

**REGULATIONS GOVERNING
THE DEGREE OF
DOCTOR OF PHILOSOPHY [Ph.D.]
2022**



GUJARAT TECHNOLOGICAL UNIVERSITY

Nr. Visat Three Road, Visat-Gandhinagar Road,
Chandkheda, Ahmedabad – 382424, Gujarat, India.

Phone: 079-23267583

E-mail: phd@gtu.edu.in

Website: www.gtu.ac.in/PhD.aspx



GUJARAT TECHNOLOGICAL UNIVERSITY

(Established by Government of Gujarat under Gujarat Act No. : 20 of 2007)

ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી

(ગુજરાત સરકારના ગુજરાત અધિનિયમ ક્રમાંક : ૨૦/૨૦૦૭ દ્વારા સ્થાપિત)

VICE-CHANCELLOR:

Prof. (Dr.) Navin Sheth

REGISTRAR:

Dr. K. N. Kher

CONTROLLER OF EXAMINATIONS (i/c):

Dr. V. Borisagar

This brochure-cum-prospectus is published for those who intend to apply for admission to Doctor of Philosophy (Ph.D.), at GTU

The contents are subject to change from time to time and the University may make such changes without notice. Individuals and institutions may write to us for seeking any additional information at phd@gtu.edu.in



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❖ "1st Rank in Gujarat State Institutional Ratings Framework (GSIRF) 2019" ❖ "National Leadership Excellence Award 2019 in Technical Education" ❖ "India's Most Trusted State University 2019 " ❖ "Outstanding University in West India 2019"

Head office : GTU Campus, Nr. Visat Three Road , Visat-Gandhinagar Road , Chandkheda, Ahmedabad - 382 424. Gujarat, India.

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IMPORTANT DATES

START DATE OF ONLINE
REGISTRATION PROCESS : Second Week of May

END DATE OF ONLINE
REGISTRATION PROCESS : Thirty first May

DATE OF ENTRANCE : Third Sunday of June

DATE OF ENTRANCE
RESULT : Second Week of July

DATE OF INTERVIEW
(FIRST ROUND) : First Week of August

DATE OF INTERVIEW
(SECOND ROUND) : First Week of October

DATE OF INTERVIEW
(SPECIAL ROUND-I) : Last Week of August

DATE OF INTERVIEW
(SPECIAL ROUND –II) : Second Week of October

ONLINE APPLICATION FEE:

GENERAL: INR 1500/-

SC/ST: INR 1250/-

Interested candidates can submit their online application through ONLINE APPLICATION FORM LINK available on the website for each Admission process.

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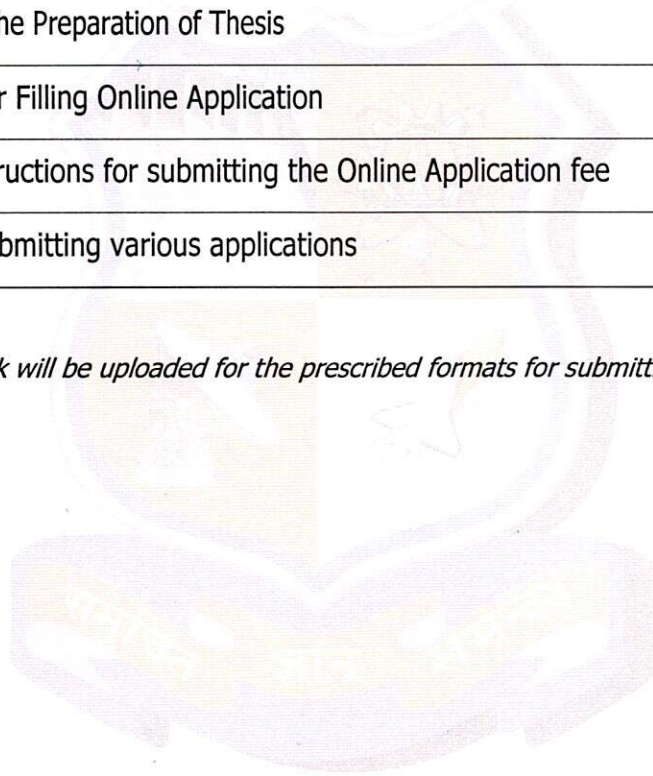
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Ph.D. Regulations, 2022

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Note: Separate link will be uploaded for the prescribed formats for submitting various applications



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Gujarat Technological University is a premier academic and research institution which has driven new ways of thinking since its founding in 2007 and was established by the Government of Gujarat vide Gujarat Act No. 20 of 2007. Today, GTU is an intellectual destination that draws inspired scholars to its campus, keeping GTU at the nexus of ideas that challenge and change the world. GTU is a State University with more than 400 affiliated colleges in its fold operating across the state of Gujarat through its FIVE zones at Ahmedabad, Gandhinagar, Vallabh Vidyanagar, Rajkot and Surat. The University has about 4,00,000 students enrolled in a large number of Diploma, Under Graduate, Post Graduate programs along with the robust Doctoral program.

Our education empowers individuals to challenge conventional thinking in pursuit of original ideas. With a commitment to free and open inquiry, our scholars work transform the way we understand the world, advancing – and creating – fields of study.

GTU's Vision, Mission statements and the *Objectives* it stands to fulfil are:

VISION:

To be a global university for the creation and dissemination of knowledge and innovation in Science & Technology, Humanities and Multidisciplinary domains for sustainable development and enrichment of human life.

MISSION:

1.	To develop centres of academic excellence at university premises and at affiliated colleges in domains of science, engineering, technology, management, and environment for imparting comprehensive education, training, and research infrastructure as per the nation's requirements.
2.	To build resources, facilities, proficiencies and other related infrastructure of global standard for the development of knowledge, skills, and competencies in the various educational domains.
3.	To develop research-oriented pedagogy for flourishing ideas and to nurture innovators, entrepreneurs and professionals of tomorrow
4.	To build and enhance collaborations with other academic, research, industry, and government organizations as well as NGOs across the globe so that education, training and research at university and its affiliated colleges become aligned with national and global level requirements
5.	To encourage multidisciplinary research and develop flexible learning ecosystem

CORE VALUES (Objectives):

1. Excellence with value-based education
2. Responsiveness to society
3. Integrity and transparency
4. Mutual Respect
5. Sustainable development

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Gujarat Technological University, is one of Gujarat's largest public university in terms of the number of the students enrolled in more than 400 affiliated colleges. The University offers a wide range of programmes ranging from diploma to doctoral studies in six different Faculties of study and also in interdisciplinary areas.

Presently GTU is situated in a temporary campus at Chandkheda, Ahmedabad however the University has been allocated 100 acre of land near Lekavada, Gandhinagar where the sprawling new permanent campus will be established in near future. GTU has been catering to a number of students and has initiated a number of innovative teaching, learning and certificate programmes over the years.

GTU has been a pioneer in setting up an ecosystem of Start-ups through its various councils and centres and has WIPO-Technology and Innovation Support Centre. The Atal-Incubation Centre has been established at GTU by NITI-Aayog for nurturing viable enterprises and start-up ventures in healthcare, medical devices, biotechnology and allied disciplines. GTU has recently started its own Multidisciplinary International Research Journal.



During the year 2021, GTU has been ranked 1st in Gujarat and 7th in India in Atal Ranking of Institutions on Innovation Achievements (ARIIA)-2021 amongst all Government Universities (Technical) in India. GTU's Graduate School of Management Studies has received the award under the category of Emerging

Institute from the global Eminence Award-2020, Pune and has also bagged the award for the Most Promising Future Ready University -2021 Award.



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GTU through its International Co-Supervisor programme provides a platform for international cooperation where experts across the leading universities in the world co-supervise our research scholars. GTU has active collaboration with many national and international institutes and has been recognized by various governmental and non-governmental agencies for its work in innovation and technology. At present, the Schools at various GTU campuses caters majorly to engineering, technology, pharmacy, management and applied sciences disciplines. GTU has signed MoUs with many leading universities and research institutions in the country for collaboration.



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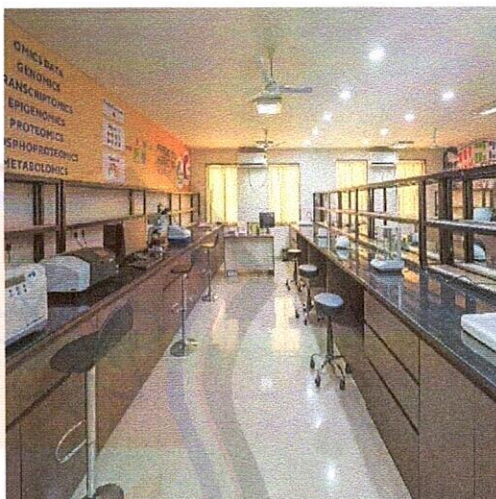
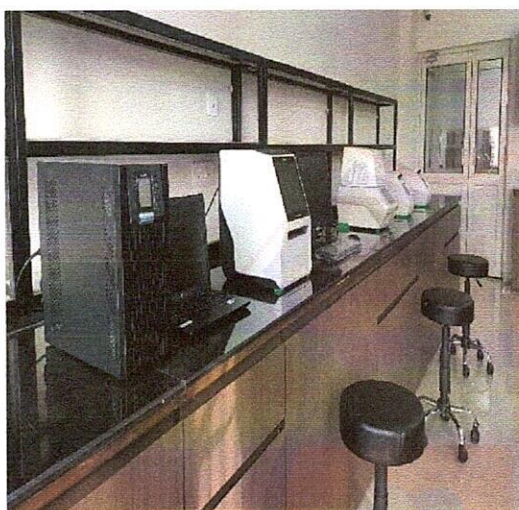
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A dedicated section has been established by the University to look after the affairs of research scholars from registration, constitution of Doctoral Research Committees (DRC), monitoring research scholars' progress and quality of publication and problems faced by scholars, question paper setting, arrangement to conduct of Ph.D. course work examinations, evaluation etc.. This section also take care of expediting the process of thesis evaluation, conduct of Viva-Voce Examination and award of provisional degree.



The University has good infrastructural facilities including adequate classrooms, air conditioned high-tech seminar halls for classroom teaching, examination centres, well-equipped research laboratories, and computer labs with internet facilities. Atal Incubation Centre at the University has been instrumental in nurturing various start-ups. The Central Instrumentation Laboratory has facilities for advanced research work. The e-Library provides access to many e-journals and e-resources. The BVM College is the only research centre approved by the University.

The University has 24 hours uninterrupted power supply. The University has invested substantially over the last few years to improve the classroom and laboratory infrastructure, procuring books, journals and online resources for teaching, learning and research. Some Schools/ Departments have associations, under the auspices of which students can interact with eminent academicians, researchers and scientists. Students actively participate in extension activities through NCC, NSS and various boards and councils.

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Chapter I: Regulations for Doctor of Philosophy

I. Preamble

These regulations governing the Degree of Doctor of Philosophy (Ph.D.) have been framed with a view to fulfil the provisions in UGC (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degrees) Regulations, 2016, University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D Degrees) (1st amendment) Regulations, 2018, University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D Degrees) (2nd amendment) Regulations, 2018 and University Grants Commission (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018. They also take into account the experience of the University in conducting the Ph.D. programme during the last nine years or so and aim at ensuring a high standard for the Ph.D. conferment by the University.

Ph.D. – 1 Short Title and Commencement

Ph.D. 1.1 These Regulations shall be called GTU Regulations Governing the degree of Doctor of Philosophy (Ph.D.) 2022

Ph.D. 1.2 These shall come to force from the date of their notification by the University and applicable for candidates seeking registration for Ph.D. programme in the Faculty of Engineering & Technology, Faculty of Pharmacy, Faculty of Architecture, Faculty of Management, Faculty of Computer Science, Faculty of Humanities & Sciences and in Interdisciplinary Subject Areas initially.

Ph.D. 1.3 All correspondence with the University regarding the Ph.D. programme, like Reports/ Presentation / Thesis shall be in English language only.

