

## **ORDINANCE**

### **Doctor of Philosophy (Ph.D.)**

- (1). The higher degree in research field in the different specializations such as Engineering, Science, Management, Humanities, Social Sciences and Mathematics is referred as Ph.D. As per the guidelines, the duration of the doctorate degree in Engineering stream is 03 years (minimum) and 06 yrs (maximum) and for the other streams is 03 yrs (minimum) and 07 yrs (maximum) through full time as well as part time basis. The degree shall be designated as DOCTOR OF PHILOSOPHY (Ph.D.) in the respective branches/research area.
  - (a) The doctorate degree of Doctor of Philosophy (hereinafter called Ph.D.) shall include the branches as under:
    - i. Electronics & Communications Engineering (ECE)
    - ii. Computer Science & Engineering (CSE)
    - iii. Civil Engineering (CE)
    - iv. Mechanical Engineering (ME)
    - v. Information Technology (IT)
    - vi. Sciences i.e. Physics, Chemistry
    - vii. Mathematics
    - viii. Management/Humanities/Social Sciences.
    - ix. Specialization of any other department established by the University
  - (b) The studies and examination of the Ph. D. courses shall be on the basis of marks- cum-credit system and final evaluation shall be by grading system. Studies in each year shall be divided in two semesters viz. Odd Semester (July to Dec) and Even Semester (Jan to June).
- (2). Admission:
  - (a) Minimum qualification for admission to the first year Ph.D. shall be M.E./M.Tech. in an appropriate branch with at least 60% aggregate marks or

its equivalent CGPA from any recognized University/Institutions or any other qualification as recommended by UGC/AICTE for a particular course.

- (b) Minimum qualification for admission to the first year Ph.D. in Science/Mathematics/Humanities/Management Stream shall be Master's Degree/M.Phil. in appropriate specialization with at least 60% aggregate marks or its equivalent CGPA from any recognized University/Institutions or any other qualification as recommended by UGC/AICTE for a particular course.
  - (c) The Ph.D. Entrance Test will be conducted by the University; all applicants who qualify in the entrance will have to face the personal interview. Candidates are required to discuss their research interests and proposed research work at the time of the Interview.
  - (d) Applicants who have qualified GATE/SLET/UGC/CSIR (JRF) shall be given preference over those candidates who do not possess GATE/SLET/UGC/CSIR (JRF) on a full-time basis.
  - (e) All full-time & part-time candidates who have been sponsored for Ph.D. studies must have at least two years experience in the relevant field.
  - (f) Admission shall be done in the University based on merit.
  - (g) The admissions to Ph. D. course shall be generally governed by the rules of the UGC/AICTE or any other competent authority of the Govt. of India or the Govt. of Uttar Pradesh and shall be as notified in the admission notification of the respective academic year.
- (3). Ph.D. Thesis Supervisor(s), their Eligibility Criteria and Allocation
- (a) For every Ph.D. student, a Ph.D. Supervisor (hereinafter referred as Supervisor-I) will be decided considering available specializations of the faculty members and research interests of the student. Additional supervisor(s) (herein referred as Supervisor-II), if required may be appointed with the approval of the Vice-Chancellor.  
There will be a Doctoral Program Monitoring Committee (DPMC) for every Ph.D. Research Scholar. The DPMC will consist of the Dean of the faculty (Chairman), respective Supervisor(s), two Faculty members (including one from an allied discipline) to be nominated by the Vice-Chancellor.
  - (b) The Supervisor(s) shall himself/herself be a Ph.D. degree holder.
  - (c) At any given point of time, no Supervisor will have more than 8 Ph.D. students.
- (4). Course Work

- (a) Every student admitted to the Ph.D. Program will have to register for a minimum of
  - (i) 9 credits of course work to be recommended by the Supervisor(s), if the candidate possesses M.Tech. degree.
  - (ii) 18 credits of course work to be recommended by the Supervisor(s), if the candidate possesses Master's Degree in Sciences/Humanities/Social Sciences/Mathematics/Management.
- (b) The course work should be successfully completed within the first three semesters after registration.
- (c) The Research Scholar must obtain a minimum of 'B' Grade in every registered course/subject.
- (d) Obligatory courses/subjects are
  - (i) Research Methodologies including Quantitative Methods and Computer Applications - 3 Credits.
  - (ii) Review of published Research Work in the relevant field - 3 Credits (Literature Survey and Seminar).
  - (iii) (a) One Advanced Level Course/Subject for Scholars having M.Tech. Degree - 3 Credits.  
OR  
(b) Four Advanced Level Courses/Subjects for Scholars having Masters Degree in Sciences/Humanities/Social Sciences/Management/Mathematics - 12 Credits.
  - (iv) All Courses/Subjects should be relevant to the proposed Ph.D. work. They will be specified by the DPMC on the recommendations of the Supervisor(s).
- (5). Evaluation and Assessment Methods:
  - (a) Residential Requirement
    - (i) The registered Ph.D. students are required to work full time throughout the tenure of their Ph.D. Program.
    - (ii) However, in special cases of Sponsored students (from recognized Organizations) and Part Time students, the residential requirement may be relaxed to a minimum of one semester. It is desirable that the scholar spends one full year here for conveniently completing the course work and having greater interaction with the Supervisor(s).
    - (iii) After successful completion of the minimum residential requirement and satisfactory completion of the course work, the part time

candidates, or if sponsored by an Academic/Research Organization/Reputed Industry, may be permitted to return to the parent Organization and continue his/her Ph.D. work there provided the Organization has necessary facilities to carry out Ph.D. Research Work.

