

# MANUAL FOR UNDERGRADUATE STUDIES

General Rules and Guidelines



NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH  
BHUBANESWAR

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# 1 PREFACE

National Institute of Science Education and Research (NISER) was established in 2007. It is envisioned to be a unique, premier research institution in India that operates under the umbrella of the Department of Atomic Energy (D.A.E) and strives to become a **Center of Excellence** in science education and research in four basic sciences viz., Biology, Chemistry, Mathematics and Physics and in related areas. This apart, NISER is planning to introduce two more schools in the disciplines Computer Sciences and Earth and Planetary sciences.

There is a noticeable decline in bright students taking to studies and research in Basic Sciences. There is a need to reverse this trend through higher quality teaching and research, on one hand and providing an attractive career path for students passing through such an environment, on the other hand.

In response to this impending national need, NISER has set forth an ambitious vision of teaching and research in the four basic sciences to prepare students for high quality research and channelize them into promising career path through linkages with research institutions and industries that are engaged in Research and Development.

NISER envisions research as a catalyst for expanding and diversifying the country's economy; enhancing the education of its citizens and the training of its work force.

In striving towards this vision, NISER will distinguish itself as a premier institute that embraces scholarly excellence, innovation, creativity inclusiveness, and merit.

## 1.1 Academic Vision

The aim of this distinguished institute is to attract bright, motivated students, nurture them to become world class scientists for the country who will take up challenging research and teaching assignments in universities, DAE institutes, R & D laboratories and various industries.

The academic programme of NISER is designed to provide strong foundations to students through rigorous course work and development of experimental skills, before they embark at the threshold of research in the field of their choice. NISER

recognizes that modern scientific research is carried out in a domain without any boundaries. The undergraduate students and research scholars will flourish in the ambiance of this scientific culture. In this perspective, it is expected that faculty members from different schools would try to establish centres of research in interdisciplinary areas while discharging their teaching duties of the respective schools.

Furthermore, it will promote both theoretical and experimental research in frontier areas in all branches of science. NISER puts equal emphasis on both research and teaching. The imparting of knowledge, by way of teaching and research attributes of its faculty, will inspire strongly motivated bright young students to dedicate their lives for scientific research.

## 1.2 Academic Programmes

The curricula are designed to ensure depth in the area of specialization together with breadth of exposure and intellectual enrichment and to prepare the students for high level professional research and development career in national laboratories, universities and industries.

NISER is at present conducting the following programmes.

- M.Sc. (5 year integrated) programme in the core and emerging branches of basic sciences viz., Biology, Chemistry, Mathematics and Physics to students after their 10+2 higher secondary schooling.
- Ph.D. programme

Besides, NISER is planning to conduct Ph.D. (integrated) programme, wherein the students who have completed their B.Sc. from other Institutes and Universities can do their Integrated Ph.D. programme in NISER.

## 2 M.SC. (5-YEAR INTEGRATED) PROGRAMME

NISER offers 5-year integrated M.Sc. Programme in basic sciences after 10+2 years of schooling (or equivalent). The nomenclature of the program is **M.Sc. (5-year integrated) Programme** in Biological Sciences, Chemical Sciences, Mathematical Sciences and Physical Sciences.

### 2.1 Salient Features

- After successful completion of the academic requirements, students are awarded a Master of Science degree in one of the four subjects: biology, chemistry, mathematics or physics.
- The curriculum for the first two semesters (first year) is common to all students and specialization begins from the third semester.
- After specialization in second year, students are required to go through a certain number of courses in other disciplines.
- Apart from these, students are required to go through some compulsory courses in humanities, social sciences, technical communication, history of science, environmental and energy sciences.
- The fourth and fifth year of the integrated M.Sc. Programme is devoted to advanced courses in various disciplines.
- The students will be encouraged to undertake projects from 4th year onwards. However the course curriculum will be designed by individual schools. A handbook “Courses of Study,” containing all the approved courses, will be available in the academic section.
- In the fifth year every student will undertake a guided research project. The outcome of the investigation will be reported in the form of a thesis.
- Throughout the five-year programme, students will be encouraged to take up summer projects and visit reputed national, international laboratories and universities.

- Exposure and linkages with the relevant D.A.E institutions and programmes will receive special emphasis for NISER students.
- Eminent scientists from India and abroad will be regularly invited to give colloquia/seminars and interact with the students.

## 2.2 Admission Procedure

- Students seeking admission in NISER in 5 year Integrated M.Sc. programme will have to appear for National Entrance Screening Test (NEST) conducted every year at several centers in India.
- The minimum marks in Class XII (or equivalent) examination, from any recognized Board in India, to appear in NEST is: 60% marks for general category and 55% for SC/ST/PD category in aggregate (or equivalent grade).
- Students who have passed the Class XII qualifying examination in last two years or appearing in that year are eligible to apply.
- The candidates must not be more than 20 years of age; this limit is relaxable as per the Central Government norms for SC/ST/PD candidates.
- Regarding the reservation of seats for various categories, Central Government norms are followed in NISER.

## 2.3 Scholarships & Incentives

- All admitted students of M.Sc. will receive a scholarship of Rs. 5,000/- per month ( as determined from time to time ), from the INSPIRE programme of the Department of Science & Technology, Government of India. Students can avail KVPY fellowships also.
- In addition students are entitled to receive summer internship grant of Rs 20,000/-(as determined from time to time)) annually to facilitate their academic pursuits.

- There will be reimbursements for the Medical expenditures of the students.
- Railway & Airfare concessions may also be availed during the major vacations.