Ph.D. – 2 Definitions:

Ph.D. -2.1 In these Regulations unless the context requires otherwise or it is specifically so defined:

a.	"BoG" means Board of Governors
b.	"website" means the website of the University www.gtu.ac.in
c.	"UGC" means the University Grants Commission
d.	"TMMS" means Ph.D. Thesis Management & Monitoring System Portal of University
e.	"Coursework" means the courses prescribed as a part of the Ph.D. programme, which the candidate shall successfully complete as a pre-requisite.
f.	"FN/PIO" means Foreign National/Person of Indian Origin in abbreviated form.
g.	"Programme" means Doctoral Programme leading to the award of Ph.D. Degree
h.	"DRC" means Doctoral Research Committee

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i.	"DPC" means "Doctoral Progress Committee"; a Committee constituted by the University for each Ph.D. candidate/ Research Scholar to monitor the progress of his/her research work
j.	"Research Supervisor" means a faculty member of the University or Scientist working at a recognized research centre who has been recognized by the University to supervise the Ph.D. candidate/ Research Scholar
k.	"Co-supervisor" means the additional Research Supervisor who has been recognized by the University to Co-Supervise the Ph.D. candidate/ Research Scholar
l.	"Research Scholar" means any candidate admitted by the University either under Full-Time or Part-Time category for pursuing research for the award of Ph.D. Degree after completion of Coursework.
m.	"Research Centre" means a College/Institute and the like recognized by the University for the candidate/ Research Scholar to pursue Ph.D. programme in an approved discipline(s).
n.	"University" means Gujarat Technological University with its Head- quarters at Ahmedabad, Gujarat
o.	"Vice Chancellor" means the Vice Chancellor of the University
p.	"Viva-Voce Board" means a committee of experts appointed by the University to conduct the final Viva-Voce on the Thesis submitted
q.	"UGC-CARE List" means UGC-CARE Reference List of Quality Journals
r.	"RPP" means research proposal presentation which is mandatory to be attended by all candidates seeking admission to the Ph.D. programme, as per schedule.
s.	"TOEFL" means The Test of English as a foreign language administered by the Educational Testing Service in the US
t.	"IELTS" means The International English Language Testing Service administered by the British Council

Ph.D.-3 Committees:

Ph.D.-3.1 The University shall constitute the following Committees for Ph.D. Programme:

- Doctoral Research Committee (DRC)
- Research Committee (REC)
- Doctoral Progress Committee (DPC)
- Viva-Voce Board
- Such other Boards/Committees, as may be required

Ph.D.-3.1.1 Doctoral Research Committee (DRC) for every sub-discipline under each faculty to recommend / to take decision(s) as per the policy framed and the mechanism evolved by the Research Council as enshrined in GTU Regulations 2017- 6.5.1.2.

Constitution of Doctoral Research Committee (DRC)

DRC for each sub-discipline shall consist of nine members or if the DRC is to be constituted for a group of sub-disciplines, maximum number of members may be increased to 13-15. Each DRC shall be constituted by the Vice Chancellor. Chairperson of each DRC shall be appointed by the Vice Chancellor from amongst the members of

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the DRC. While nominating / selecting members for the DRC, due care shall be exercised to provide adequate representation of each sub-discipline -

- (i) Five experts from the following categories-
 - (a) Directors of Schools / Centres established by the University,
 - (b) Deans of Faculty
 - (c) Principles of Affiliated Institutes
 - (d) Professors / Associate Professors of the School / Centres established by the University
 - (e) Professors/ Associate Professors of affiliated institutes

Note: The appointed person shall be an expert of sub-discipline as evident from his/her qualifications and /or experience. The persons appointed shall be recognized Ph.D. Supervisors. In addition at least two/ three candidates must have completed Ph.D. under the guidance of the each appointed person.

- (ii) Two experts at a level not below the rank of Professor from Academic Institutions other than Schools established by GTU and institutions affiliated with GTU. The appointed experts shall have specialization of the sub- discipline. In addition, the appointed experts must be approved Ph.D. supervisors/guides from a UGC recognized University in the discipline.
- (iii) Two eminent persons from the Industries/Research Organizations with significant contribution in Research and/or Development.
- (iv) For Interdisciplinary research, the Vice-Chancellor may appoint committee members on a case to case basis.
- (v) The Vice-Chancellor may invite, at his discretion, any expert(s) to the meeting of RC and/or DRC to advise or to recommend the University on matters relating to Research and Development in the University.
- (vi) The Vice-Chancellor or a senior member nominated by the Vice-Chancellor shall be the Chairperson of the Research Committee and Senior Dean shall be convener.
- (vii) (i) The term of office of the members nominated by the Vice- Chancellor under sub-clauses (ii) and (iii) of clause (3) and sub-clauses (i) (ii) and (iii) of clause (4) shall be three years.
- (viii) A member nominated in his/her capacity as an official shall cease to be a member of the Committee from the date on which he ceases to be an officer.
- (ix) Any person nominated in a vacancy occurring before the expiry of the original term of three years shall, subject to other provisions, be a member of the committee only for the residuary period for which the person whose place he has filled would have been a member.

Meeting of Doctoral Research Committees

The DRC shall meet at least once in three months, or as often as it may be necessary.

- (i) The Chairperson of respective sub-discipline shall preside over the meeting of the DRC. In his absence, the Senior Member appointed by the Chairperson shall preside.
- (ii) Two weeks' notice shall ordinarily be given for each meeting. In special

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- circumstances, a meeting may be convened with shorter notice. Under orders of the Chairperson, the Senior Member appointed by the Vice Chancellor as a convener shall issue the notice informing the day, date, time and venue of the meeting.
- (iii) The convener shall prepare the agenda with the approval of Chairperson and also send the agenda to each member at least one week in advance of the meeting date. However, with shorter notice or no notice at all, the Chairperson may bring before the meeting any item considered by him as urgent, for discussion at any meeting of the Committee.
 - (iv) Any item for inclusion of the agenda suggested by a member may be included with the approval of the Chairperson.
 - (v) The minutes of the meeting shall be prepared by the convener with the approval of Chairperson within one week after the meeting and submit them to the Vice-Chancellor. The minutes as approved shall be communicated to all the members of the Committee.
 - (vi) The Convener shall, as early as possible, but not later than fifteen days from the date of approval of the minutes, initiate further action on resolutions passed at the meeting of the Committee.
 - (vii) The minutes shall be in the custody of the Chairperson and he/she shall preserve them till such time as the Board of Governors directs.

Duties and Functions of DRC

- (i) Admit and register candidates leading to research degree with the approval of the Vice Chancellor
- (ii) Obtain and maintain a database pertaining to admissions, registrations, reservation category, research supervision, research topic, payment of fees, etc;
 - a. Obtain and maintain database on pre-PhD examination, field work/lab work, publications, pre-submission seminars, submission, etc. related to the research students/scholars;
- (iii) Grant leave to Research Scholars, cancel M.Phil./ Ph.D. registrations, recommend modification of titles for Ph.D. / M.Phil. (ii) allow change of Supervisors and Doctoral Progress Committee Members (iii) early submission of Thesis / dissertation and (iv) extension of time for submission of thesis / dissertation, all in accordance with University rules;
- (iv) Recognize research supervisors/co-supervisor on the recommendations of the Research Committee constituted for the purpose, as per University rules,
- (v) Allocation of Supervisor/s to eligible candidates in order of merit;
- (vi) Appointment and Allocation of Co-Supervisor;
- (vii) Appointment and Allocation of Doctoral Progress Committee for each enrolled Research Scholar;
- (viii) Recommend examiners /subject experts for entrance examination, research proposal presentation, course work etc.,

Consider such other issues relating to research as may be referred to it by the Vice-Chancellor or any other Authority of the University.

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Ph.D. 3.1.2 Research Committee (REC):

Research Committee (REC) shall be constituted by the Vice- Chancellor

Constitution of Research Committees (REC)

REC shall comprise of the following members -

- (i) The Chairperson of respective discipline/sub discipline DRC
- (ii) Director of School / Centre established by the University
- (iii) Dean of Faculty
- (iv) The Vice-Chancellor may invite any expert(s) to the meeting of REC, at his discretion
- (v) The term of office of all the members nominated by the Vice- Chancellor above shall be three years.
- (vi) A member nominated in his/her capacity as an official shall cease to be a member of the Committee from the date on which he ceases to be an officer
- (vii) Any person nominated in a vacancy occurring before the expiry of the original term of three years shall, subject to other provisions, be a member of the committee only for the residuary period for which the person whose place he has filled would have been a member.

Duties and Functions of REC

REC shall recommend to the DRC-

- (i) Eligible candidates for recognition as Research Supervisors along with maximum seats that can be allocated to them in accordance with the University's rules.
- (ii) Eligible candidates for recognition as Co-supervisors in accordance with the University's rules.

Consider such other issues as may be referred to it by the Vice- Chancellor or any other Authority of the University.

Ph.D.-3.1.3 Doctoral Progress Committee (DPC):

There shall be a DPC for each candidate/ Research Scholar constituted by the Vice-Chancellor based on the recommendation of DRC/DRCs-

Constitution of DPC

- (i) Research Supervisor shall be the Member Convener of this Committee
- (ii) Two domain experts, other than the Supervisor, will act as DPC Members
- (iii) Co-Supervisor(s)(if any) shall be the Joint Member Convener
- (iv) The term of office of all the members will be co-terminated with the deposition of Ph.D. thesis by the Research Scholar
- (v) Any person nominated in a vacancy occurring before the expiry of the original term, subject to other provisions, be a member of the committee

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only for the residuary period for which the person whose place he has filled would have been a member.

Duties and Functions of DPC

- DPC shall register themselves on TMMS Portal immediately after its notification on the University's website.
- DPC shall guide the candidate to develop the study, design and methodology of research and design a Self-Study Course.
- DPC shall be responsible to review and examine the Research Scholar for the Self-Study Course [PHD22-03] of the Coursework and submit its report/result/marks in hard copy in the prescribed University's format.
- DPC shall be responsible to review the research proposal and finalize the topic of research before submitting Final Registration form to the University.
- DPC shall be responsible to review, assist and monitor the progress of the Ph.D. work of Research Scholar, either through e-medium or otherwise; till the submission of Ph.D. thesis by the Research Scholar.
- DPC shall submit all evaluation report/reviews in the prescribed format to the University

Consider such other issues relating to research as may be referred to it by the Vice-Chancellor or any other Authority of the University.

Ph.D.-3.1.4 Viva-Voce Board

The Viva-Voce Board shall be constituted by the Vice Chancellor for each Research Scholar soon after receipts of favourable reports from adjudicators.

Board of Examiners, constituted for adjudication of the thesis, shall constitute the Viva-Voce Board

Constitution of Viva-Voce Board

- Research Supervisor shall be the Convener
- Co-Supervisor(s), if any, shall be Co- Convener
- Identified Adjudicator 1 shall be the Member
- Identified Adjudicator 2 shall be the Member

In case of unavailability of (iii)/(iv) above the Vice Chancellor shall appoint additional Adjudicators.

Duties and Functions of Viva-Voce Board

- The board shall conduct the final Viva-Voce of the Research Scholar to defend the Ph.D. thesis and shall primarily be designed to test the understanding of the Research Scholar on the subject matter of the thesis and the competence in the general field of study.
- The board shall ask the Research Scholar to make a brief presentation and the Viva-Voce will end when all the questions raised by the board and audience are answered.

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- (iii) The board shall submit its detailed report in the prescribed format to the University
- (iv) The board shall conduct the Viva-Voce in the mode, at a place and time decided by the University

Consider such other issues relating to research of the Research Scholar as may be referred to it by the Vice- Chancellor

Ph.D. - 3.1.5 Other Boards and Committees

- (i) The Vice Chancellor may constitute other Boards/Committees in connection with other specific requirements in connection with the Ph.D. programme.
- (ii) The duties/responsibilities and other details of these Boards/Committees shall be notified by the University as and when they are constituted.

Ph.D.- 4 NATURE OF Ph.D. PROGRAMME

Ph.D.- 4.1 List of Faculties offering Ph.D. programme

The University shall permit the registration for Ph.D. programme in the following Faculties-

- a) Faculty of Architecture
- b) Faculty of Computer Science
- c) Faculty of Engineering & Technology
- d) Faculty of Humanities & Sciences
- e) Faculty of Management
- f) Faculty of Pharmacy

Ph.D.-4.2 Interdisciplinary Subject Areas

It shall also be possible for a candidate to pursue Ph.D. programme in a subject area of inter-disciplinary nature in the same faculty in which the candidate has obtained the Post Graduate degree or across two disciplines/faculty(ies).

Ph.D.-5 ELIGIBILITY FOR ADMISSION

Ph.D.-5.1 Eligibility Requirement

The eligibility requirements for candidates to get admitted to the Ph.D. programme shall include the following:

Ph.D.-5.1.1 Categories of Candidates and Other Requirements

There shall be provision for the following categories of candidates for admission to Ph.D. programme:

Full-Time:

- (i) Candidates possessing Post Graduate degree shall be eligible to pursue Ph.D. programme on a full time basis.

