



OFFICE OF THE REGISTRAR
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR
AN INSTITUTE OF NATIONAL IMPORTANCE
(FORMERLY BENGAL ENGINEERING AND SCIENCE UNIVERSITY, SHIBPUR)

No: 16th BoG/AT/ 19/252

Date: 16th March, 2020

Order

The BOG in its 16th meeting held on 17th January, 2020 vide Resolution no.16.10, has approved the following three "Ordinances" duly made by the Senate with the direction that the Senate will oversee the implementation process of these three Ordinances and submit its report, including its observation of any operational discrepancies that may arise, amendments, if any, to be incorporated after proper procedural processing.

- (i) the Ordinances and Regulations for Undergraduate Programmes,
- (ii) the Ordinances for Postgraduate Programmes; and,
- (iii) the Ordinances for Doctoral Programmes

The BoG also resolved that the matter will be reviewed by the BoG after completion of one year from the date of introduction of the draft ordinances which were approved in principle by the BoG in its 14th meeting.

The above mentioned three "Ordinances" are enclosed for ready reference for all concerned.

This order is issued with the concurrence of the competent authority.

Sd/-
(Biman Bandyopadhyay)
Registrar, IEST, Shibpur &
Secretary to BOG

Encl: As stated

Copy forwarded for information and necessary action to:

1. PS to the Director
2. All Deans/ All HODs /All Heads of Schools and Centres
3. All Officers
4. Institute Website

16/3/2020
Registrar

INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

THE ORDINANCES
FOR
DOCTORAL PROGRAMME

FROM 2019 ADMISSION ONWARDS



July 2019

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

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

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

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The Ordinances for Doctoral Programme

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

1. SHORT TITLE AND COMMENCEMENT

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

2. APPLICATION

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

3. DEFINITIONS

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

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

4. ABBREVIATIONS AND ACRONYMS

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

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

5. OBJECTIVES OF THE PROGRAMME

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

6. GENERAL OUTLINE

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

7. THE DOCTORAL PROGRAMME

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

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

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

8. ELIGIBILITY CRITERIA

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

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

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

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

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

(2) *Regular Candidates with Institute Fellowship*

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

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

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

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

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

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

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

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

(4) Candidates Selected under the QIP Scheme of AICTE

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

(5) Candidates from Sponsored Research Project

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

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

(6) Other Candidates

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

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

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

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

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

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

9. SELECTION, ADMISSION AND ENROLMENT

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

10. SEMESTER REGISTRATION

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

11. WITHDRAWAL FROM THE PROGRAMME

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

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

12. POST GRADUATE COMMITTEES

(1) Senate Post Graduate Committee (SPGC)

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

(2) Departmental Committees

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

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

13. THESIS SUPERVISOR

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

14. ALLOTMENT OF THESIS SUPERVISOR

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

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

15. RESEARCH PROGRESS EVALUATION COMMITTEE (RPEC)

(1) Constitution of the RPEC

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

(2) Duties and Functions of the RPEC

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

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

16. ACADEMIC SESSION

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

17. PRELIMINARY MILESTONES

(1) Coursework

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

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

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

(2) Performance Requirements in the Coursework

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

(3) Comprehensive Examination

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

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

(4) State-of-the-Art Seminar

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

18. REGISTRATION TO THE PROGRAMME

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

19. THESIS REGISTRATION, PROGRESS REPORT AND SEMINAR

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

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

20. PRE-SUBMISSION SEMINAR

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

21. SUBMISSION OF THESIS

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

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

22. ADJUDICATION OF THE THESIS

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

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

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

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

23. VIVA-VOCE EXAMINATION

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

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

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

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

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

24. LEAVE RULES

(1) Ordinary Leave

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

(2) Maternity/ Paternity Leave/ Child Care Leave

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

(3) Academic leave

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

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

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

25. PRIVILEGES AND OBLIGATIONS OF A RESEARCH SCHOLAR

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

26. END NOTE

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

REQUEST FOR THESIS SUPERVISOR ALLOCATION

Scholar's Name: _____ Enrolment No: _____

Programme (PhD/ MTech/ MURP, etc.): _____

Department/ School/ Centre: _____

Area of specialization: _____

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

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

Date: _____ (Scholar's Signature)