## **2.4 Residence Requirement**

- As it is a residential institute students are required to stay in the hostels provided by the Institute for the entire duration of the programme.

## **2.5 Withdrawal from the Course**

- Withdrawal from the M.Sc. program is not normally allowed except on justifiable grounds.
- In case the administration allows a student to withdraw from the program the following will be observed.
  - Certificates and transcripts will be given back only at the end of that semester.
  - Only caution deposit after the deductions if any will be refunded.
  - The administration reserves the right to demand the refund of the amount of the scholarship the student availed until the withdrawal during the current semester.

### **3 ORGANIZATIONAL STRUCTURE OF ACADEMIC ADMINISTRATION**

The Academic Council (AC) is the supreme, statutory body that formulates, proclaims, and governs all the academic programmes of the Institute. The rulings of the Chairperson, Academic Council (Director of the Institute) are final with regard to all academic issues.

The organizational échelon of the Administration in Academic section is as follows:

Academic Council  
Dean, Academic Affairs  
Undergraduate committee of the Institute  
Undergraduate committee of the School  
Faculty Advisor

#### **3.1 Faculty Advisor**

- Faculty Advisor is normally a permanent faculty member of the Institute.
- On joining the Institute, every student will be assigned to a Faculty Advisor for the first year. Later from second year onwards, another Faculty advisor from the same stream to which the student belongs will be assigned to him/her.
- The Faculty Advisor will generally remain associated with a student in that capacity till such time as the student has graduated from the Institute or the studentship has been terminated for any reason.
- Similarly, if the Faculty Advisor leaves Institutes employment, a replacement of Faculty Advisor will be made.

#### **3.2 The responsibility of Faculty Advisor**

- The Faculty Advisor is expected to play a significant role in shaping the career of students.

- The first person to be contacted by the administration, in case of any problem with regard academic or non-academic performance of a student, is his/her faculty advisor.
- Faculty Advisor will closely monitor the performance of his ward and may permit him/her to take reduced academic load if the performance of the student is poor.
- Though the role of the Faculty Advisor is largely advisory, he/she may recommend to the Dean, Academic affairs, through UGCS, that a student may be required to adhere to a plan of study in the interest of the student.
- Similarly, in case a student is specially gifted, the Faculty Advisor may permit him/her, subject to approval of the Dean, Academic affairs, and other system constraints, to take additional load over and above the prescribed load for him/her.
- The Faculty Advisor is expected to be acquainted not only with the academics of a student, but with his/her social life as well. In case the student is passing through a troubled phase or shows signs of depression or of addiction to alcohol or drugs, he/she should alert the appropriate authorities, for necessary action and counselling.

### 3.3 UGCI

- Chairperson of UGCI will be elected among UGCI members. He convenes and presides over the meetings.
- Functions of the UGCI consist primarily of general policy determination, coordination and review of the Academic matters. Academic Council holds the right to make final decision.
- Besides Dean, UGCI consists of the UGCS conveners of all schools, six nominated members, and four student representatives whose CGPA is above or equal to 7.5.
- The general responsibilities of UGCI are as follows
  - Oversees the core curriculum, coordinates its various facets and performs all other relevant functions.
  - Approving new courses of instruction in the school and recommending it to Academic council for formal approval.

- Modifications of courses already approved.
- To fix the credit valuation of courses.
- Conduct of examinations.
- Evaluation of academic performance of students to make recommendations regarding
  - (i) their further programme of studies and
  - (ii) action to be taken in the case of deficient students.
- Such other related matters as may be referred to it by the Academic Council. It is noted that UGCI shall make full use of the appraisals, recommendations of the UGCS. The tenure of UGCI is two years.

### 3.4 UGCS

- UGCS monitors all academic matters, related to both academic programmes as well as academic performance of each student of the school and it makes recommendations to UGCI to implement.
- The general responsibilities of UGCS are to express their opinion and recommend decisions to UGCI pertaining to the students, curriculum of its school. It is entrusted with carefully analyzing and recommending their decisions to UGCI on
  - Formal approval/disapproval of new courses of instruction,
  - Modifications of courses already approved,
  - Fixing the credit valuation of courses,
  - Academic performance-related problems of the individual student brought to their notice by the respective Faculty Advisor.
- The convener of UGCS will be nominated by the Chairperson of the School in consultation with the faculty of the school.
- Besides convener, there will be minimum 4 and a maximum of eight faculty members and two student representatives, as members of UGCS. The members of UGCC will be nominated by the Chair person of the school.
- The tenure of UGCS is two years.

### **3.5 Academic Section**

Academic section works under Dean, Academic Affairs. It is responsible for the implementation of the decisions taken on academic matters by the Academic Council and UGCI. The Dean's office takes care of the First year students until their selection process to various streams is complete.

- receives processes and maintains all records relating to the undergraduate programmes including curricula, courses offered, academic calendar, registration, leave, examinations, grades and award of degrees and prizes.
- disseminates information pertaining to all academic matters.
- issues necessary memoranda/orders.
- acts as a channel of communication between the students, instructors, departments/ interdisciplinary programmes and UGCI.

### **3.6 Academic Calendar**

The academic activities of the Institute are regulated by Academic Calendar approved by the Academic Council and released at the beginning of each academic year. It is mandatory for everyone to strictly follow the academic calendar for execution of academic activities.

## 4 CURRICULUM

The curriculum consists of 4 stages.