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- (ii) Candidates possessing Post Graduate degree shall be eligible to pursue Ph.D. programme at GTU School on a full time basis and shall be entitled to avail various benefits as mentioned at Annexure II.
- (iii) Employed candidates possessing a minimum professional experience of not less than two years after their Post Graduate Degree and are amongst the full time faculty members working in any Degree College / Diploma College / University / Deemed to be University (recognized / accredited by appropriate bodies in India) / Units of Government or research staff of public / private organizations / industry or are sponsored by the respective employer shall be eligible to pursue Ph.D. programme on a full time basis if they are fully relieved for the period of study.
- (iv) FN/PIO candidates shall possess a Degree considered equivalent to post graduate degree accredited by an Assessment or Accreditation Agency which is approved under a law in its home country. The candidates shall also have qualified either TOEFL in which scores of at least 580 overall and 4.0 in the Test of Written English are required. The computer based test requires scores of at least 240 overall and 4.0 in essay writing OR IELTS in which scores of 6 or more in each section and an overall score of 6.5 is required.

Part-Time:

- (i) Employed candidates possessing a Post Graduate Degree and are amongst the full time faculty members working in any Degree College / Diploma College / University / Deemed to be University (recognized / accredited by appropriate bodies in India) / Units of Government or research staff of public / private organizations / industry shall be eligible to pursue Ph.D. programme on a part time basis.

Ph.D.-5.1.2 Study leave/Employment/Clearances

- (i) Employed candidates, who take up Ph.D. Programme on full time basis, shall produce a "No Objection Certificate" from their respective employer/organization(s) stating that a study leave for a minimum period of three years has been sanctioned as per rules of the employer/organization(s).
- (ii) Employed candidates who take up Ph.D. programme on a part time basis, shall produce a No Objection Certificate issued by employer/ organization(s) that they shall be allowed to avail leave for attending the mandatory coursework and the required laboratory or experimental facility is available at the place of work of the candidate OR shall produce a No Objection Certificate issued by the lab-in charge/an appropriate authority stating that the experiments related to research of the candidate shall be allowed to be conducted at the lab/research facility.
- (iii) Unemployed candidates who take up Ph.D. programme on full time basis shall not be allowed to take up any employment during such period of Ph.D. work. However, they can apply for scholarship / fellowship / stipend/ assistantship, if any, with intimation to the University subject to recommendation of Research Supervisor.
- (iv) FN/PIO candidates shall hold valid passport/visa, clearance from MHRD and other documents as mandated by the Government of India throughout their studentship at the University.

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Ph.D.-5.2. Minimum Academic Qualifications to be satisfied

The minimum academic qualifications required for seeking admission to the Ph.D. Programme in respect of the different Faculties:-

Ph.D.-5.2.1 Faculty of Engineering & Technology

- (i) Candidate shall possess Post Graduate Degree in Engineering and/or Technology recognized by the University or any other recognized University/Institution with a minimum of 55% aggregate marks in Post Graduate Degree.

Ph.D.-5.2.2. Faculty of Pharmacy

- (i) Candidate shall possess Post Graduate Degree in Pharmacy recognized by the University or any other recognized University/Institution with a minimum of 55 % aggregate marks in Post Graduate Degree.

Ph.D.-5.2.3. Faculty of Architecture

- (i) Candidate shall possess Post Graduate Degree in Architecture recognized by the University or any other recognized University/Institution with a minimum of 55 % aggregate marks in Post Graduate Degree.

Ph.D.-5.2.4 Faculty of Management

- (i) Candidates shall possess Post Graduate Degree in Management or such other allied disciplines recognized by the University or any other recognized University/Institution, with a minimum of 55 % aggregate marks in Post Graduate Degree
- (ii) Candidates shall possess CA, CMA, and CS with a minimum of 55% aggregate marks and who are registered with Institute of Chartered Accountants of India or the Institute of Cost Accountants of India or the Institute of Company Secretaries of India.
- (iii) Candidates shall possess PGDM with a minimum of 55% marks in aggregate from an Institution whose Two-Year Full Time Postgraduate Diploma in Management (PGDM) has been equated with MBA Degree for purpose of admission to Higher Studies.

Ph.D. 5.2.5 Faculty of Computer Sciences

- (i) Candidates shall possess Post Graduate Degree in Computer Applications, recognized by the University or any other recognized University/Institution, with a minimum of 55 % aggregate marks in Post Graduate Degree.

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Ph.D. 5.2.6 Faculty of Humanities & Sciences

- (i) Candidates shall possess Post Graduate Degree in English from any other recognized University/ Institution with a minimum of 55 % aggregate marks in Post Graduate Degree.
- (ii) Candidates shall possess Post Graduate Degree in Physics/ Chemistry/ Mathematics, from any other recognized University/ Institution with a minimum CGPA of 55 % aggregate marks in Post Graduate Degree.

Ph.D. 5.3. Inter-Disciplinary Subject Areas

Candidate desirous of pursuing Ph.D. in subject areas of interdisciplinary nature shall fulfill the following eligibility requirements:

- (i) Candidate shall possess the Post Graduate Degree in any branch/subject/discipline recognized by the University or any other recognized University/Institution, with a minimum of 55% aggregate marks.
- (ii) Candidate shall qualify the entrance examination, as per University rules, in the branch/subject/ discipline in which the candidate has submitted the application form.
- (iii) Candidate shall remain present at RPP, as per University rules, in which the candidate has submitted the application form.
- (iv) In such cases, the Degree shall be awarded in the Faculty in which the candidate has registered for the Ph.D. programme.
- (v) Further, if required, Co-Supervisor(s) from appropriate discipline(s) may be assigned on the request of Research Supervisor.

Ph.D.-5.4 Others

- (i) The eligibility of candidate passing their qualifying examination from Universities following the letter grading system will be determined based on percentage equivalent to the letter grade obtained by the candidate according to the conversion formula adopted by the University concerned. In the absence of any such formula, the decision of the University shall be final and binding on the candidate.
- (ii) The eligibility of candidate passing their qualifying examination from a Foreign Educational Institution shall be determined by producing document/ certificate that the degree obtained by him/her is accredited by an Assessment or Accreditation Agency which is approved under a law in its home country.

Ph.D.-5.5 Relaxations

- (i) Candidates who have obtained Post Graduate Degree or a professional degree declared equivalent to the Post Graduate Degree, in accordance with

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GUJARAT TECHNOLOGICAL UNIVERSITY

(Established by Government of Gujarat under Gujarat Act No. : 20 of 2007)

ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી

(ગુજરાત સરકારના ગુજરાત અધિનિયમ ક્રમાંક : ૨૦/૨૦૦૭ દ્વારા સ્થાપિત)

Ph.D. Regulations, 2022

UGC specification of Degrees, with at least 55% marks in aggregate through the medium of MOOCs available on a SWAYAM platform provided they submit a certificate that the degree has been granted following UGC (Credit Framework for online learning courses through SWAYAM), Regulations, 2016.

- (ii) Candidates who have appeared or are appearing in the final year / semester for qualifying Post Graduate degree examination and whose result is still awaited can also apply. However, such candidates should complete all formalities, viz., written the theory examination, completed practical examination, submitted project reports, completed Viva-Voce examination etc. before May 31 of the respective year. Such candidates will be admitted provisionally and shall be considered eligible for admission only after they have obtained Post Graduate degree or equivalent with a minimum of 55 % aggregate marks in Post Graduate Degree.
- (iii) A relaxation of 5% of marks, from (55% to 50%), or an equivalent relaxation of grade, is allowed for those candidates who have obtained their Post Graduate Degree or a professional degree declared equivalent to the Post Graduate Degree before 19th September, 1991.
- (iv) A relaxation of 5% of marks, from (50% to 45%), or an equivalent relaxation of grade, is allowed for those candidates who have obtained their Post Graduate Degree or a professional degree declared equivalent to the Post Graduate Degree and belong to Schedule Caste (SC) / Schedule Tribe (ST) / Socially and Educationally Backward Classes (SEBC) non-creamy layer as notified by the Government of Gujarat.
- (v) A relaxation of 5% of marks, from (50% to 45%), or an equivalent relaxation of grade, is allowed for those candidates who have obtained their Post Graduate Degree or a professional degree declared equivalent to the Post Graduate Degree and are Differentially abled (not less than 40% disability).

Ph.D.-5.6 Exemption from Entrance Test

Candidates who have qualified any of the following exams shall be exempted from the entrance test:-

- (i) Candidates who have qualified in the NET / SLET or other similar tests conducted by such Government bodies as UGC, CSIR, ICAR / ICMR.
- (ii) Candidates having valid GATE / GPAT/ NATA/CAT.
- (iii) Candidates who apply through Ministries of Government of India/State or candidates under Cultural Exchange Scholarship Programme of Government of India.
- (iv) Candidates who are granted fellowship/scholarship from state/central government agencies for pursuing Ph.D.
- (v) Teacher Fellowship holder.
- (vi) Candidates having M.Phil. Degree from a UGC recognized University and whose admission was done through the Entrance Test.

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Ph.D. Regulations, 2022

Ph.D.-5.7 Reservation of Seats:

- The University shall adopt the reservation policy of State Government and the guidelines of the University Grants Commission.
- The University reserves the right to verify the caste certificate used for claim of a seat in reserved category at any point of time or at any stage including after award of degree. If the certificate is found to be false/fake/incorrect, the admission or degree will be cancelled.
- The seats reserved for SC/ST candidates shall be mutually interchangeable as per UGC norms but not transferable to the general pool.
- The seats reserved for Differentially-abled candidates shall be mutually interchangeable.

PhD.-6 ADMISSION NOTIFICATION

Ph.D.-6.1 Notification

- The University may call for applications for Admissions to the Ph.D. programme normally once in an academic year notifying on the website and through advertisement in at least two (2) newspapers, of which one (1) shall be in the regional language. The advertisement on the website will fulfill following criteria:
 - Eligibility requirements to be satisfied for getting admitted;
 - Number of seats to be filled in a branch/ discipline / subject area;
 - The procedure to be followed for Ph.D. admissions;
 - Entrance examination-dates, centre(s), Syllabi etc., and online application procedure;
 - Information on available scholarships, assistantships, if any.
- University's Ph.D. Entrance Examination shall be held only once in a year.
- Selected candidates shall be provisionally registered for pursuing Ph.D. programme with the approval of the Vice-Chancellor in two sessions every year.
- The University shall launch a special admission drive to fill vacant seats allocated for SC/ST/SEBC (Non Creamy layer) / Differentially-Abled categories after completion of the process of admission of each session, every year subject to availability of candidates.

Ph.D. 7 SUBMISSION OF APPLICATIONS AND THEIR PROCESSING

Ph.D.- 7.1 Applications from the eligible candidates shall be submitted as follows:

- All eligible candidates satisfying the requirements as mentioned in eligibility requirements shall submit their applications for Ph.D. admission in the prescribed online format and appear for entrance examination (unless exempted).

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- (ii) At the time of provisional registration to the University the candidate shall submit the hard copy of the pre-registration form along with all necessary enclosures as specified in the form.

Ph.D.-7.2 Functions/Responsibilities of the DRCs for Admission

The DRC/DRCs shall act as admission committee for the particular discipline/ sub discipline and shall perform all duties as enshrined in GTU Regulations 2017 and shall be responsible for:

- Scrutinizing the applications to determine candidate's eligibility, including those eligible for exemption from the entrance test;
- Conducting the entrance test based on the syllabus decided by the University
- Getting the answer scripts evaluated;
- Deciding the number of candidates to be called for RPP, if required
- Conducting RPP of eligible candidates.
- Preparation of the discipline/ Faculty and category-wise consolidated merit-list of candidates
- Recommending examiners for designing Multiple Choice Entrance test question papers for respective discipline(s) including research methodology.
- Recommending examiners for RPP

Ph.D.-7.3 Entrance Test Examination

- Entrance Test Examination shall be a Multiple Choice Entrance Test comprising of two papers of one hour each.
- Paper I shall be research methodology comprising of 35 questions of 1 mark each [syllabus as per Annexure-III]
- Paper II shall be subject specific comprising of 35 questions of 1 mark each [latest syllabus as mentioned below]
 - All Engineering branches – GATE syllabus [except quantitative/general aptitude and engineering mathematics]
 - Pharmacy – GPAT syllabus
 - Management – UGC NET Syllabus
 - Computer Science – UGC NET Syllabus
 - Humanities - English – UGC NET Syllabus
 - Science - Maths – GATE Syllabus
 - Science - Physics – GATE Syllabus
 - Science - Chemistry – GATE Syllabus
 - Architecture – GATE Syllabus
 - Biotechnology – GATE Syllabus
- Qualifying marks in Multiple Choice Entrance test shall be 50% for General/ EWS Category candidates
- Qualifying marks in Multiple Choice Entrance test shall be 45% for SC/ST/SEBC (Non-Creamy layers) / Differentially- abled category
- The weightage of marks obtained in Multiple Choice Entrance test shall be 70% (seventy percent) for the purpose of creating a discipline/ Faculty

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- and category-wise consolidated merit-list
- (vii) The list of qualified candidates shall be displayed on the website.
- (viii) The candidates stated at **Ph.D.-5.6** shall be exempted from appearing in the entrance test.