Supervisor allotted: _____

Signature of Chairman, DPGC _____

I agree to supervise the work

Signature of supervisor

Approved/ Not Approved

Signature of Chairman, SPGC _____

CONSTITUTION OF RESEARCH PROGRAMME EVALUATION COMMITTEE (RPEC)

Department/ School/ Centre: _____

Scholar's Name: _____ Enrolment No: _____

Month and Year of enrolment: _____ (month) _____ (year)

Programme: **PhD** Area of specialization _____

Thesis Supervisor(s): _____

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

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

Date _____ Supervisor(s) _____

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

Serial Name Department/ School/ Centre No.

Comments of Chairman, DPGC _____

Signature of Chairman, DPGC

Approved/ Not Approved

Signature of Chairman, SPGC

REPORT OF COMPREHENSIVE EXAMINATION

Scholar's
Name: _____
Enrolment No: _____ Date _____
No: _____

Programme: _____ Doctor of Philosophy _____

Supervisor(s) _____

Date of Examination _____

Report on mode and procedure of Comprehensive Examination (including the written part, if any):

Overall Impression _____ Satisfactory/ Unsatisfactory

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

REGISTRATION TO PHD PROGRAMME

Session: 20.....-..... Semester : Odd/ Even

Particulars of the Scholar
 Name: _____ Enrolment no.: _____
 Email: _____

Particulars of the Supervisor(s)
 Name: _____ Designation: _____
 Department/ School/ Centre: _____

Particulars of the Co-Supervisor(s)
 Name: _____ Designation _____
 Affiliation: _____ Address _____

 Name: _____ Designation _____
 Affiliation: _____ Address _____

Broad Topic of the Research: _____

Coursework done/Grades :

Sl No.	Course Undertaken (code: course name)	Credit Point	Grade Obtained
1.			
2.			
3.			
4.			
5.			
6.			

CGPA obtained: _____

Comprehensive examination held on _____ State-of-the-Art seminar held on _____

 Signature of the scholar

(Continued overleaf.....)

Recommendations of RPEC:

Comments of the Chairman,
DPGC:

←----- For office use only -----→

Permitted/Not permitted:

Registration. No _____ Date: _____

Unless renewed the validity of the Registration shall expire on: _____

Signature of Dean (Academic)

REPORT OF (XX799) SEMINAR

Session: 20.....-..... Semester : Odd/ Even

Particulars of the Scholar

Name: _____ Email: _____
 Registration no.: _____ Date of Registration: _____

Particulars of the Supervisor(s)

Name: _____ Designation: _____
 Department/ School/ Centre: _____

Particulars of the Co-Supervisor(s)

Name: _____ Designation: _____
 Affiliation: _____ Address: _____

Name: _____ Designation: _____
 Affiliation: _____ Address: _____

Date of Presentation

Topic of Presentation:

The candidate was awarded the grade: _____
 Signature of RPEC members _____

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

REPORT ON PRE-SUBMISSION SEMINAR

Session: 20.....-..... Semester : Odd/ Even

Particulars of the Scholar
 Name: _____ Email: _____
 Registration no.: _____ Date of Registration: _____

Particulars of the Supervisor(s)
 Name: _____ Designation: _____
 Department/ School/ Centre: _____

Particulars of the Co-Supervisor(s)
 Name: _____ Designation: _____
 Affiliation: _____ Address: _____

Date of Pre-Submission Seminar: _____
 Final Title of the Thesis: _____

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

1. _____
2. _____
3. _____

Observations of RPEC (if any) _____

Recommendation of RPEC The scholar **may be/ may not be** permitted to submit the thesis
 Signature of RPEC members _____

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

Comments of Chairman, DPGC _____

Signature of Chairman, DPGC _____

THESIS SUBMISSION

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

Semester : Odd/ Even

Name of the Scholar:

Email:

Registration no.:

Date of
Registration:

Title of the Thesis:

I certify that

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

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

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

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

The thesis has been prepared without resorting to plagiarism (IPR Cell Report submitted)

Whenever I have used materials (data, theoretical analysis and text) from other sources, I have given due credit to them by citing them in the text of the thesis and giving their details in the references.