1. The first stage will be when they are in first year, all courses will be compulsory for all students in the first year. The courses in the first two semesters will consist of introductory courses in all the four streams and introductory courses in Humanities and Social Sciences as well as in Computer programming.
2. At the beginning of the second year a student will opt for a stream. The stream will be allotted based on the academic performance in the first two semesters. During the second stage a student is introduced to basic techniques in his/her chosen stream which will prepare him/her for a subsequent research career in the stream. The student studies natural and abstract problems and acquires analytical, mathematical and experimental skills required for such a career.
3. In the third stage, which substantially overlaps with the preceding stage, the student is exposed to advanced knowledge in disciplines other than his/her own which enables the student to choose a career in a cross disciplinary area, if he/she so chooses. The student is also exposed to modern research techniques and writing of scientific and technical reports.
4. The fourth and final stage consists of a research project under the supervision of a guide which formally launches the student to a career in scientific research.

### 4.1 Enhancing the Curriculum

#### 4.1.1 *Summer Internship Program*

- In general students who have very low CGPA and many FR's will be discouraged to do summer internship outside of NISER. Instead they will be strongly advised to do the summer courses offered in NISER, by getting the consent from the respective UGCS conveners of the school.

- In any case, a student who got an FR in any course that is offered in the school will not normally be allowed to go abroad to do summer internship course. The Director after consulting the UGCS convener/ Chairperson of the School, can exercise his discretionary powers to decide whether to allow or disallow a student to go abroad to do summer internship.
- All the summer internship applications to foreign educational institutes including R & D organizations should get the approval from the Dean, Academic affairs, by routing them through the concerned UGCS, as NISER has to commit/produce certificates to various ministries and consulates...among other commitments including financial. Applying directly without the knowledge of the Academic section, will be entertained under no circumstances and the applications will outrightly be rejected at any stage of the process.

## 4.2 Registration Process

NISER follows what one generally calls **credit based semester system**. It is therefore mandatory for each student to register the courses at the beginning of each semester on the prescribed dates announced in the Academic Calendar, till he/she completes the programme. The sole responsibility of registration lies with the student and if a student does not register in a particular semester without approval of the Dean, his/her studentship is liable to be cancelled. The process is as follows:

- A list of courses to be offered during the semester is put up on the notice boards/ website.
- On the date of Registration as specified in the Academic Calendar, students can collect the registration cards available in the Academic section.
- Based on the advices given by the Faculty advisors and the UGCS members, students should select the courses they want to credit.
- Then they fill the forms with the names of the courses, the number of credits.

- They should get it signed by concerned teachers and Faculty Advisor.
- They sign it and submit it to the academic section along with the prescribed fee.
- Dean/Chairperson approves the registration. This completes the registration.
- The Institute will in course of time migrate to on-line registration system for those students who do not have backlog, with digital authorization by the Faculty Advisor.

### **4.3 Late Registration**

- Late registration may be permitted by the Dean, only for valid reasons. They should register on the day specified in the Academic Calendar on payment of a late registration fee. In no case a student will be allowed to register after the last date assigned for add and drop of courses.

### **4.4 Adding and Dropping of Courses**

- A student, on recommendation from his/her Faculty Advisor and subsequent approval from the Dean, Academic affairs, may be permitted, within the date which will be specified in the Academic Calendar, make adjustment in his/her academic load by dropping, adding or substituting one or more courses.
- He has to fill-in the form (overleaf of the Registration card) get it signed by the Faculty advisor and submit it to the Academic section for the approval.

### **4.5 Credit Requirements**

- Total number of credits a student is required to accumulate for graduation is 240. The normal load for a student to register is 24 credit points in a semester.
- Each school will fix a minimum credit points which may range from 130-180 for its student to earn when he finishes the M.Sc. (5-year

integrated) programme of that school. The remaining credits have to be from either electives of other streams or from HSS courses.

- A student is required to register for all prescribed courses in the first two semesters.
- From the third semester onwards a student must register for a minimum of 18 credits every semester.
- In general, if a student has two or more backlogs, his Faculty Advisor may recommend that he/she clears such backlogs before registering for regular courses.
- Temporary withdrawal from the Institute on medical grounds or under other exceptional circumstances may be permitted up to a maximum of two semesters during the entire programme duration of the student.
- If a student does not register for a regular semester without permission from the Dean, Academic affairs, his/her name may be struck off from rolls of the Institute and he/she may not be normally readmitted.
- A bright student without any backlogs may however be permitted by UGCI to take an overload (that is more than 24 credit points), if he wishes to do so. But it should not be more than 28 credit points.
- Similarly a deficient student may be required to take a reduced load, on the advice from UGCS.

#### **4.6 Summer Term Registration**

- A list of courses to be offered in the Summer Term (subject to availability of faculty members and other considerations) is brought out during the even semester, normally before March 15 every year. Students register for these courses at the beginning of the Summer Term on the advice of the UGCS.
- No student is allowed to register for more than 8 credits during the summer term.
- In view of the short duration of the Summer Term, late registration and adding and dropping of courses are not permitted.

## 4.7 Attending the Conferences

- NISER renders financial support to M.Sc. students to attend a conference (or workshop, training school as the case may be) on completion of 7th semester.
- In general, they will not be allowed to go to any conference when the semester is on. Exceptions can be made for those who do not have any backlogs and whose CGPA is more than six, provided the student gives an undertaking that he/she will not ask for any other concessions on academic requirements, for his/her absence.
- Only one conference for the whole duration of his M.Sc. program, may be allowed with the stipulation that no other academic requirements will be relaxed.