Ph.D.-7.4 Research Proposal Presentation (RPP)

RPP shall be organized for all candidates who have qualified entrance test or are exempted from appearing in the entrance test.

- Attending the RPP, as per the notified schedule, is mandatory.
- RPP will determine the candidate's aptitude for research before an Expert Committee.
- During the RPP, candidates shall also present in brief their proposed area of research
- RPP shall comprise of maximum marks 30 (thirty marks) having the following distribution-
 - 15 marks for candidate's competence for the proposed research.
 - 10 marks for research work can be suitably undertaken at the Institution/College
 - 5 marks for contribution of proposed research work for new/additional knowledge.

Ph.D.-7.5 Preparation of Consolidated Merit List

The DRC/DRCs shall prepare a consolidated merit list of all the candidates who have appeared for RPP in accordance with UGC, Regulations 2018 and shall be notified on the University's website-

Sl. No.	Category of candidate	Marks obtained in entrance test (having 70% weightage) Component 1 of merit list	Marks obtained in RPP/ (having 30% weightage) Component 2 of merit list	Discipline / Faculty and category wise Consolidated merit list
1	Candidates who have passed the entrance test	Marks obtained in the University's entrance test.	Marks obtained in the RPP	Total marks obtained [Component 1 + Component 2]
2	Candidates who have been exempted from appearing in the entrance test	Marks will be awarded by the DRC/ DRCs. The criteria for calculating marks will be as per Annexure- I	Marks obtained in the RPP	Total marks obtained [Component 1 + Component 2]
3	FN/PIO candidates exempted from appearing in the entrance test	Marks will be awarded by the DRC/ DRCs. The criteria for calculating marks will be as per Annexure- I	Marks obtained in the RPP	Total marks obtained [Component 1 + Component 2]

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- (i) Selection for admission to Ph.D. Programme shall be subject to availability of vacant seats in order of merit.
- (ii) Candidates belonging to General / EWS category shall have to score greater than (>) 50% marks in the consolidated merit list for being eligible for Ph.D. admission.
- (iii) Candidates belonging to SC / ST / SEBC / Differently-Abled Categories shall have to score greater than (>) 45% marks in the consolidated merit list for being eligible for Ph.D. admission
- (iv) The following shall be applied for determining merit for those candidates who have obtained equal marks in the Discipline / Faculty and category wise Consolidated merit list to break the tie-
 - A candidate who has more marks in the Post Graduate degree examination shall rank higher in order of merit.
 - If still a tie persists then the candidate who has obtained more marks in the Bachelor degree level examination, shall rank higher in order of merit.
 - If both the above cases will not be resolved, candidate senior in age shall rank higher in the order of merit.
- (v) The Discipline / Faculty and category wise consolidated merit list shall be considered for filling the existing vacancies and the respective special rounds (depending on the availability of such seats) and shall be rendered null and void after the completion of the admission process for an academic year.

Ph.D.-8

ADMISSION PROCEDURE

- (i) The DRC/DRCs shall submit the Discipline / Faculty and category wise Consolidated merit list to the University for facilitating the provisional registration of candidates as per their rank in the list.
- (ii) University shall communicate the same merit list on the website.
- (iii) Upon successful interaction with the proposed Research Supervisor, each candidate shall submit the prescribed pre-registration form to the University through the Research Supervisor and/or Research Centre for the purpose of provisional registration to the Ph.D. Programme. This shall be compulsory for all the candidates.
- (iv) For those selected candidate who are unable to get a consent from any Research Supervisor; the concerned DRC / DRCs shall decide allocation of Research Supervisor.
- (v) The DRC/DRCs shall have the authority to decide the allocation of Research Supervisor to the candidate, subject to availability of resources/ laboratories/ expertise etc., intake of candidates under a Research Supervisor, research interest of the Research Scholar. The DRC/DRCs may consider the choice indicated by the candidate in the pre-registration form, if found feasible.
- (vi) The DRC/DRCs shall finalize and register the provisional candidates along with the appointed Research Supervisor within one month of the declaration of merit list and the same shall be communicated on the University's website.
- (vii) The DRC/DRCs shall finalize and register provisional candidates in the same faculty in which candidate has appeared for RPP.
- (viii) Prescribed fees shall be paid by each candidate to the University for

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completing the provisional registration.

- (ix) At this stage each Research Supervisor shall recommend domain experts for the appointment as DPC members in the University's format within fifteen days of declaration of enrollment number.

Ph.D.8 (A) Ph.D. COURSEWORK

- (i) Vice Chancellor shall appoint the DPC for each provisionally registered Research Scholar on the recommendation of the DRC/DRCs
- (ii) After provisional registration, the candidate shall undergo following Coursework which shall be considered as first DPC.

Sl. No.	Subject Name & Code	Credit	Attendance	Activities	Month	Examination to be conducted by	Component / Distribution of marks
1	Research Methodology [PHD22-01]	4	75% attendance is mandatory to qualify for appearing in respective subject's examination	Classes (Online / Physical) will be conducted by the University	September - November or March - May	University in the month of January / June	70 marks (External Examination) Passing marks 38/70 30 marks (Assignment) Passing marks 16/30
2	Research and Publication Ethics [PHD22-02]	2	75% attendance is mandatory to qualify for appearing in respective subject's examination	Classes (Online / Physical) will be conducted by the University	September - November or March - May	University in the month of January / June	35 marks (External Examination) Passing marks 19/35 15 marks (Assignment) Passing marks 8/15
3	Self-Study Course/ Contact Program [PHD22-03]	4	75% attendance is mandatory to qualify for appearing in respective subject's examination and will be maintained by Research Supervisor	Assignments and Presentation (Online / Physical)	November - December or April - May	Research Supervisor & DPC members can mutually decide a date to conduct the Presentation and assignment in the month of January / June	70 marks (Presentation) Passing marks 38/70 30 marks for (Assignment) to be designed by Research Supervisor and evaluated by DPC Passing marks 16/30

- (iii) The DRCs shall recommend names of at least five subject experts for teaching courses on Research Methodology [PHD22-01] & Research and Publication Ethics [PHD22-02] to the Vice Chancellor.
- (iv) Vice Chancellor shall appoint at least four subject experts each for Research Methodology [PHD22-01] & Research and Publication Ethics [PHD22-02] subjects.
- (v) Depending on the availability of the subject expert the University shall

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- schedule the classes of Research Methodology [PHD22-01] & Research and Publication Ethics [PHD22-02] subjects which will be notified on the University's website.
- (vi) The prescribed Coursework should be completed within a span of maximum of two semesters / one year from the date of generation of enrolment number.
 - (vii) Research Scholars who have already completed course work of minimum of 8 credits during M.Phil. can be exempted from appearing in Research Methodology [PHD22-01] course upon furnishing a certificate, issued by the respective University, clearly specifying that the candidate has successfully cleared/passed Research Methodology course during/pursuing M.Phil. Degree and the awarded marks / grades obtained by the candidate is equivalent to 55% marks and the procedure adopted for awarding it was in accordance with the UGC Regulations, 2016.
 - (viii) University will arrange either online or physical class for coursework at one or more of its campuses / schools.
 - (ix) University shall have the freedom to revise and notify the courses in the coursework.
 - (x) The University shall have the provision to issue Grade Card to all the candidates upon completion of the coursework which can be downloaded from the website.

Ph.D.-8.2 Setting of Question Papers and Evaluation

- (i) [PHD22-01] & [PHD22-02] external examination component shall be conducted by the University.
- (ii) Question papers of these examinations shall be set by the identified examiner/(s) appointed by the Vice Chancellor for this purpose from the panel recommended by the DRC/DRCs.
- (iii) Question papers shall revise upon adoption of a new teaching scheme.
- (iv) Question papers shall be designed according to the prescribed syllabi.
- (v) The format of the Question paper can be brief / descriptive.
- (vi) The duration of the examination for [PHD22-01] shall be two hours.
- (vii) The duration of the examination for [PHD22-02] shall be one hour.
- (viii) Vice Chancellor shall appoint evaluators of the answer scripts which may/may not be the same as those who designed the respective question paper. Vice Chancellor can appoint any other expert from the panel of experts recommended by the DRC/DRCs for this purpose or otherwise.
- (ix) The prevailing University's Recheck / Re-assessment rules shall be applicable for recheck and reassessment of answer scripts.

Ph.D.-8 (B) NORMS FOR MAINTAINING PROVISIONAL REGISTRATION

After issue of photo identity card the following norms shall be applicable to all the candidates for maintaining their provisional registration:

- (i) The course work shall be completed and cleared by each candidate with minimum required marks in each course within two consecutive coursework examinations conducted by the University from the date of generation of enrolment number.
- (ii) In no case the time period for completing the coursework shall exceed four

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- (iii) semesters / two years from the date of generation of enrolment number. The provisional registration of candidates failing to fulfill the above requirements shall be automatically cancelled. Such candidates shall seek provisional registration for Ph.D. afresh.

Ph.D.-8 (C) CONFIRMATION OF Ph.D. REGISTRATION

- After successful completion of coursework the candidate shall be designated as Research Scholar and the Research Supervisor shall recommend submission of Final Registration to the University.
- The hard copy of the Final registration form complete in all aspects, along with all enclosures, shall be submitted to the University within thirty days of issue of coursework result which will be reviewed by DRC/DRCs.
- At this stage the Research Scholar shall be issued a Final Registration Certificate specifying the validity of Ph.D. registration and the allocated research topic.

Ph.D.-8 (D) CONVERSION OF Ph.D. ADMISSION CATEGORY FROM PART-TIME TO FULL-TIME AND VICE-VERSA

- Change of category from full-time to part-time is not permitted.
- Change of category from Part-time to Full-time shall be permitted only once in the entire duration of registration for those research scholars who have been issued Final Registration Certificate by the University.
- Application for change of category shall be submitted in the University's format at the beginning of a session and shall be recommended through respective DPC.
- Research Scholars shall submit the following for consideration of such application by DRC/DRCs-
 - No Objection Certificate from the place of work of Research Supervisor stating that the required research facility shall be made available to the research scholar.
 - No Objection Certificate/ Order/Letter from employer/organization(s) stating that the Research Scholar has been granted a study leave of minimum period of two years OR Research Scholar shall submit an undertaking to the effect that he/she shall not undertake any employment for a minimum period of two years except those mentioned at **Ph.D.-5.1.2.(iii)**

Ph.D.-8 (E) CHANGE OF PLACE OF RESEARCH / RESEARCH CENTRE:

- The Research Scholars shall have the possibility to shift from a place of research/ research Centre to another due to reasons like, change of research supervisor, requirement of new/additional equipment / instruments / apparatus and need for special facilities in the case of women candidates.
- In all such cases the DRC / DRCs shall recommend its decision to the Vice Chancellor. The decision of the Vice Chancellor shall be final and binding.