Pre-Submission Seminar held on (dd/mm/yyyy): _____

No. of papers published in SCIE/SCOPUS/AzndHI indexed journals: _____

No. of copies of synopsis submitted: _____

No. of hard copies of thesis submitted: _____

Metadata submitted in (media)

Filename of the Soft copy of thesis: _____ .pdf;

Filename of the Soft copy of synopsis: _____ .pdf

Date: _____

Scholar's Signature: _____

Endorsement by the
Supervisor(s)

Signature of the Supervisor

Signature of the Chairman, DPGC

Permitted/Not permitted to submit the thesis:

Signature of the Chairman,
SPGC

ADJUDICATION REPORT

1. Name of the Scholar:
2. Registration No.:
3. Title of the of the Thesis:
4. Submitted for the degree of : Doctor of Philosophy (PhD)

5. Please tick (✓) in the appropriate box
YES or NO
- | | | |
|--|------------------------------|-----------------------------|
| 5.1. Is the thesis of substantial nature making a distinct addition to knowledge in the subject? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 5.2. Has the thesis embodied any new ideas with original thoughts? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| 5.3 Whether quality of work is comparable with other universities of repute? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

6. Recommendations [Tick (✓)any one]

- a) The thesis is recommended for the award of PhD degree, in its present form.
- b) The thesis is accepted for the award of PhD degree, subject to some corrections to be incorporated in thesis as suggested, but the final thesis need not be sent to the examiner. The candidate should explain the corrections made and satisfy the viva-voce board.
- c) The thesis is accepted for the award of PhD degree, subject to some revision(s) as suggested and the revised thesis is to be sent to the examiner for Re-adjudication.
- d) The thesis in its present form is not acceptable for the award of PhD degree.

Date: _____
(dd/mm/yyyy)

Signature of the Adjudicator

Affiliation: _____

Telephone/Fax No. _____

e-mail ID: _____

7. Reasons in support of your recommendations (attach separate sheet if necessary)

8. Do you suggest any revision of the thesis? If so, please indicate the aspects to be covered under the revision (attach separate sheet if necessary)

9. If not recommended, state reasons (attach separate sheet if necessary)

Date: _____
(dd/mm/yyyy)

Signature of the Adjudicator

GUIDELINES FOR THESIS PREPARATION

SPECIFICATIONS FOR THESIS FORMAT

(1) Preparation of Manuscript and Copies

The thesis needs to be prepared using a standard text processing software and must be printed in black text (color for images, if necessary) in standard typeface.

The thesis must be printed or photocopied on both sides of white paper. All copies of thesis pages must be clear, sharp and even, with uniform size and uniformly spaced characters, lines and margins on every page of good quality white paper of 75 gsm or more.

The thesis should be free from typographical errors.

Size and Margins

- (a) A4 is the recommended thesis size.
- (b) Content should not extend beyond the bottom margin except for completing a footnote, last line of chapter/subdivision, or figure/table caption.
- (c) A sub-head at the bottom of the page should have at least two full lines of content below it. If the sub-head is too short to allow this, it should begin on the next page.
- (d) All tables and figures should conform to the same requirements as text. Color may be used for figures. If tables and figures are large, they may be reduced to the standard size and /or folded just once to flush with the thesis margin (if the page size does not exceed 250x360 mm).

Page Numbering

- (a) Beginning with the first page of the text in the thesis (chapter 1), all pages should be numbered consecutively and consistently in Arabic numerals through the appendices.
- (b) Page numbers prior to Chapter 1 should be in lower case Roman numerals. The title page is considered to be page (i) but the number is not printed.