## 5 TEACHING

### 5.1 General Procedures

- The medium of instruction is ENGLISH.
- **Approval of Courses** -Each course along with its weight in terms of credits is discussed in UGCI as per the procedures laid down by the Academic Council and has to be recommended for approval to Academic Council by UGCI. Only approved courses by Academic Council will be offered during any semester/summer-term.
- **List of Courses** -The list of courses to be offered by a School/ interdisciplinary programme is finalized before the beginning of the semester/summer term by the concerned Chairperson and UGCS, taking into consideration of all the requirements and the recommendations of the standing committees of the Academic Council.
- Each course is conducted by the Faculty with the assistance of the required number of instructors and/or tutors. The faculty is responsible for conducting the course, holding the examinations, evaluating the performance of the students, awarding grades at the end of the semester/summer term and transmitting the grades to the academic section within the prescribed time limit.
- The faculty and tutors for all the courses offered by a School / interdisciplinary programme during the semester / summer term are designated by the concerned Chairperson. If any other School/ interdisciplinary programme is also required to participate in teaching a particular course, the respective Chairperson designates the instructor and /or tutor.
- **Auditing of courses** -A student may audit a course in addition to the prescribed academic load requirement with the permission of the concerned Faculty. Under this arrangement, the student is simply auditing the course. It should be noted that grades are not awarded for a audit-course.

## 6 COURSE STRUCTURE

### 6.1 Nature of Courses

In the curriculum of each school, core curriculum or course of study, forms central theme of the school and will be made mandatory for all students of the school to pass. Apart from core courses, school will float a list of elective courses. Students will have choices to choose from the list. Electives have more flexibility in nature. There are mainly two distinct types of courses, viz., lecture courses and laboratory courses. The lecture courses have lectures and tutorials while the laboratory courses have practical sessions.

Besides, the unstructured courses like Projects and Dissertation will also form part of the curriculum. Project is a course wherein a student, under the guidance of an assigned faculty member, is expected to do an in-depth study in a specified area by doing literature survey, understanding different aspects of a research problem and presenting a status report on that area. The scope of Dissertation is very similar to what is stated for the Project.

- Each course has a unique number. It will be assigned by UGCI in consultation with UGCS, after UGCI approves the course.
- The weight of a course in the curriculum is measured by assigning a “credit” to each course.
- The credits associated with the course depend on its structure and the number of contact hours per week assigned for the course.
- The credit associated for each contact hour per week over the semester carries 1credit for Lecture and similarly for Tutorial. Thus a theory course with 2 lectures and 1 tutorial per week will carry 3 credit units.
- Minimum one session with a span of at least 3 hours duration will earn 2 credit points for the student, for a laboratory course.
- Credits are also assigned to courses such as Projects depending on the expected quantum of work on these courses.

## 7 ASSESSMENT

### 7.1 Attendance

- Attendance in lectures, tutorials and laboratories is compulsory.
- A student must have 80% attendance in order to be eligible to sit for the end-semester examination. This relaxation already takes care of health and other personal situations and no further relaxation on these grounds may be permitted.
- If there is no end semester examination, as it happens in project course, or some elective course, a student having less than 80% attendance will be given *FR* grade.
- Failure to have 80% attendance may also result in to discontinuation of scholarships being given by the Institute. The decision of Dean, Academic affairs in such matter will be final.

### 7.2 Mode of Evaluation

It is emphasized that the Institute follows a continuous evaluation system of assessment.

- Theory courses
  - Except for evaluation of Project, all assessments are done internally by the teachers who conduct the course.
  - The core courses of all semesters and the elective courses up to first 6 semesters will have one mid-semester examination and one end semester examination.
  - The end-semester examination will carry a minimum of 40% weightage of the evaluation of a student.
  - Apart from these examinations, the teacher can conduct quizzes/short tests, tutorials, assignments, laboratory work (if any), make-up examinations (if applicable), etc.
  - It is mandatory for the teacher to declare the evaluation mechanism clearly specifying the breakup he wants to give for quizzes, assignments, and so on to the students on the first day itself.
  - In case the teacher wishes to have any other means of examination other than end-semester examination for elective courses given

after 6th semester, he/she has to notify it to the academic section.

- It is desirable to follow relative grading system (using mean and standard deviation) for core, theory courses.
- Laboratory courses
  - The assessment in a laboratory course will also be based continuous evaluation in practical hours, performance in viva-voce examination and general quality of work during the laboratory hours.

### 7.3 Grading

- For every course taken by a student he/she is assigned a grade based on his/her cumulative performance in the course during the semester. Typically an instructor evaluates each student out of 100 marks of quizzes, tests, mid-semester and end-semester examinations (or in case of a laboratory courses in the applicable parameters) and converts the marks to a letter grade.
- Each letter grade corresponds to a grade point for calculation of an index known as the Cumulative Grade Point Average (CGPA).
- The letter grades and the corresponding grade point are as follows:

AA	10
AB	9
BB	8
BC	7
CC	6
CD	5
DD	4
FR	0

In addition, the following letter grades may also be awarded in situations listed against each:

- A student passes a course if he/she has been awarded any grade from DD to AA i.e., a grade with a grade point of 4 or more.