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GUJARAT TECHNOLOGICAL UNIVERSITY

(Established by Government of Gujarat under Gujarat Act No. : 20 of 2007)

ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી

(ગુજરાત સરકારના ગુજરાત અધિનિયમ ક્રમાંક : ૨૦/૨૦૦૭ દ્વારા સ્થાપિત)

Ph.D.-9 RECOGNITION / FUNCTIONING OF RESEARCH SUPERVISOR & CO-SUPERVISOR

Ph.D.-9.1 Procedure for Recognition & Continuation

- (i) University shall invite applications, from full time regular / endorsed faculty members, for being recognized as Research Supervisors, through its website.
- (ii) University shall invite applications, from full time regular Scientists working at recognized Research Centre, for being recognized as Research Supervisors, through its website.
- (iii) The faculty member/ Scientist shall apply in the prescribed online format and submit his/her application along with all necessary supporting documents to the University in hard copy too.
- (iv) REC shall scrutinize the applications subject to availability of such applications and shall recommend names of those who fulfill the prescribed criteria for being recognized as Research Supervisors to DRC/DRCs.
- (v) DRC/DRCs shall re-scrutinize all applications and shall recommend names of those who can be recognized as Research Supervisors to Vice Chancellor.
- (vi) DRC/DRCs shall readdress the grievances of not-selected candidates in the next phase only once.
- (vii) List of Approved candidates who have been recognized as Research Supervisors shall be notified on the website.
- (viii) Each Research Supervisor shall adhere to the University's Rules & Regulations.
- (ix) Upon recognition, a Research Supervisor shall become eligible to supervise the candidates/ Research Scholars of the University.
- (x) Research Supervisor shall be eligible to supervise candidates/Research Scholars according to the **Ph.D.-10**.
- (xi) Research Supervisor shall not be recognized by the DRC/DRCs if he /she has only three years of service left.
- (xii) Research Supervisor shall immediately inform the University about any change with respect to their place of work and designation.
- (xiii) Research Supervisor can also act as a Co-Supervisor upon the recommendation of the respective DPC and subsequent recommendation of DRC/DRCs to supplement the expertise on a research topic and approval of Vice Chancellor.
- (xiv) Research Supervisor shall recommend name of Co-Supervisor(s) (if required) and shall submit the due No objection certificate to this effect.
- (xv) Co-Supervisor shall be appointed by the University upon the recommendation of the respective Research Supervisor or DPC and subsequent recommendation of DRC/ DRCs to supplement the expertise on a research topic and approval of Vice Chancellor.
- (xvi) Co-Supervisor can be appointed from any other Department / Faculty / School / College which is under the control /jurisdiction of this University.
- (xvii) Co-Supervisor can be appointed from any other Institution/ University/ Department / Faculty / College/ Research Organization / Laboratory / Industry which is not under the control /jurisdiction of this University.

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Ph.D.-9.2 Eligibility for Recognition as Research Supervisors

- (i) A Faculty/Scientist who has obtained / was awarded Ph.D. degree and is working on a full time regular basis or is endorsed by the University or is working on a full time regular basis at a recognized research centre shall be eligible for recognition as a Research Supervisor, provided he/she obtains a minimum of 60 (sixty) points in total as per the below mentioned criteria:

Sr. No.	Eligibility Criteria	Points to be obtained	Maximum Points
1.	Research Publications in refereed journals* after having obtained Ph.D. degree		
(i)	Assistant Professor (At-least 2)	30 (compulsory)	30 (compulsory)
(ii)	Associate Professor (At-least 3)		
(iii)	Professor (At-least 5)		
2.	Total Teaching / Research / Industry Experience		
(i)	Post-Graduate	6 per year	20
(ii)	Post- Graduate/ Under-Graduate	5 per year	
(iii)	Under-Graduate	4 per year	
(iv)	Diploma	2 per year	
(v)	Research & Development	2 per year	
3.	Guidance as Supervisor/ Co-Supervisor		
(i)	Acted as a Supervisor (in any other UGC / State University) and has supervised Ph.D. Thesis for which the Degree / Notification has been awarded	5 per Thesis	10
(ii)	Acted as a Co- Supervisor and has supervised Ph.D. Thesis for which the Degree / Notification has been awarded	4 per Thesis	
(iii)	Acted as a Supervisor for Post Graduate Thesis for which the Degree has been awarded	3 per Thesis	
(iv)	Acted as a Co-Supervisor for Post Graduate Thesis for which the Degree has been awarded	2 per Thesis	
4.	Research Grant availed (minimum INR 1,00,000/-)		
(i)	As a Principle Investigator (PI)	5 per project	10
(ii)	As a Co- Principle Investigator	2.5 per project	
5.	Research Project completed (minimum INR 1,00,000/-)		
(i)	As a Principle Investigator (PI)	5 per project	10
(ii)	As a Co- Principle Investigator	2.5 per project	

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6.	Research and/or consultancy work completed (minimum INR 1,00,000/-)	2 per project	10
7.	Patents		
(i)	Registered	2 per patent	10
(ii)	Published	4 per patent	
(iii)	Granted	10 per patent	
8.	Additional research publications during the last five years in refereed* journal. These publications shall be over and above those mentioned Ph.D.9.2.(i).1	3 per paper	10

*Research journals indexed/listed in UGC-CARE List

- (ii) A Faculty/Scientist who has obtained / was awarded Ph.D. degree from a Foreign Educational Institution shall submit a certificate that the awarded Ph.D. degree is accredited by an Assessment or Accreditation Agency which is approved under a law in its home country.

Ph.D.-9.3 Eligibility for Recognition as a Co-Supervisor

- (i) A Faculty who has obtained/was awarded Ph.D. degree and is serving any other Department/Faculty/College which is under the control/ jurisdiction of this University.
- (ii) A Faculty/ An Expert who has obtained/was awarded Ph.D. degree and is serving any other Department/Faculty/College/Research Organization/Laboratory/Industry which is not under the control /jurisdiction of this University.
- (iii) An Expert from an Industry having a minimum ten years of industrial experience and is serving an Institution/Organization/Industry not under the control/jurisdiction of this University.

Ph.D.-9.4 Duties and Functions of a Research Supervisor and Co-Supervisor

- (i) Research Supervisor shall declare the number of vacant seats available with them in specific Faculty/discipline in which they are recognized.
- (ii) Research Supervisor shall recommend names and submit details of at least five domain experts fulfilling the following criteria(s) relevant to/with the research topic of a particular Research Scholar
- The recommended domain expert shall possess Ph.D. degree
 - The recommended domain expert shall possess at least two years of research experience in the area relevant to/with the research topic of the Research Scholar
- (iii) In the case of interdisciplinary subject area(s), a Research Scholar may have a Co-supervisor.
- (iv) Research Supervisor, who is a Member Convener of the DPC in consultation with Co-Supervisor (if appointed) and both appointed DPC

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- members shall send a request for conduction of DPC review on TMMS Portal through Supervisor Login and inform the Research Scholar through email.
- (v) Research Supervisor shall convene at the most two DPC reviews in a year having at least a minimum gap of 5 months between two such consecutive reviews. All such requests should be made on TMMS portal.
 - (vi) Research Supervisor shall convene the DPC review meeting either through any *e-medium or in-person* as per University's rule.
 - a) If the DPC review is conducted in-person then such a review should either take place at University's Affiliated College / Workplace of any of the DPC members / Workplace of Research Supervisor/ Co-Supervisor (if appointed) on the same date as intimated.
 - b) DPC Member will submit their inputs within 3 working days through email to the concerned Research Supervisor.
 - (vii) The Research Supervisor shall immediately inform the University if a scheduled DPC review could not take place due to any reason. The Research Supervisor shall reschedule the DPC review of a respective scholar by intimating the new date through e-mail. Upon approval by the University the same date shall be reflected on TMMS portal.
 - (viii) Research Supervisor shall inform the Research Scholar through e-mail to submit the progress report to all the members of the DPC before ten days of the scheduled DPC review. This progress report should contain the progress/achievements made during the period under review and plan(s) for the rest of the programme.
 - (ix) Research Supervisor and/or the Research Centre shall maintain attendance and leave records of all full-time research scholars allotted under his/her Supervision
 - (x) Research Supervisor shall inform the Research Scholar to attend the scheduled Annual Research Week reviews organized by the University.
 - (xi) Research Supervisor shall apprise the Research Scholar to clearly state sources from where the information is derived, to obtain animal and/ or human ethical approvals or any other approval(s) as may be required from any statutory body/ bodies for the progress of their research work
 - (xii) Research Supervisor shall be responsible to inform the Research Scholar about the extent to which the work of others can be made use of, self-plagiarism and the portion of the work the researcher claims as original.
 - (xiii) Research Supervisor shall inform the Research Scholar that not attending the scheduled DPC review(s) will extend the duration of the Ph.D. course.
 - (xiv) Research Supervisor shall inform the Research Scholar that consecutively not attending three scheduled DPC review(s) shall render the Research Scholar liable for cancellation of his/her registration.
 - (xv) Research Supervisor shall inform the Research Scholar that three consecutive unsatisfactory performance in scheduled DPC review(s) shall render the Research Scholar liable for cancellation of his/her registration.

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- (xvi) Research Supervisor shall recommend and certify all application(s) or any other document(s) or request pertaining to research or any other related Ph.D. programme activity before forwarding it to the University.
- (xvii) Research Supervisor shall be responsible for mentioning whether the progress is satisfactory / accepted & Research Scholar shall be allowed to continue or progress with his/her research in the next term/semester or unsatisfactory /not-accepted & Research Scholar shall be allowed to redo his/her research in the next term/semester.
- (xviii) Research Supervisor shall provide a copy of DPC review card to the Research Scholar as early as possible or within a maximum of five days from the conduct of such review.
- (xix) Research Supervisor shall not opt to become Co-Supervisor for more than two Research Scholars at any time
- (xx) Research Supervisor shall immediately inform the University and request for replacement, in the University's format, where any or both the appointed
- DPC member is/are declining to continue to review the progress of Research Scholar
 - DPC member has/have shifted or are stationed outside Gujarat, at a later stage.
 - DPC member is /are terminally ill and is/are unable to continue to review, assist and monitor the progress of Research Scholar.
 - DPC member against whom any sort of disciplinary / misconduct action(s) has been initiated by any agency

Such application for replacement of DPC members shall be processed by the DRC / DRCs and recommended for approval by the Vice Chancellor.

- (xxi) Research Supervisor shall immediately inform the University and request for replacement of a Co-Supervisor and submit due No Objection Certificate to this effect, as per University rules, for removal / change of Co-Supervisor for a Research Scholar citing valid reasons. Such application shall be processed by the DRC / DRCs and recommended for approval by the Vice Chancellor.

- (xxii) No Research Supervisor/Co-Supervisor shall supervise his/her close relation.

The term "Close Relation" includes father, mother, wife, husband, son, daughter, sister, brother, nephew, niece, grand-son, grand-daughter, grand-nephew, grand-niece, uncle, aunt, first cousin, son-in-law, daughter-in-law, brother-in-law, sister-in-law, father-in-law, mother-in-law of the Supervisor and also the nephew, niece, grand-nephew, grand-niece of Supervisor's wife.

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Ph.D.-10 INTAKE / SEAT ALLOCATION FOR RESEARCH SUPERVISORS AND CO-SUPERVISORS

- (i) Research Supervisor who is a Professor having at least five publications shall not undertake to offer supervision for a maximum of eight (8) Research Scholars including Part-time scholars.
- (ii) Research Supervisor who is an Associate Professor having at least three publications shall not undertake to offer supervision for a maximum of six (6) Research Scholars including Part-time scholars.
- (iii) Research Supervisor who is an Assistant Professor having at least two publications shall not undertake to offer supervision for a maximum of four (4) Research Scholars including Part-time scholars.
- (iv) Research Supervisor who is a Professor having at least three publications shall not undertake to offer supervision for a maximum of six (6) Research Scholars including Part-time scholars.
- (v) Research Supervisor who is a Professor having at least two publications shall not undertake to offer supervision for a maximum of four (4) Research Scholars including Part-time scholars.
- (vi) Research Supervisor who is an Associate Professor having at least two publications shall not undertake to offer supervision for a maximum of four (4) Research Scholars including Part-time scholars.
- (vii) Research Supervisor who is a Scientist working at recognized research centres shall be allocated seats by the respective DRC/DRCs depending upon their experience and expertise but not beyond five research scholars at any point in time.
- (viii) DRC/DRCs shall not permit a Research Supervisor to start supervising more than three research scholars in one semester and more than four research scholars in an academic year.
- (ix) In no case there can be more than two Research Supervisor(s) and two Co-Supervisors for a Research Scholar.
- (x) Research Supervisor who is also a recognized Research Supervisor with any other University shall not be permitted to supervise beyond the permitted intake as in **Ph.D.-10(i),(ii),(iii),(iv), (v) & (vi)** by the DRC/DRCs.
- (xi) In case of promotion of a Research Supervisor the intake / seat allocation will be revised accordingly upon submitting due documents, in the University's format, for scrutiny by the DRC/DRCs.
- (xii) Research Supervisor shall not declare any intake/vacant seats if he/she has less than three years of service left before the prescribed age of retirement from the College/ Centre/ School/ Department/ Institution/ Recognized Research Centre concerned at the time of declaration / start of the admission process for Ph.D. admission.
- (xiii) DRC/DRCs shall allocate Research Supervisors to the selected candidates.
- (xiv) Research Supervisor may decide on the number of seats that he/she may like to fill in a particular year within his/her permissible strength. However, the University reserves the right to allocate more/less number of candidates to a Research Supervisor upon the recommendation of DRC/DRCs and approval of the Vice Chancellor.
- (xv) Research Supervisor should not take into consideration those Research Scholars while declaring the number of vacant seats available with them for a

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- particular academic year who have been issued provisional certificate for award of Ph.D. degree.
- (xvi) A special provision of creating supernumerary Ph.D. seats available in the concerned faculty not exceeding 10(%) percent of the total seats in a particular discipline, if there is no vacant seat available with the eligible Research Supervisor, in that particular discipline for encouraging the faculty members of colleges and universities for getting Ph.D. degree, as laid down in the UGC Regulations for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of standards in Higher Education, 2018.
 - (xvii) Supernumerary Ph.D. seats can be created for already enrolled Research Scholars upon recommendation of the DRC/DRCs and approval of Vice Chancellor.
 - (xviii) Co-Supervisor who is also a recognized Research Supervisor of this University can co-supervise a maximum of two Research Scholars.
 - (xix) Co-Supervisor who is a recognized Research Supervisor of any other University can co-supervise a maximum of two Research Scholars.
 - (xx) Co-Supervisor who is not a recognized Research Supervisor can co-supervise a maximum of two Research Scholars.
 - (xxi) Co-Supervisor who is from an industry can co-supervise a maximum of four Research Scholars.