Multi-Volume Thesis

A thesis may be in two or more volumes, if required. The volume separation should come at the end(s) of major division(s). The preliminary pages prior to Chapter 1 are contained only in Volume I, except the title page.

(2) Tables, Figures and Equations

- (a) All tables (tabulated data) and figures (charts, graphs, maps, images, diagrams, etc.) should be prepared, wherever possible, on the same paper used to type the text and conform to the specifications outlined earlier. They should be inserted as close to the textual reference as possible.
- (b) Tables, figures and equations should be numbered sequentially either throughout the thesis or chapter-wise using Arabic numerals. They are referred to in the body of the text capitalizing the first letter of the word and number, as for instance, Table 17, Figure 24, Equation (33), or Table 5.3, Figure 3.11, Equation (4.16), etc.
- (c) If tables and figures are of only half a page or less, they may appear on the same page as text but separated by adequate line spacing.
- (d) Good quality Line Drawings/figures must be drawn using standard software.
- (e) *Images, Photographs, etc.* preferably be scanned in resolution exceeding 300dpi with 256grayscale for the monochrome images and 24 bit per pixel for the color images.

Binding

The student should submit the copies of the thesis in fully bound form (soft cover) for PhD. Once the thesis is accepted, it is the student's responsibility to get it properly bound before depositing the required number of copies. The front cover of the bound copy may be the same as the title page of the thesis. The front cover should have printing on the side to include the author's name, abbreviated thesis title (optional), degree, department, and the year.

GUIDELINES FOR STRUCTURING CONTENTS

Sequence of Contents

Preliminaries: Title Page As per the format given }
Certificate }
Acknowledgement and/ or Dedication (where included) }
Abstract/Synopsis
Table of Contents
List of Figures, Tables, Illustrations,
Symbols, etc (wherever applicable)
Text of Thesis: Introduction, body of the thesis, summary and conclusions, scope for future work
Reference Material: List of References, Bibliography (where included)
Appendices where included
Index where included

Preliminaries

Synopsis/Abstract

A PhD thesis should contain an abstract/synopsis not exceeding 1000 words.

Further, every PhD scholar should submit 2 copies of brief abstract not exceeding 250 words for record keeping in the Library.

A synopsis or abstract shall be printed with the heading "SYNOPSIS" or "ABSTRACT" followed by certain preliminary information and the text. For textual matter, refer to the suggested format which is placed at the end of the Thesis Guide.

Synopsis/Abstract should be self-complete and contain no citations for which the thesis has to be referred.

Table of Contents

The Table of Contents lists headings of all Chapters/Sections/Sub-sections that follows it. No preceding material is listed.

List of Figures with headings of all figures/illustrations, and List of Tables with headings of all tables, are listed separately. A list of symbols used and a list of abbreviations/acronyms may also be included.

Text of the thesis

Introduction

Introduction may be the first chapter or its first major division. In either case, it should contain a brief statement of the problem investigated. It should outline the scope, aim, general character of the research and the reasons for the student's interest in the problem

The body of Thesis

This is the substance of the dissertation inclusive of all divisions, subdivisions, tables, figures, etc.

Summary and conclusions

If required, these are given as the last major division (chapter) of the text. A further and final sub-division titled “*Scope for Further Work*” may follow.

Reference

The list of references should appear as a consolidated list with references listed either alphabetically or sequentially as they appear in the text of the thesis. Spacing and font size should be consistent inside a single reference.

Reference Format

For referencing an article in a scientific journal, the suggested format should contain the following information: authors, title, name of journal, volume number, page numbers and year.

For referencing an article published in a book, the suggested format should contain, authors, the title of the book, editors, publisher, year, page number of the article in the book being referred to.

For referencing a thesis, the suggested format should contain, author, the title of thesis, where thesis was submitted or awarded, year.

A few examples of formats of references are given below and the student should be consistent in following the style. Referencing format used in widely referred and reputed international journals may also be used, consistently.