- The Grade FR is a temporary grade. If a student gets an FR grade, it means that he failed in the course. If it is a core course he/she has to repeat the course. If it is an elective course, he/she can, if he wishes can replace this course with any other elective course in consultation with his/her faculty advisor and UGCS convener.
- The Grade FR will continue to appear in the semester grade cards or transcripts until he/she improves it to get a better grade either in the same course or its replacement.
- Once he/she changes his FR into any other better grade, this FR will not be taken into account in computing the CGPA.
- **II or Incomplete Grade:** Only students with a satisfactory and complete in-semester record like quizzes, assignments, but who has missed the end-semester examination for medical reasons or for a valid reason acceptable to the Dean (such as death of a parent or a sibling) may be awarded II grade. That is to say that an II grade is not awarded simply because a student has failed to appear in examination(s).
- An II grade must, however, be converted by the teacher into an appropriate letter grade by giving make-up examination and communicated to the Academic section by the last date specified in the academic calendar. Any outstanding II grade after this date shall be automatically converted into the FR grade.

#### 7.4 Cumulative Grade Point Average (CGPA)

- The performance of a student in the Institute at any point of time is indicated by a number called CGPA.
- The CGPA is calculated by the following steps:
  1. Multiply the total credit of each course ( $C_i$ ) by the grade point ( $g_i$ );
  2. Add up the total of Item 1 for all courses taken;
  3. Add up the total of credits of all the courses taken;
  4. CGPA is the ratio of the number obtained in Item 2 to that in 3, i.e.,

$$CGPA = \frac{\sum_i C_i g_i}{\sum_i C_i}$$

## 7.5 Semester Grade Point Average (SGPA)

An index similar to CGPA is calculated considering only the courses taken during a particular semester. This index SGPA is calculated following the same steps as for CGPA. The grade card of a student at the end of every semester will contain the SGPA of that semester and the CGPA till then.

The following table illustrates calculation of SGPA:

Course	Credits (C)	Grade obtained	Grade point (g)	C × g
Physics	3	BB	8	24
Chemistry	3	BC	7	21
Mathematics	3	AB	9	27
Biology	3	CC	6	18
Physics Lab	2	AA	10	20
Total	14			110

$$SGPA = 110/14 = 7.85$$

CGPA and SGPA are calculated only to the second place of decimal, the figure in the second place is rounded off to the next higher digit if the digit in the third place is 5 or more.

## 7.6 Semester Grade Report

- Teacher, will generally permit a student to get back his/her answer scripts in a test, quiz or a mid-semester examination.
- It is mandatory for the teachers to evaluate the end-semester examination within 72 hours after the end-semester examination.
- It is mandatory on the part of the teachers to show the corrected quizzes, assignments, mid-semester and end-semester examination answer scripts to the students.

- Disagreement on evaluation has to be sorted out between the instructor and the student before the student has taken the answer-script back with him/her.
- If the disagreement persists, it can be referred to the Dean for redressal.
- As grades are awarded to individual student after taking into consideration of the marks obtained by all students in the course, the teachers should not show the grades to the students.
- The Grade sheet will be prepared by the Academic section and it will be announced in the Notice Board of the Academic section within a 5 working days after the end of last examination of the examination schedule.
- After all the grades are announced, a semester grade report containing all the grades, SGPA and CGPA will be issued in the Academic section and will be mailed to the parents/guardians.
- The teacher must retain all end-semester answer books for a period of six months after the conclusion of the examination. The answer books may be destroyed thereafter.
- The teacher must keep the in-semester record of all the students in a course for at least one year after completion of the course.
- The grades of a student may be withheld if he/she has not paid his/her dues, or if there is a case of indiscipline pending against him/her, or for any other reason that deemed fit by any standing committee like Disciplinary Action committee.
- Once the on-line system is in place, a student may also see his/her academic status including grades therein.

## 7.7 Examination Pattern

Examination Pattern for the elective courses from 7<sup>th</sup> semester onward:

- As far as possible assessment of these courses should also be similar to the other compulsory courses.
- However, if the teacher is of the view that mid semester/end semester examinations can be replaced with evaluation of reports/term

papers followed by oral presentations by the students it can also be done. He needs to inform the academic section well in advance.

## **7.8 Academic Load**

- Students with CGPA of 8.5 or above may be permitted to take one course per semester as overload subject to time table constraints.
- The students CGPA and SGPA will be calculated considering the overloaded course as any other course.
- See also 4.2

## 8. PROJECTS

### 8.1 Projects Allotment

- Project work is carried over as a course work in NISER. The tenure and number of credits allotted to project work vary with the school.
- Likewise, the maximum numbers of students that are to be guided by one faculty member vary with the school.
- Project work can be on one continuous theme throughout the program or fragmented with the on-going semesters. In any case the project done in the 5<sup>th</sup> year should be continuous.
- A thesis embodying the work done during his 5<sup>th</sup> year will be submitted at the end of 5<sup>th</sup> year in the prescribed format.
- The students can approach the faculty members depending on their interest and give a preference list to the UGCS convener at the beginning of the semester.
- The UGCS convener circulates the list to the faculty members. He convenes a faculty meeting and a decision is reached. The list will be circulated by the UGCS convener to the students.
- It is noted that assigning a guide to each student of the school is mandatory on the part of the school.
- It is helpful to point out that the preference of a student should be based on the merit of the student.
- The change of Guide is not encouraged.

### 8.2 Evaluation of Projects

- All the components of the evaluation of projects including the presentation should be completed before the date of announcement of Grades of the semester.
- The marks apportioned for the execution of the project and the presentation of the project may vary with the school. But the conduct/study of the project including the preparation of the project report should be given at least 50% measure.