Ph.D.11 APPOINTMENT OF IN-CHARGE RESEARCH SUPERVISOR

Ph.D.11.1 Procedure to be followed where Research Supervisor is away for more than two months and up to six months.

- (i) An In-charge Research Supervisor shall be appointed by the Vice Chancellor on the recommendation of DRC/ DRCs based on the request and recommendation of the Research Supervisor of the Research Scholar.
- (ii) In-charge Research Supervisor shall fulfill all duties and responsibilities till the appointed Research Supervisor returns.
- (iii) In-charge Research Supervisor shall not be entitled for claiming any intellectual right on the research work of such Research Scholars and Research Supervisors.
- (iv) All such applications of appointment of In-charge Research Supervisor shall be submitted to the University, as per the format, at least one month in advance.

Ph.D. 11.2 Procedure to be followed where Research Supervisor resigns or shifts to another University/ College or an affiliated institution(s) becomes a Private University before submission of Final Registration by the candidate.

- (i) An alternate Research Supervisor shall be appointed by the Vice Chancellor upon the recommendation of the DRC/ DRCs.

Note 1: For those Research Scholar who wish to continue work on the same research topic, he/she shall submit the requisite form, in the University's format, specifying the appointment of an alternate Research Supervisor along with the letter of No Objection from appointed Research

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Supervisor clearly specifying that he/she does not have any objection if the Research Scholar continues to work on the same research topic and will not claim any rights/privileges, etc. on the research work done by the Research Scholar presently under the supervision of the alternate Research Supervisor, at a later stage.

Note 2: A No Objection letter from alternate Research Supervisor, should specify that he/she shall continue to supervise the Research Scholar on the present research topic and will ensure that proper recognition/acknowledgement etc. shall be imparted to the allotted Research Supervisor.

- Ph.D. 11.3** In case of death / disability / any other condition(s) which renders a Research Supervisor unfit for the conduct of his/her duties, an alternate Research Supervisor shall be appointed by the Vice Chancellor upon the recommendation of the DRC/DRCs and shall take care of all administrative and research responsibilities of the Candidate/ Research Scholar.

Note 3: For those Research Scholars where a change of research title is recommended by alternate Research Supervisor, the application for change of research title shall be processed first, if final registration form/ certificate has been submitted/issued, and then the alternate Research Supervisor can conduct a Self-Study course on the new research title, if required, and shall be treated as an additional Self-Study course. This additional self-study course shall be submitted to the University.

Note 4: If the Research Scholar has successfully cleared the coursework then the additional Self-Study course result shall not affect the coursework result of the Research Scholar.

Ph.D.-11.4 Handling of Conflict

In case of receipt of request letter stating conflict between the Research Supervisor and/or Co-Supervisor and/or In-charge Research Supervisor and the Research Scholar, from either or both the parties the matter shall be referred to the Vice Chancellor. The decision of the Vice Chancellor shall be final and binding in this regard.

Ph.D.-12 DE-RECOGNITION OF RESEARCH SUPERVISOR(S) / CO-SUPERVISOR(S)

Vice Chancellor shall de-recognize a recognized Research Supervisor on account of:-

- A Research Supervisor shall be de-recognized who seeks fresh registration of candidates under his/her supervision whose superannuation or term of leaving service is up to or less than three years.
- Communication in any form with the Thesis adjudicators by the Research Supervisor/Co-Supervisor after the submission of Synopsis/ Thesis by the Research Scholar in connection with the evaluation report shall lead to withdrawal of the Research Supervisorship for a period of three years and they shall be debarred from supervising the existing Research Scholars of the University till such period.
- Once recognized as Research Supervisor of this University, a Research Supervisor shall not seek/obtain Supervisorship from any other University. However, the recognized Research Supervisors can function as Co-Supervisor for scholars working in association with other reputed Universities/Institutions/ Research & Development laboratories which have Memorandum of Understanding with Gujarat Technological University.
- Any violation of Ph.D. regulations by the Research Supervisor/ Co-Supervisor shall lead to withdrawal of the Supervisorship either permanently or for a

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maximum period of three years and they shall be debarred from guiding the existing scholars in the University till such period.

Ph.D.-13 PERIODIC REVIEW BY THE DOCTORAL PROGRESS COMMITTEE

Ph.D.-13.1 Procedure for Review

Each Research Scholar who was declared successful in the Ph.D. Coursework examination shall submit a Final Registration form, in the University's format, recommended through the Research Supervisor. Only after the issue of Final Registration Certificate, the Research Scholar shall be allowed to progress in his/her research work.

- For each review the Research Scholar must submit a minimum 4 page or a maximum 10 page progress report to the Supervisor, Doctoral Progress Committee (DPC) members and Co-Supervisor (if appointed) before 10 days of the scheduled DPC review through email.
- Research Scholar shall appear before the DPC once in every six months and make a presentation of the progress of his/her work for evaluation and guidance.
- Research Scholar shall appear in Research Week reviews after issue of Final registration certificate, as and when organized by the University. Research Week reviews shall be treated as additional reviews.
- Research Supervisor shall submit all requests for conduct of DPC on the TMMS portal after obtaining consent of all other members of the DPC.
- Once the date of conduct of DPC is approved by the University on the TMMS portal the Research Supervisors shall conduct the DPC review.
- DPC shall review, assist and monitor the progress of the Ph.D. work of Research Scholar till the submission of the thesis.
- DPC review card shall be downloaded from the TMMS portal.
- Research Supervisor shall be responsible to submit all records of the DPC to the University within fifteen days from the day of convening such meetings.

Ph.D.13 (A) MAINTENANCE OF REGISTRATION

- All enrolled candidates shall deposit their due semester tuition fee between 1st - 20th January and between 1st to 20th July every year for continuation of their registration till the completion of pre-submission seminar or cancellation of registration as the case may be along with other fee(s) as notified.
- A tuition fee of INR 13000/- (Thirteen thousand only) per semester shall be paid by each enrolled Research Scholar belonging to General/ EWS category till the completion of pre-submission seminar or cancellation of registration as the case may be along with other fee(s) as notified including library fee.
- A tuition fee of INR 11000/- (Eleven thousand only) per semester shall be paid by each enrolled Research Scholar belonging to either SC/ST/SEBC categories till the completion of pre-submission seminar or cancellation of registration as the case may be along with other fee(s) as notified including library fee.
- Candidates residing outside the state of Gujarat, belonging to any category, shall have to pay a tuition fee of INR 41000/- (Forty one thousand only) per

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- semester till the submission of thesis or cancellation of registration as the case may be along with other fee(s) as notified including library fee.
- (v) Upon nonpayment of respective semester tuition fee a penalty shall be levied

Penalty to be paid from 21 st January to 19 th February	INR 1200/- (penalty) + respective semester fee
Penalty to be paid from 20 th February to 19 th April	INR 2400/- (penalty) + respective semester fee
Penalty to be paid from 20 th April to 19 th May	INR 6600 (penalty) + respective semester fee
Penalty to be paid from 20 th May to 30 th June	INR 6600 (penalty) + respective semester fee + INR 100 (penalty per day)
Penalty to be paid from 21 st July to 19 th August	INR 1200/- (penalty) + respective semester fee
Penalty to be paid from 20 th August to 19 th October	INR 2400/- (penalty) + respective semester fee
Penalty to be paid from 20 th September to 19 th November	INR 6600 (penalty) + respective semester fee
Penalty to be paid from 20 th November to 31 st December	INR 6600 (penalty) + respective semester fee + INR 100 (penalty per day)

- (vi) The paid respective semester tuition fee, after generation of enrollment number, shall neither be refunded nor adjusted in any case.
- (vii) The deposited caution money (INR 1000) can be refunded after the award of Ph.D. degree upon submitting due application.
- (viii) Research Scholar shall pay INR 8000/- (Eight Thousand only) as Thesis Evaluation fee at the time of submission of Synopsis.
- (ix) If an initial extension of one year in two slots of six months each is granted to the Research Scholar then the Research Scholar shall be liable to pay the applicable semester fee for each such extension.
- (x) If an additional extension of one year in two slots of six months each is granted to the Research Scholar then the Research Scholar shall be liable to pay double the applicable semester fee for each six months extension to a maximum period of one year.
- (xi) For re-submission of revised thesis on account of major modification the Research Scholar shall be liable to pay a processing fee of INR 1000/- per month till such re-submission, as per the extension granted. This processing fee shall be over and above the Thesis Evaluation fee and shall be paid to

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- the University at the time of re-submission of revised thesis after incorporating corrections/ revisions indicted by the Adjudicator(s).
- (xii) Women and Differently-Abled Research Scholars who have been allowed to avail relaxation shall be liable to pay the applicable semester fee.
 - (xiii) Women Research Scholars who have been allowed to proceed on Maternity/Child care leave shall be liable to pay the applicable semester fee.
 - (xiv) University reserves the right to revise the tuition fee or any other fee from time to time and/or before the start of next semester.

Ph.D.-13 (B) REFUND OF FEE UPON WITHDRAWAL OF CANDIDATURE FROM Ph.D. ADMISSION

If the candidate chooses to withdraw from the program at Pre-Registration the University shall follow the following four-tier system for refund of fees

Sr. No.	Percentage of Refund of Aggregate fees (excluding caution money and security deposit)	Point of time when notice/application of withdrawal of admission is served.
1.	100%	If the notice/application is served within the time period of on-going Pre-Registration. However, the University shall charge INR 1000/- (one thousand only) as processing fee.
2.	80%	15 days after the last date of submission of Pre-Registration Form.
3.	50%	More than 15 days but less than 30 days after the last date of submission of Pre-Registration Form.
4.	00%	More than 30 days after the last date of submission of Pre-Registration Form

Ph.D.-13 (C) MODIFICATION OF RESEARCH TITLE

If at a later stage, while progressing with the research work the Research Scholar and DPC concludes that the research title assigned in Final Registration Certificate cannot be pursued any further;

- (i) Research Scholar and DPC can submit a request for modification of the research title stating/justifying their request for such change, in the University's format.
- (ii) Such request for modification of research title shall be processed only once during the entire period of registration in the Ph.D. programme.
- (iii) Research Supervisor shall be responsible for conducting at least one DPC review with modified research title, if such a request has been accepted by the University before proceeding ahead with Pre-Submission Seminar.

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- (iv) The Vice Chancellor upon specific recommendation of the DRC/DRCs may allow for such modification.

Ph.D.-13 (D) MINIMUM PERIOD FOR SUBMISSION OF THESIS BY FULL – TIME RESEARCH SCHOLARS

- (i) Research Scholars enrolled for the Ph.D. degree shall normally be eligible for submission of the Thesis after a minimum period of three years upon completion of at least six successful DPC reviews including coursework from the date of generation of enrollment and attending two Research Week reviews, subject to fulfillment of all other prescribed requirements.
- (ii) DPC after considering the progress made by the Research Scholar may recommend to the Research Scholar to take steps to submit the Synopsis to the University first followed by the Thesis within the validity period.