- (iv) Such candidates will have to be in constant touch with the Supervisor-I. It is desirable that they spend at least two weeks every semester in University and interact with the Supervisor-I.
  - (v) They have to report for every Semester Seminars and for all Performance Evaluation Requirements in order to renew their Registration.
  - (vi) The requirement of the Supervisor-II having Ph.D. degree from sponsoring organizations for such candidates may be relaxed, provided, the Supervisor-II has long R & D experience.
- (b) Process for submission of Thesis:
- (i) Completed the course work requirement successfully,
  - (ii) Completed the Research Work,
  - (iii) Published at least two papers in referred journals and
  - (iv) Prepared a draft Ph.D. thesis, he/she will be required to
    - (a) Submit a draft Synopsis of the Ph.D. work and
    - (b) Deliver a Synopsis Seminar, which will be open to all Faculty Members and Research Scholars.
  - (v) On the recommendations of the DPMC, the candidate will be required to submit the final Ph.D. Synopsis in the specified format with all suggested modifications included, within one week of the Ph.D. Synopsis Seminar.
  - (vi) The candidate will be required to submit his/her Ph.D. Thesis in the specified format and fulfilling other requirements within two months of the submission of the final Ph.D. Synopsis.
  - (vii) Two panels each consisting of five Experts having long experience and good standing in the relevant field of the Ph.D. work, will be proposed by the Supervisor to the Vice-Chancellor. The First Panel will have Experts from within India and the Second Panel will have Experts from outside India.

- (i) The Vice-Chancellor will finalize the Examiners, one from each Panel, to whom the Thesis will be sent for Evaluation after obtaining their consent.
- (ii) The approved Examiners will be approached, along with a copy of the Synopsis, to seek their consent.
- (iii) The Supervisor(s) is/are also required to submit an Evaluation Report on Thesis.
- (iv) The External Examiners are supposed to give their Evaluation Reports and Recommendations in a prescribed format within eight weeks of the receipt of the Thesis.
- (v) The External Indian Examiner will also be the Examiner for the Viva-Voce Examination (Open Defence). If the external Indian examiner is unable to conduct Viva-Voce, the Vice-Chancellor can select another expert from India to conduct the Viva-Voce.
- (vi) The Recommendations and the Evaluation Reports from all the Examiners including the Supervisor(s) will be placed before the Vice-Chancellor for further action.
- (vii) If the Vice-Chancellor finds the Recommendations and the Evaluation Reports from both the External examiners Satisfactory, the date of the final Viva-Voce Examination will be decided in consultation with the External Viva-Voce Examiner.
- (viii) In case, the Report(s) and Recommendations of one of the two External Examiners are not Favourable, the Thesis would be sent to another Examiner, from the respective Panel, to be decided by the Vice-Chancellor, for the evaluation.
- (ix) However, if the Report(s) and the Recommendations from two External Examiners are not Favourable, then the Thesis will be rejected and the Ph.D. degree will not be awarded.  
The candidate may, however, be allowed to Re-register to continue the Ph.D. work on the same topic and under the same Supervisor(s) for a minimum period of one year. A fresh Thesis has to be submitted by the candidate within two years. The normal process of the Evaluation will be followed afresh.
- (x) Once the Thesis is accepted, the candidate will be required to defend his/her Ph.D. work and the Thesis in an open Viva-Voce Examination. He/she has to answer satisfactorily the queries of the

Examiners at the time of the Viva-Voce Examination where the External Indian Thesis Examiner shall be present along with the DPMC members.

- (xi) On the successful completion of the final Ph.D. Viva-Voce Examination and evaluation process, the report shall be submitted to the Vice-Chancellor for approving the award of Ph.D. degree to the candidate. Further, the candidate will be required to submit the final version of the Thesis in the required format, incorporating all the suggestions of the Viva-Voce Board, both in Hard as well as Soft forms.
- (xii) After the approval of the Vice-Chancellor, the award of the Ph.D. degree would be announced and a Provisional Certificate would be issued to the candidate.
- (xiii) The final Degree will be awarded in the Convocation.

(6). Depository with UGC

Following the successful completion of the Evaluation Process and the announcement of the Award of the Ph.D. Degree, a soft copy of the Ph.D. Thesis will be sent to the UGC within a period of thirty days.

(7). Award of Credits & Grades

- (a) Each course, along with its weightage in terms of units and equivalent credits, shall be recommended by the Supervisor concerned and shall be approved by the Academic Council. Only approved courses can be offered during any semester.
- (b) A student shall be continuously evaluated for his/her academic performance in subject through Lecture, Tutorial work, Practical, Home assignment, mid-semester tests, field work, seminars, quizzes, end-semester examination etc. and regularity, as proposed by respective Board of Studies and approved by the Academic Council of the University.
- (c) The distribution of weightage/marks for each component shall be decided by the respective of Board of Studies and approved by the Academic Council of the University.
- (d) Each candidate, registered for a course, shall be awarded grade by the faculty/course coordinator(s) concerned with the specific theory course. The

grades awarded to a student shall depend upon his/her continuous evaluation through performance in various examinations, assignments, quizzes, laboratory work, class work, mid-semester tests etc. and regularity.

(8). Medium of Instruction and Examination

- (a) The medium of instruction and examination shall be English throughout the course of study.
- (b) The subjects to be studied in different semester of Ph.D. shall be as per the schemes, approved by the Board of Studies.

(9). General

Notwithstanding anything contained in these Ordinances and Regulations, all the Ph.D. Scholars will be governed by the rules and procedures framed by the University regarding this matter, and on matters of general discipline, and implemented from time to time.