- The project report will be evaluated by a 2 member committee comprising the Project Guide and a faculty member (preferably working in the area), nominated by the UGCS convener.
- The scheduling and the conduct of the presentation of projects will be done by UGCS convener or by some faculty member assigned for this job.
- The schedule for the presentation can be after the end semester exams are over, but not during period when mid/end semester exams are slated to be held.
- The oral presentation will be evaluated by all the faculty whoever wish to do among those who are present during the seminar and an average is taken. At least half of the faculty of the school is expected to be present in the presentation.

## 9 INADEQUATE ACADEMIC PERFORMANCE

The academic performance of each undergraduate student is reviewed by UGCS at the end of a regular semester and is considered inadequate if his/her SGPA /CGPA is 4.5 or below. Such a student is termed “academically deficient” and he will be placed on Academic Probation, or his/her academic programme may be terminated, as the case may be.

### 9.1 Academic Probation

A student is strictly warned and placed on academic probation if his/her SGPA and/or CGPA at the end of a regular semester are as follows:

$$\text{SGPA} \leq 4.5 \text{ and/or } \text{CGPA} \leq 5.0$$

His / Her parents will be informed immediately.

### 9.2 Scholarship

- All students are eligible to get Inspire Scholarship sponsored by Department of Science and Technology (DST), Government of India.
- The continuation of the scholarship after two semesters will depend solely on the academic performance of the student. Only those students whose CGPA is more or equal to 6.00 will continue to avail the Inspire fellowship.
- If the CGPA falls below 6.00, the scholarship will be suspended. However, the scholarship will be reinstated if his CGPA improves to be more or equal to 6.00.
- For the SC, ST students the entire suspended scholarship will be dispersed once their CGPA reaches 6.00.

### 9.3 Termination of Programme

The programme of a student will be terminated by Academic Council if his/her case falls in any one of the following:

- The student is on Academic Probation and fails to secure a minimum CGPA of 4.00 after the 2nd semester.

- The student is absent without authorized leave of absence for a major part of the semester and does not appear in the end-semester examination of the courses in which he/she is registered.
- The student fails to report and register by the last date of registration without any bona fide reason.
- The student involves himself/herself, in violation of the code of conduct, in ragging, etc. and the Disciplinary Action Committee of Students (DACs)/a special Institute committee makes a recommendation to that effect.
- Maximum number of FR grades a student can get for a given course. Apart from the first appearance of a course irrespective of compulsory or elective another two attempts at the maximum (that is excluding first attempt) can be allowed. To elaborate, in the event that someone gets an FR in an elective course, we allow them to credit twice at the maximum either same course or some other elective in lieu of the course.
- Maximum backlog a student can accumulate in a given semester is to the tune of 12 credit points.
- At any given point of time during his tenure, a student can have backlogs of courses to the tune of 24 credits at the maximum.
- Maximum duration that a student can spend is seven years, including the semester leave a student availed on medical grounds or otherwise.

It is noted that at the time of admission an undertaking is taken from the student that he knows the rules in regard to the termination of programme for want of sufficient CGPA.

#### **9.4 Reduced Academic Load**

A student placed on warning or academic probation will be permitted a reduced load up to a minimum of 12 credits. However, the courses for which he/she registers will be decided by UGCS considering the input obtained from the Faculty Advisor, Chairperson of the School

concerned, and Counselling Service. The parents/guardian of such a student will be kept informed of his/her progress.

### **9.5 Appeal Against Termination**

A student whose programme is terminated on account of inadequate academic performance or otherwise has the right to appeal to the Chairman, Academic Council for reconsideration. While making the appeal against termination, he/she is expected to give reasons for his/her poor academic performance and/or to explain why his/her position merits reconsideration along with supporting documents. The Academic Council shall take a final decision after considering all the available inputs. However, the Academic Council will not entertain any further appeal for review unless substantial additional information is brought to its notice.

### **9.6 Mid-semester Recess and Vacation**

Undergraduate students are entitled to avail the mid-semester recess and vacation as specified in the Academic Calendar.

### **9.7 Leave of Absence (Short-term Leave)**

Leave of absence shall be discouraged for all registered students. However, the following rules govern the leave of absence during the session:

- Application for leave of absence should be addressed to the Chairperson, UGCI and submitted to the Academic section with a medical certificate, if applicable.
- It should be routed through Convener, UGCS, if the student is attached to a school. Otherwise it should be sent to the Academic section for favor of signature and approval from the Chairperson, UGCI.
- Students should have a minimum of 80% attendance to complete a course. A student having less than 80% attendance will not be allowed to sit for the End-Semester examination.
- The maximum number of days (including the weekends and Institute holidays) that can be availed at a stretch will be 15 days on medi-

cal grounds and 7 days for any other valid reasons. If the number of days extends more than 15, then one has to seek for a temporary withdrawal for a semester.

- Dean, Academic Affairs can waive the above two rules in extraordinarily deserving cases, on recommendation of the Chairperson, UGCI, routed through Convener, UGCS.
- Leave must not usually be availed of without prior approval of the UGCI.

### **9.8 Leave of Absence (Long-term Leave/Temporary Withdrawal)**

- A student is not normally allowed to withdraw from the academic programme temporarily and is expected to complete his/her studies without any break.
- However, for bona fide reasons and/or in exceptional circumstances, a student may be allowed to withdraw temporarily on leave of absence at the discretion of Academic Council for an extended period.
- Such leave of absence(s) shall ordinarily not exceed one semester with or without break during the entire period of the academic programme.
- During this period students are not entitled to avail any scholarship/financial assistance which is normally given.