Ph.D.-13(E) MINIMUM PERIOD FOR SUBMISSION OF THESIS BY PART – TIME RESEARCH SCHOLARS

- (i) Research Scholars enrolled for the Ph.D. degree shall normally be eligible for submission of the Thesis after a minimum period of four years and upon completion of at least eight successful DPC reviews including coursework from the date of generation of enrollment and attending three Research Week reviews, subject to fulfillment of all other prescribed requirements
- (ii) Research Scholars enrolled for the Ph.D. degree and having successfully completed M.Phil. degree shall normally be eligible for submission of the Thesis after a minimum period of three years and upon completion of at least six successful DPC reviews including coursework from the date of generation of enrollment and attending two Research Week reviews, subject to fulfillment of all other prescribed requirements
- (iii) DPC after considering the progress made by the Research Scholar may recommend to the Research Scholar to take steps to submit the Synopsis to the University first followed by the Thesis within the validity period.

Ph.D.-13 (F) CANCELLATION OF Ph.D. REGISTRATION

Ph.D. registration of the research scholar is liable to be cancelled for any of the following reasons:

- (i) Violation of discipline, conduct rules of the University/ Research Centre.
- (ii) Registration of those Research Scholar shall be automatically cancelled if he/she fails to submit the Synopsis of the Thesis within 06 years from the date of generation of enrollment if extension is not sought/granted.
- (iii) Non-conformity with the rules/regulations of the programme.
- (iv) Submitting false information in application/admission/registration form(s).
- (v) DPC shall be free to recommend the cancellation of Ph.D. registration of the Research Scholar if consistent lack of progress in research is observed on account of-
- a) Three consecutive DPC reviews are not adjudged to be satisfactory
- b) Three consecutive DPC reviews are not attended by the Research Scholar

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- c) Before recommending cancellation of registration, the DPC shall issue a show-cause notice to the Research Scholar, seeking his/her explanation.
- d) If the explanation is not agreed, the Research Scholar shall be free to appeal to the Vice Chancellor with valid reasons, seeking intervention.

The decision of the Vice Chancellor shall be final and binding.

Ph.D.-13 (G) REVOKING OF Ph.D. REGISTRATION

- (i) After the cancellation of registration, the research scholars can submit the thesis only after getting the cancellation revoked. He/she must initiate this process by submitting the draft thesis, along with a letter to the University furnishing justifiable reasons for the delay in thesis submission. The Research Supervisor should forward this letter and the draft thesis, along with a letter in support of the appeal to the Vice Chancellor. Under some circumstances the cancellation of the Ph.D. registration can be revoked if the reason is agreed upon by Vice Chancellor considering the circumstances even upon completion of the Maximum Period for Submission of Ph.D. Thesis

	Cancellation of Registration after	Time period for revocation by Vice Chancellor*	Time period for revocation by Vice Chancellor*
Research Scholars	6 years from the date of generation of enrolment number	6 years to 7 years from the date of generation of enrolment number up to a maximum of 1 year	7 years to 8 years from the date of generation of enrolment number in two slots of six months each
Women Research Scholars	8 years from the date of generation of enrolment number + 240 days of maternity leave (if availed)	9 years to 10 years from the date of generation of enrolment number up to a maximum of 1 year	10 years to 11 years from the date of generation of enrolment number in two slots of six months each
Differentially-abled Research Scholars	8 years from the date of generation of enrolment number	9 years to 10 years from the date of generation of enrolment number up to a maximum of 1 year	10 years to 11 years from the date of generation of enrolment number in two slots of six months each

*The DRC/DRCs shall recommend such extension(s) to the Vice Chancellor for permitting revocation of Ph.D. Registration.

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Ph.D.-14 PRE-SUBMISSION SEMINAR

Ph.D.14.1 Eligibility for Pre-submission Seminar

- Full time Research Scholars who have successfully completed a minimum of six (6) DPCs and attended at least two Research Week reviews.
- Part- time Research Scholars who have successfully completed a minimum of eight (8) DPCs and attended at least three Research Week reviews.
- Part- time Research Scholars (on account of MPhil) who have successfully completed a minimum of six (6) DPCs and attended at least two Research Week reviews.
- Research Scholars should have paid the semester fee up till the current ongoing Semester.

Ph.D.-14.2 Procedure for Pre-Submission Seminar

- Research Supervisor shall request the University at least one month in advance for proceeding ahead with the Pre-Submission Seminar of the Research Scholar, after satisfying all requirements.
- Pre-Submission Seminar request shall be submitted in the University's format and also on TMMS portal.
- Pre-Submission Seminar shall be notified on the University's website.
- Pre-Submission Seminar of the Research Scholar shall be conducted at a place designated by the University.
- The DPC shall remain present during the Pre-Submission Seminar.
- Pre-Submission Seminar shall be open for all faculty members, other Research Scholars, members of the academic fraternity and experts.
- Pre-Submission Seminar shall be arranged with the object of getting feedback(s) and comments/suggestions, for being suitably incorporated into the thesis, under the guidance of the DPC.
- If the Pre-Submission Seminar could not be conducted due to any reason, then the Research Supervisor should immediately inform the University by e-mail stating reasons for such cancellation.
- Research Supervisor shall follow the same procedure for rescheduling the Pre-Submission Seminar.

Ph.D.-14.3 Pre-Submission Seminar

- Research Scholar shall present his/ her work before the audience including DPC, demonstrating his/her preparedness to submit the Synopsis to the University along with the mandatory requirement of publication(s) Research Scholar shall be free to submit the Synopsis to the University if the Pre-Submission Seminar is satisfactory.
- However, if the performance of the Research Scholar in the Pre-Submission Seminar is not- satisfactory, the DPC shall point out deficiencies and shall ask the Research Scholar to repeat the Pre-Submission Seminar within three months.
- The procedure for reappearing for Pre-Submission Seminar shall be the same as **Ph.D.-14.2**
- Only on satisfactory performance at this stage, the DPC shall permit the Research Scholar to submit the Synopsis of the Thesis.

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Ph.D.-14.4 Permission for Submission of Synopsis & Thesis

The DPC shall be free to permit a Research Scholar whose performance was satisfactory in the Pre-Submission Seminar to submit the Synopsis & Thesis. DPC shall endorse all report as well as copies of all the publications made during the period when the Research Scholar was enrolled during Ph.D. programme of the University.

Ph.D.-15 PUBLICATION REQUIREMENT

Ph.D.15.1 Mandatory Publication Requirement

- Research Scholar shall publish a minimum of two research papers out of which at least one should be in a refereed journal indexed/listed in UGC Care List before submission of the Synopsis for adjudication and submit it on TMMS portal.
- Research Scholar shall make two paper presentation in conferences / seminars before the submission of the Synopsis for adjudication and submit it on TMMS portal.
- These publications should be based on Research Scholar's Ph.D. research work and shall produce evidence for the same in the form of acceptance letter from the publisher or copies of the publication at the time of submission of Synopsis.
- Research Scholars shall mention Gujarat Technological University as his/her affiliation or affiliating institute in all such publication(s) done by him/her under the period of registration in the Ph.D. programme of the University.

Ph.D.-16 SUBMISSION OF SYNOPSIS AND THESIS

The Ph.D. program culminates with the submission of a thesis of substantial original research work carried out by the Research Scholar under the guidance of the Research Supervisor. The thesis is expected to be potentially fit for publication and should stand peer reviewed.

Ph.D.-16.1 Eligibility for Submission of Synopsis and Thesis

- Upon successful completion of the Coursework and satisfactory research progress followed by mandatory publications, as prescribed in these regulations, and successful completion of Pre-Submission Seminar, the Research Scholar shall be considered ready for the submission of the Synopsis.
- DPC after considering the progress made by the Research Scholar may recommend the Research Scholar to take steps to submit to the University the Synopsis first followed by the Thesis.

Ph.D.-16.2 Submission of Synopsis

- Within a maximum of two months from the date of successful completion of Pre-Submission Seminar, the Research Scholar shall submit a soft copy of the Synopsis along with six hard copies to the University forwarded through the Research Supervisor in the prescribed University's format, printed on both sides.
- The submitted Synopsis shall be forwarded by the Research Supervisor.
- The Synopsis shall be uploaded on the University's website.
- Research Scholar shall also pay the prescribed Thesis Evaluation fee.

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- (v) If a patent or any other form of intellectual property is being filed from the Ph.D. research work undertaken by the Research Scholar. The Research Scholar shall be allowed to opt for evaluation of the Thesis only after a Non-Disclosure agreement has been signed by the external adjudicator to maintain confidentiality of proprietary information, in the prescribed University's format.

Ph.D.-16.3 Submission of Thesis

- (i) Within a maximum of six months from the date of submission of the Synopsis, the Research Scholar shall submit a soft copy of the thesis along with four hard copies to the University forwarded through the Research Supervisor in the prescribed University's format, printed on both sides.
- (ii) It shall be submitted to the University through the respective Research Supervisor in four hard copies and a soft copy together with –
 - a) Application for adjudication of the Thesis
 - b) Declaration from the Research Supervisor stating that the Research Scholar has fulfilled all requirements.
- (iii) Research Supervisor shall also certify that the thesis submitted is a record of original research work done by the Research Scholar during the period of study under his/her supervision and the submitted thesis shall not contain any material infringing upon the copyright of any individual/organization by submitting a certificate in the prescribed University's format.
- (iv) Research Supervisor shall also ensure that the thesis or any part of the thesis is not a reproduction, in part or whole, of Research Scholar's or Research Supervisor's own previously published work without adequate citation and proper acknowledgement and is not self-plagiarised in any form by submitting an Originality Report Certificate in the prescribed University's format.
- (v) It shall be ascertained by the Research Supervisor(s) that the information such as text, tables, equations, diagrams, figures, charts, graphs, photographs, taken from the various sources has been cited appropriately by the Research Scholar in the thesis.

Ph.D.-17 ANTI-PLAGIARISM CHECK AND SUBMISSION OF THE THESIS

- (i) The Research Scholar shall check his/her thesis with any reputed anti-plagiarism software.
- (ii) Similarities up to 10% shall be allowed.
- (iii) Common knowledge or coincidental terms, up to fourteen (14) consecutive words shall be allowed.
- (iv) Similarity checks shall exclude all quoted work with all necessary permission and/or attribution, all references, bibliography, table of contents, preface and acknowledgements and all generic terms, formula, laws, standard symbols and standard equation.
- (v) The submitted thesis shall be based on original ideas which shall include abstract, summary, hypothesis, observations, results, conclusions and recommendation(s).
- (vi) Research Scholar and Research Supervisor shall certify the University's certificate for Originality at the time of submitting the thesis.

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Ph.D.18 ADJUDICATION OF Ph.D. THESIS

Ph.D.18.1 Panel of Adjudicators

The period of six months between the submission of Synopsis and the Thesis by the Research Scholar shall be used by the University for deciding the panel of Adjudicators.

Ph.D.18.2 Selection of Adjudicators

- Research Supervisor shall forward to the University the proposed adjudicators containing details of seven experts for adjudication of the thesis. The list of proposed adjudicators shall be forwarded to the University along with the Synopsis.
- Research Supervisor shall ensure that out of the proposed seven experts, two should be from abroad and four should be from the country but not from Gujarat, preferably from institutions of national importance.
- Vice Chancellor shall choose two adjudicators from the suggested panel for adjudication of the thesis.
- Vice Chancellor may ask the Research Supervisor to re-submit the proposed panel of adjudicators and or may ask the concerned DRC/DRCs to submit the panel of adjudicators for adjudication of a thesis, if required, or may select adjudicators from outside the panel under special circumstances.
- Controller of Examination shall send invitation letters to the two chosen adjudicators along with a copy of the Synopsis.
- Their acceptance shall be preferably obtained within one month from the date of invitation before taking any further step.

Ph.D.18.3 Appointment of Adjudicators to Evaluate the Thesis

- The University shall arrange for the thesis to be evaluated by the Research Supervisor (and jointly by the Co-Supervisor, if any) and two more Adjudicators identified by Vice Chancellor **Ph.D.18.2 (iii) and (vi)**.
- The two adjudicators above shall be appointed by the Vice Chancellor to adjudicate the submitted thesis.