Journals

Exner H.E., “Physical and Chemical Nature of Cemented Carbides,” *International Metals Review*, 1979, v. 24, pp. 149-173.

Spriggs G.E., “The Importance of Atmosphere Control in Hard Metal Production,” *Powder Metallurgy*, 1970, v. 13, n. 26, pp. 369-393.

Conference Proceedings

Baek W.H., Hong M.H., Lee S., and Chung D.T., “A Study on the Shear Localization Behavior of Tungsten Heavy Alloy,” *Tungsten and Refractory Metals 2*, Bose A. and Dowding R.J. (eds.), Metal Powder Industries Federation, Princeton, NJ, USA, 1995, pp. 463-471.

Fischmeister H.F., “Development and Present Status of the Science and Technology of Hard Materials,” *Science of Hard Materials*, Viswanadham R.K., Rowcliffe D.J., and Gurland J. (eds.), Plenum Press, New York, NY, USA, 1982, pp. 1-45.

Books

German R.M., *Powder Injection Moulding*, Metal Powder Industries Federation, Princeton, NJ, USA, 1990. 521p.

Thesis

Johnson J.L., “Densification, Microstructural Evolution, and Thermal Properties of Liquid Phase Sintered Composites,” PhD Thesis, The Pennsylvania State University, University Park, PA, USA, 1994.

Technical Reports

Zukas E.G., Rogers P.S.Z., and Rogers R.S., “Experimental Evidence for Spheroid Growth Mechanisms in the Liquid Phase Sintered Tungsten Based Composites,” Informal Report: Los Alamos Scientific laboratory, USA, 1976, 35p.

Patents

Oenning V. and Clark I. S. R., U. S. Patent No. 4988386, 1991.

Journals in Non-English Language

Weihong L. and Xiuren T., “Tungsten Matrix in Cu-W Contact Materials by Impregnation Process,” *Powder Metallurgy Technology*, 1988, v. 6, n. 8, pp. 1-4. (in Chinese)

Online resources

Author Surname Author Initial, (Year Published). *Title*. [online] Available at: <http://Website URL> [Accessed Date Accessed].

Appendix or Appendices

Supplementary illustrative material, original data, and quotations too lengthy for inclusion in the text or which is not immediately essential to an understanding of the subject can be presented in Appendix or Appendices (as Appendix A , Appendix B, etc.)

Each appendix with its title should be listed separately in the table of contents. Likewise, tables and figures contained in the Appendices are to be included in the lists of tables and figures, respectively.

CONCLUDING REMARKS

This Thesis Guide lists only the basic requirements for preparing the thesis. Over and above the aforementioned points, a thesis should be reader-friendly in both its appearance and presentation. Several aspects of thesis preparation, particularly style of writing and presentation, have not been discussed in great detail. The student should follow appropriate ideas from standard literature of his/ her area of research, and adopt a uniform style and format throughout the thesis, such as in the structural divisions/subdivisions of the thesis, in the mode of citing references and footnotes in the text, in using dimensions, units and notations, and in preparing tables and figures, etc.

Sample Formats for Certificate, Abstract/Synopsis, and Title Page

Indian Institute of Engineering Science and Technology, Shibpur

ABSTRACT/SYNOPSIS

Name of Student.....Roll/Regn no.

Degree for which submittedDepartment.....

Thesis Title

.....

Name(s) of Thesis Supervisor(s)

1.

2.

Month and year of thesis submission.....

[Text of Synopsis/abstract begins here]

CERTIFICATE

It is certified that the work contained in the thesis titled “Title of the Thesis,” prepared by “Name of the Student,” has been carried out under my/our supervision in partial fulfillment of the requirements for the degree of Doctor of Philosophy and that to the best of my knowledge this work has not been submitted elsewhere for a degree.

Signature of Co-Supervisor

Name/Designation

Signature of Supervisor

Name/Designation

Month, Year

SAMPLE COVER PAGE FORMAT

(Title of the Thesis)

A Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of
Doctor of Philosophy

Name of the Scholar



INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

Month, Year