## 10 GRADUATION REQUIREMENT

A student shall be deemed to have completed the graduation requirements, if the student has

1. Passed all prescribed courses and acquired a total of 240 credits.
2. Attained the minimum CGPA (Cumulative Grade Point Average) namely 5.00;
3. Attended at least 80% of total number classes in course;
4. Satisfied minimum academic and residence requirements;
5. Satisfied all requirements specified by the concerned school;
6. Satisfied all requirements specified by the Academic Council and Ordinances.

In addition, the student must have paid all the dues to the institute and must have no pending case of indiscipline.

## 11. PROJECT WORK FOR EXTERNAL STUDENTS

- Students not belonging NISER, should not be allowed to do project work when the semester is on.
- Summer projects could be allowed for both internal as well as external students on the basis of willingness of the prospective supervisors with the knowledge and approval of the UGCS. All requests are to be sent to the UGCS for approval and record.
- Due to lab, space and other constraints, it is desirable that the school recommends a cap for the number of students a faculty can guide at a given point of time. Moreover, each school should have an appropriate methodology in selecting/screening the students which will subsequently be approved by the Dean, Academic Affairs.
- The supervisor is expected to oversee that the student follows rules and regulations of the NISER in its premises and take care that no misconduct on the part of the student in labs, class rooms and so on.

## 12 CODE OF CONDUCT

- Each student shall conduct himself/herself in a manner befitting his/her association with an Institute of national importance. He/she is expected not to indulge in any activity which is likely to bring down the prestige of the Institute. He / She should also show due respect and courtesy to the teachers, administrators, officers and employees of the Institute, and good neighborly behavior to fellow students. Due attention and courtesy is to be paid to visitors to the Institute and residents of the Campus.
- Lack of courtesy and decorum, unbecoming conduct (both within and outside the Institute), wilful damage and/or removal of Institute property or belongings of fellow students, disturbing others in their studies, adoption of unfair means during examinations, breach of rules and regulations of the Institute, noisy and unseemly behavior and similar other undesirable activities shall constitute violation of the Code of Conduct for students.
- Ragging in any form is strictly prohibited and is considered a serious offense.

### 12.1 Disciplinary Actions and Related Matter

- Violation of the Code of Conduct shall invite disciplinary action which may include punishment such as reprimand, disciplinary probation, fine, debarring from examinations, withdrawal of scholarship and/or placement services, withholding of grades and/or degrees, cancelation of registration and even expulsion from the Institute.
- The teacher of a course shall have the power to debar a student from the examination in which he/she is detected to be using unfair means. The Instructor/Tutor shall have the power to take appropriate action against a student who misbehaves in his/ her class.
- The Chief Warden of the hostels has the power to reprimand, impose fine or take any other suitable measure against a resident who violates either the Code of Conduct or rules and regulations pertaining to the concerned Hall of Residence.

- Involvement of a student in ragging may lead to his/her expulsion from the Institute. The Disciplinary Action Committees of Students (DACs) investigates alleged misdemeanors, complaints, etc. and recommends a suitable course of action. Violation of the Code of Conduct by an individual or of a group of students can be referred to this committee by a student, teacher or other functionary of the Institute.
- In very exceptional circumstances, the Chairman, Academic Council may appoint a special committee to investigate and/or recommend appropriate action for any act of gross indiscipline involving an individual or a number of students, which, in his/her view, may tarnish the image of the Institute.
- The recommendation for any action, including expulsion of a student from the Institute, shall be referred to the Academic Council for its final decision. A student who feels aggrieved with the punishment awarded may, however, appeal to the Chairman, Academic Council stating clearly the case and explaining his/her position, and seeking reconsideration of the decision.
- The Academic Council may not recommend a student, who is found guilty of some major offense, to the Board of Governors for the award of a degree/diploma/certificate even if he/she has satisfactorily completed all the academic requirements.

## 13 GENERAL

### 13.1 Seminars

- There are 2 types of seminars that are conducted presently in the schools.
  1. Weekly seminars by the faculty of NISER, or experts from outside.
  2. Student seminars

The student seminars are basic in nature and organized by the students.

- It is desirable to have an In-Charge for the weekly seminars in each school.
- A faculty member may suggest a name to the In-Charge and it will be discussed in the Faculty meeting of the school.
- In a semester, the institute will fully support the visit of not more than 2 visitors from outside NISER, but within India.
- The speakers are expected to be eminent and their visit should prove to be useful to both faculty and the students.
- The proposer should seek the approval from the Director through Chairperson before sending any official communication.
- It is desirable that the Chairperson sends the invitation once the Director approves the proposal.

### 13.2 Colloquium

- Any faculty member can bring the names of eminent scientists and outstanding speakers to the notice of the chairperson for giving a colloquium series in NISER.
- It is to be noted that the speakers should be able to inspire students to pursue science and help realize the beauty and relevance of science.

