
    - i. Within India: TA/DA and Registration fees.
    - ii. Outside India: Registration, Visa and Medical Insurance fees
  - (g) Laboratory Consumable items.
  - (h) Subscription/purchase of Journals not subscribed by the Library.
  - (i) Publication fee or additional charges (e.g., overlength fee) for publication in journals.

This list will be reviewed from time to time.

2. The Initial Approving Authority is the Class Teacher.
3. When approving a contingency claim bill, the initial approving authority shall verify that the items have been purchased by the student.
4. All bills should be in the name of the student and have been issued in the appropriate financial year.
5. Books purchased should have the name of the student written on their first page.
6. Identification number/License number of electronic items and software should be mentioned in the contingent claim form.
7. Since the annual contingency grant is given for the entire academic year, students claiming reimbursement for expenses made in a financial year must ensure that their claim forms are submitted well in advance for processing to be completed by the 31st of March.
8. The unspent balance of the contingency grant at the end of any academic year will not be carried forward to the next year.
9. A student can make claims under his/her contingency grant only when he/she is getting full stipend at that point in time, that is, at the time of submission of bills, the student should be getting full stipend, bill dates should be in the appropriate financial year and the claim should be in the appropriate academic year. If stipend is restored, then the student becomes eligible again for making claims under his/her contingency grant.



## 6 Miscellaneous

### 6.1 Medals and Prizes

There are several prizes and medals for outstanding performance in various degree programmes of the Institute. Currently, following prizes are given from various sources:

Degree Programme	Name of the Medal/Award/Prize	Selection Criterion
B.Stat.	ISIAA – Mrs. M. R. Iyer Memorial Gold Medal	Outstanding overall performance
	D. Basu Memorial Gold Medal	Outstanding performance
	Nikhilesh Bhattacharya Memorial Gold Medal	Best Performance in Statistics
	Mukul Chaudhuri Cash Award	Best Female Student
B.Math.	S. H. Aravind Gold Medal	Outstanding performance
M.Stat.	ISIAA – Mrs. M. R. Iyer Memorial Gold Medal	Outstanding overall performance
	P. C. Mahalanobis Memorial Gold Medal	Outstanding performance
M.Math.	ISIAA – P. C. Panesar Memorial Gold Medal	Outstanding overall performance
MS(QE)	Sanghamitra Das Memorial Gold Medal	Outstanding overall performance
M.Tech.(CS)	ISIAA – Rashi Ray Memorial Medal	Outstanding overall performance
	Sunity Kumar Pal Memorial Gold Medal	For Best Dissertation
	TCS Award	For Best Dissertation
M.Tech.(QROR)	ISIAA – Mrs. M. R. Iyer Memorial Gold Medal	Outstanding overall performance

### 6.2 Library Rules

Every student is allowed to use the reading room facilities in the library and allowed access to the stacks. Students need to pay a security deposit of an amount fixed by the Institute (and periodically revised) in order to avail of the borrowing facility. Details of the library rules are posted in the libraries.

### 6.3 Hostel Facilities

The Institute provides limited hostel facility for male and female students in the Headquarters and in all its centres. However, it may not be possible to accommodate all students in the hostels. The students have to pay a caution deposit of an amount fixed by the Institute (and periodically revised) and a minimal monthly room rent. Limited medical facilities are available free of cost at the Headquarters in Kolkata and in all of its centres.

## **6.4 Field Training Programme**

All expenses for the necessary field training programmes are borne by the Institute, as per the Institute rules.

## **6.5 Educational Tour**

Students of all bachelor and master degree programmes are allowed to go for an annual Educational Tour conducted by the Institute. Following are the guidelines for the Educational Tour:

1. For the purpose of Educational Tour, students of a relevant centre should form a tour organizing committee, the composition of which needs to be intimated to the Tour Guidelines committee. The students from Chennai may be encouraged to join the tour organized by the students from Kolkata.
2. The tour organizing committee has to take a priori approval of the tour proposal from the Dean/Associate Dean. A tour comprising at most five nights of hotel stay except travel days will be allowed. No pilot tours will be entertained. The tour proposal has to explicitly include an educational component like a visit to an educational institute or an industry visit or attending a conference/lecture, etc. The proposed tour timings should not affect regular class and examinations. After the tour is complete a report has to be mandatory submitted to the Tour Guidelines Committee.
3. The students have to carry ISI Identity Card during travel. At least one faculty/SRF has to accompany the students during the travel and he/she has to stay at the same hotel and travel in the same train. If there is a girl student in the touring party, it is recommended that there should be one female faculty/SRF as an accompanying person. The accompanying faculty/SRF(s) will be reimbursed Hotel charges and per diem costs as per his/her entitlement according to ISI rules. A student can go on a maximum of one such tour per academic year.
4. ISI travel cell will arrange the purchase of tickets for the relevant travel. The Institute shall bear travel expenses up to a maximum of Rs. 1,500 per student. The students will be entitled to sleeper class travel in trains anywhere in India/Nepal/Bhutan. For each student, the maximum expenditure covered by the Institute shall be as follows: Rs. 400 for hotel stay per night and Rs. 150 for food per day during their stay and Rs. 250 for food during the travelling time. Hence, the maximum expenditure borne by the Institute per student in a tour programme will be Rs. 4,500 with the restriction of maximum expenditure covered under each head as mentioned above.

## **6.6 Students Receiving Stipends/Scholarships from External Agencies**

As mentioned in Section 5.12, if a student is awarded a stipend/scholarship from another government agency then the stipend paid by ISI will be discontinued. If, during a degree programme, a

student obtains any scholarship with retrospective effect then he/she must return the stipend given by the institute. Failure to do so will be deemed as unsatisfactory conduct and corresponding rules shall apply (see Section 5.4 for more details).

All students who receive stipends from external agencies, like KVPY and INSPIRE, must satisfy all requirements, including attendance requirements, which are applicable to students receiving stipends from ISI. If such students do not satisfy these requirements, then the Institute reserves the right not to forward their requests for renewal of funding to their respective funding agencies.

## **6.7 Change of Rules**

The Institute reserves the right to make changes in the above rules, course structure and the syllabi as and when needed.