## 14 HOSTEL RULES

### 14.1 Hostel Management Committee

1. The committee will consist of the Director, Deans, Hostel Wardens, Hostel Manager, Student representatives.
2. It is decided to have 2 boys and 2 girls from M.Sc. integrated program and 1 boy and 1 girl from P.G. Program to be, at present, included in the Hostel Management Committee. The composition may change from time to time. The selection process will be spelt out later by authorities.
3. The Hostel Management committee will frame the rules, stipulates, supervise and give advises to the Hostel Wardens and Manager when it is needed.
4. The students can approach any the Hostel Management Committee, for help, guidance and for any grievance-redressal.
5. All residents shall comply with the rules and with the supplementary rules and bye-laws as may be framed from the time to time.
6. Ignorance of any of these shall not be accepted as an excuse for its non-observance on the part of a resident.
7. For any violation of the rules and for any act of indiscipline in any hostel, the Hostel warden shall take whatever disciplinary action deemed necessary. In case of a serious offense, Hostel Management committee is empowered to take the disciplinary action in the Hostel and if need be to recommend to the Institute.
8. Institute reserves the right to take disciplinary action including cancelation of allotment of accommodation the hostels, for violation of Hostel rules.
9. Elected students bodies to cater the interests in say, sports, fine arts, etc, might be formed as and when required after getting the due approval from the authorities.

## 14.2 General Behaviour

1. A student should keep in mind that the hostel is the home of the students on the campus, he/she should behave himself/herself on the campus as well as outside in such manner that will bring credit to him/her and above all to the institution.
2. Residents shall respect the right of each individual to express his/her ideas, pursue his/her interests.
3. Internal victimization or harassment of anyone who is from a weaker/minority section will not be tolerable and will be treated as a serious offense. It will be strictly dealt with by Hostel Management committee.
4. Hostel Management committee strongly discourages the regional/religious groupings among the students. It is a National institute and inmates of the hostel are expected to inculcate the doctrine of nationalism during their stay in NISER.
5. All games/ sports activity in the hostels must have the prior approval of the Hostel Management committee.
6. The institute will not tolerate any objectionable extremist religious activities by the inmates.
7. Residents are forbidden to possess any sort of weapons including small knives, inside the premises of the Institute.
8. Students are not allowed to organise any religious activities. Fund raising for any general, non-religious activities can be done after getting prior permission from HMC.
9. Consumption of any objectionable intoxicating items in any form and smoking are strictly prohibited inside the premises of the Hostel and Institute.
10. No student is allowed to possess any vehicle other than a bicycle, in case they need it. In any case, no student is allowed to keep any vehicle other than bicycle inside the premises of NISER (this includes the Hostel, Institute of Physics campus).
11. Fixing posters and pictures or writing on the common walls and disfiguring the walls of the hostels is strictly prohibited. Hostel

Management Committee is empowered to take stringent action on any who found violating this. However, the places specially provided for posters etc. may be made use of after getting the permission from Hostel Manager. In case any resident fixes posters inside his room, he /she will be responsible for any damages.

### **14.3 Rules and Regulations**

#### **1. Allotment**

- (a) A student is allotted a residence only after he clears all the previous arrears, if any, and the mess advance.
- (b) No-due certificate from the hostel is mandatory for registration.
- (c) Allotment of residence will be done by the Hostel Management committee. Those who want to change their rooms need to give in writing to Warden through Hostel Manager. It will be accorded case by case by taking the merit of the claim into consideration.

#### **2. Living**

- (a) As it is a residential institute all students are required to stay in the hostel.
- (b) No inmate shall be absent from the Hostel without the prior permission of the Warden concerned.
- (c) Students who either discontinue their studies or whose courses are terminated by the Institute are required to vacate their rooms immediately unless he gets prior permission from the Warden.

#### **3. Guests**

- (a) No students should entertain unauthorized guest.
- (b) The Hostel Management committee reserves the right to deny entry into the Hostel to visitors if their visit is likely to disturb the peace and order of the Hostel.
- (c) An inmate might be required to vacate the room during long leave/ vacation for maintenance of Hostels.

- (d) To protect the privacy of the residents of the halls, visitors of the opposite sex are strictly not allowed in the rooms and are prohibited from entering the residential blocks of the hostels between 10 p.m. and 9 am.
- (e) In any case, no student is permitted to entertain a guest of opposite sex inside his room.

#### **14.4 General Maintenance**

- (a) Inmates will be personally responsible for the safe upkeep of the furniture, fittings, and other items supplied to them in the rooms. In case of any loss or damage to the above, the actual amount along with the fine imposed by the Hostel Management committee will either be deducted from their hostel security deposit or asked to pay immediately.
- (b) The inmates are not allowed to remove any property from the dining room, common room or the visitors' room and take it either to their rooms or any other place which they want.
- (c) Hostel Management committee reserves the right to allow any unauthorized electrical gadgets such as room heaters, cooking equipments, etc inside the rooms. Tampering with electrical fixtures will be treated as full damage to the Hostel property. Necessary action will be taken as decided by the Hostel Management Committee.
- (d) Students must not keep valuable in their rooms. A student himself/herself is responsible for all of his/her belongings. The institute will not be held responsible for any loss incurred due to his/her negligence or any other reason whatsoever.

#### **14.5 Mess**

- (a) There is a common mess for both boys and girls in the Ladies hostel.
- (b) The students will get a mess-rebate if the leave is more than or equal to 3days continuously.

- (c) Hostel mess is compulsory and under no circumstances, private preparation of food in their respective rooms shall be permitted.
- (d) The student shall strictly adhere to the timings set down by the Hostel Management committee to take food in the Mess hall.
- (e) The Hostel mess will be managed by the Hostel Mess Committee. One of the wardens will be the Chairman of the Hostel Committee.
- (f) The mess bill of the students should be notified latest by the fifth of every month.

## **15 AMENDMENTS**

Notwithstanding anything contained in this manual, the Academic Council of the National Institute of Science Education and Research, Bhubaneswar reserves the right to modify/amend without notice, the curricula, procedures, requirements, and rules pertaining to its undergraduate programmes.