Ph.D. 18. 4 Dispatch of copies of Thesis to Adjudicators

- The University shall send a copy of the Thesis to identified Adjudicator appointed by the Vice Chancellor for evaluation, with a request to evaluate the thesis and send the evaluation report, as per the prescribed University's format within a period of two months.
- If the report is not received from the Adjudicator(s) within this period, a reminder thrice in a month to this effect shall be sent to the Adjudicator(s) concerned.
- If any of the adjudicator does not send the report even after three reminders or does not reply to the communication(s) from the University, the Vice Chancellor shall identify and appoint another Adjudicator either from the panel or upon recommendation of the concerned DRC/DRCs or outside the panel, if required.

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Ph.D. 18.5 Receipt of Thesis Reports at the University

- (i) All the adjudicators shall evaluate the thesis and send their reports as per the format (at least 250 words) independently to the Controller of Examination in the prescribed University's format.
- (ii) The Report shall also include the following:
 - a. A critical review of work carried out by the candidate as expressed in the thesis.
 - b. Suggestions, if any, for modification / further research or analysis required to be done.
 - c. A definite recommendation as to whether the thesis has attained the standard for the award of Ph.D. degree or not.
 - d. Points to be clarified at the public Viva-Voce
- (iii) The Adjudicators shall make any one of the following recommendations that the:
 - a. The thesis be accepted as submitted and recommended for public Viva-Voce. OR
 - b. The thesis be accepted with minor revisions, not requiring re-examination and is recommended for public Viva-Voce if the revisions are made under the guidance of Supervisor and DPC members OR
 - c. The Thesis needs major revision and re-submission and is not recommended for public viva voce at present. I would like to evaluate resubmitted thesis again.
 - d. Thesis be rejected.

Ph.D.18.6 Consideration of Thesis Reports

On receiving favorable recommendations from both the appointed adjudicators, the University shall convey the same to the Research Supervisor (s) along with copies of the Reports received and request to conduct the final Viva Voce of the Research Scholar.

Ph.D.18.7 Scheduling the final Viva Voce

- (i) The composition of the Viva-Voce Board shall be as specified under **Ph.D.-3.1.4.**
- (ii) In case, the identified adjudicator informs in writing his / her inability to be present at the Viva-Voce, the Controller of Examination shall get another Adjudicator(s) appointed from the panel of adjudicators or panel recommended by the DRC/DRCs or outside after approval of the Vice Chancellor.
- (iii) The date/time of the Viva-Voce shall be intimated by the Research Supervisor in consultation with other members of the board, the Research Centre (if any) and the University.
- (iv) The candidate shall provide clarification(s) to all the queries of the Adjudicators satisfactorily at the time of Viva-Voce.

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Ph.D.18.8 Major Modification and Resubmission of the Thesis for re-evaluation

- If any of the external adjudicator gives a definite recommendation that the thesis requires major modification and gives a report, the report shall be sent to the Research Supervisor under intimation to Research Scholar.
- Research Scholar shall be allowed to re-submit the revised thesis after endorsement by the DPC within a maximum period of three months from the date of sending such report after paying the due processing fee.
- An extension of another three months can be granted by the Vice Chancellor upon recommendation of the same by the DPC and the DRC/DRCs, under exceptional circumstances to resubmit the revised thesis after paying the due processing fee.
- The University shall send the re-submitted revised thesis to the same external adjudicator for his/her re-evaluation.

Ph.D.18.9 Adjudication of the Thesis

Sl. No.	Adjudicator 1	Adjudicator 2	Decision of the University
1	Thesis be accepted as submitted and recommended for public Viva-Voce	Thesis be accepted as submitted and recommended for public Viva-Voce	Accepted for conducting Viva-Voce
2	Thesis be accepted as submitted and recommended for public Viva-Voce	Minor revision not requiring re-examination, if the revisions are made	Accepted for conducting Viva-Voce
3	Thesis be accepted as submitted and recommended for public Viva-Voce	Major Modification and re-submission	Re-submission of thesis for evaluation again by Adjudicator 2. Viva Voce shall only be conducted after Adjudicator 2 gives a favorable recommendation for conduct of Viva-Voce.
4	Thesis be accepted as submitted and recommended for public Viva-Voce	Rejected	Appointment of Additional adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
5	Major Modification and re-submission	Thesis be accepted as submitted and recommended for public Viva-Voce	Re-submission of thesis for evaluation again by Adjudicator 1. Viva Voce shall only be conducted after Adjudicator 1

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			gives a favorable recommendation for conduct of Viva-Voce.
6	Major Modification and re-submission	Major Modification and re-submission	Re-submission of thesis for evaluation again to all Adjudicators. Viva Voce shall only be conducted after Adjudicator 1 & 2 gives favorable recommendation for conduct of Viva-Voce.
7	Major Modification and re-submission	Minor revision not requiring re-examination, if the revisions are made	Re-submission of thesis for evaluation again by Adjudicator 1. Viva Voce shall only be conducted after Adjudicator 1 gives a favorable recommendation for conduct of Viva-Voce.
8	Major Modification and re-submission	Rejected	Re-submission of thesis for evaluation again by Adjudicator 1. Appointment of Additional Adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
9	Minor revision not requiring re-examination, if the revisions are made	Thesis be accepted as submitted and recommended for public Viva-Voce	Accepted for conducting Viva-Voce
10	Minor revision not requiring re-examination, if the revisions are made	Major Modification and re-submission	Re-submission of thesis for evaluation again by Adjudicator 2 & Viva Voce shall be conducted only after Adjudicator 2 gives favorable recommendation for conduct of Viva-Voce.
11	Minor revision not requiring re-examination, if the revisions are made	Minor revision not requiring re-examination, if the revisions are made	Accepted for conducting Viva-Voce

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12	Minor revision not requiring re-examination, if the revisions are made	Rejected	Appointment of Additional adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
13	Rejected	Thesis be accepted as submitted and recommended for public Viva-Voce	Appointment of Additional adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
14	Rejected	Minor revision not requiring re-examination, if the revisions are made	Appointment of Additional adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
15	Rejected	Major Modification and re-submission	Re-submission of thesis for evaluation again by Adjudicator 2. Appointment for Additional Adjudicator. If the Additional Adjudicator rejects the thesis will be rejected
16	Rejected	Rejected	Thesis be rejected

Ph.D.18.10 Appointment of Additional Adjudicator, if necessary

- The Thesis shall not be accepted for award of the degree if any one of the adjudicators finds that the research work is not up to the expected standard, and gives a definite recommendation that the thesis be rejected with detailed reasons for the same.
- In such a case, the Report shall be considered by the Vice Chancellor to decide on the need to appoint an Additional Adjudicator.
- An Additional Adjudicator shall be appointed by the Vice Chancellor from the panel or upon recommendation of the concerned DRC/DRCs or outside the panel, based on this decision, who shall be invited for this purpose, by following **Ph.D.-18.2 to Ph.D.-18.4**
- If the Additional Adjudicator, after evaluating the thesis gives a favorable Report, the Controller of Examination shall initiate further steps as per

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Ph.D. 18.5

- (v) If the Additional Adjudicator also does not approve the thesis, then the thesis shall be rejected.
- (vi) However, it shall be open for the candidate to seek Ph.D. registration at the University, afresh from **Ph.D.-8A**

Ph.D.-19 CONDUCT OF FINAL VIVA – VOCE

Ph.D.19.1 Procedure for Final Viva-Voce

- (i) The final Viva-Voce shall be conducted by the Viva-Voce Board at a venue declared by the University
- (ii) The composition of Viva-Voce Board shall be as **Ph.D.-3.1.4**
- (iii) The procedure for conducting the Viva-Voce shall be as follows:
 - a. The Research Supervisor shall intimate the date and time for the Viva-Voce in consultation with the Adjudicators appointed by the Vice Chancellor, and inform the same to the University and Controller of Examination, in advance.
 - b. Controller of Examination shall notify the date, place, time of the Viva Voce and the same shall be displayed on the website along with the abstract of the thesis.
 - c. The Research Supervisor can invite members of the teaching staff and other Research Scholars to attend the Viva-Voce.
 - d. The Research Scholar shall make a brief presentation of the research work carried out highlighting the important findings/conclusions.
 - e. After the completion of the presentation, the Research Supervisor shall give opportunity to the invitees to seek clarifications, if any, from the Research Scholar.
 - f. After this, the Board only shall examine the Research Scholar to test the understanding of the subject matter of the thesis and also seek answers to the written queries by the Adjudicators in the Thesis Evaluation Reports, if any. The Research Scholar shall be required to produce all the documents, data and analysis in support of the research work presented in the Thesis.
 - g. On completing the Viva-Voce, the Board shall submit a report to the Controller of Examination indicating clearly whether the performance of the Research Scholar was satisfactory and if so, giving specific recommendation for the award of the Ph.D. degree.
 - h. In case, the performance of the Research Scholar is not satisfactory, the Board shall report accordingly, giving reasons for the same and recommending another Viva-Voce to be conducted after three months. The University shall arrange another Viva-Voce as required, with the composition of the Board unchanged.

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Ph.D.19.2 Consolidated Report

- (i) After successful completion of the Viva-Voce, the Viva-Voce Board shall prepare and forward the Consolidated Report, in the prescribed University's format along with duly corrected versions of the thesis in hard and the soft copies to the University.
- (ii) Then the Vice Chancellor shall issue a notification for the award of Ph.D. degree
- (iii) At this stage, there shall also be a certificate issued by the University and/or respective Research Centre that no arrears/dues is left on/by the Research Scholar.

Ph.D.19.3 Handling of Plagiarism issues

- (i) The Vice Chancellor shall refer the matter to the Departmental Academic Integrity Panel to investigate into plagiarism issues connected with the Ph.D. thesis submitted to the University, in the case of receipt of complaints either from the adjudicator(s), other individuals, academic community or any other source(s).
- (ii) The Departmental Academic Integrity Panel shall submit its findings within three months from the date of receipt of such report/complaint to the University's Institutional Academic Integrity Panel (IAIP) to further investigate into the issues of plagiarism.
- (iii) University's Institutional Academic Integrity Panel (IAIP) shall follow the University's Plagiarism policy and shall accordingly submit its report to the Vice Chancellor within forty five days of receiving such findings from the Departmental Academic Integrity Panel.
- (iv) The University can also take *suomotu* notice/cognizance of an act of plagiarism and initiate proceedings.

Ph.D.20 AWARD OF Ph.D. DEGREE

Ph.D.20.1 Degree Certificates

- (i) Upon the approval by the BoG, the University shall issue a Ph.D. degree certificate to the candidate certifying that the degree has been awarded in accordance with the "GTU Regulations - Governing the Degree of Doctor of Philosophy 2022".
- (ii) The University shall award the Ph.D. degree certificate to the candidate during the forthcoming Convocation.
- (iii) The University shall issue a provisional certificate certifying to the effect that the Research Scholar is found eligible for the award of PhD degree after successfully passing the Viva-Voce examination and obtaining approval of Vice Chancellor.
- (iv) The University shall hold the Non-exclusive license of all the Theses.

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Ph.D.21 DEPOSITORY WITH UGC AND THE UNIVERSITY

Ph.D.21.1 Submission to UGC and the University

- (i) Following the successful completion of the evaluation process and announcement of the award of the Ph.D degree, the University shall submit a final (corrected) soft copy of the Ph.D. thesis to the UGC for hosting the same on its Information and Library Network (abbreviated as INFLIBNET), accessible to all the Institutions / Universities.
- (ii) The University shall also maintain a repository/ digital repository of such Ph.D. theses in its Library and website.

Ph.D.22 PROHIBITIONS

Ph.D.22.1 Prohibition of Statutory Officers from registering to Ph.D. degree

The Statutory Officers of the University shall not be permitted to register for the Ph.D. degree of the University during the period of their tenure at the University.

Ph.D.22.2 Prohibition of Research Scholars from Registering for any other degree

No Research Scholar registered under the Ph.D. programme of the University shall be permitted to pursue any other degree programme within the University or at other Universities / Institutions, concurrently with his/her on-going registration as a candidate for the Ph.D. degree.

Ph.D.23 REPEAL AND SAVINGS

- (i) Notwithstanding anything contained in these Regulations, the provisions of any guidelines, orders, rules or regulations in force at the University shall be inapplicable to the extent of their inconsistency with these Regulations.
- (ii) The University shall issue such orders/instructions, and prescribe such format/procedure, as it may deem fit to implement the provisions of these Regulations.

Ph.D.24 INTERPRETATION

- (i) Any question as to the interpretation of these Regulations shall be decided by the Vice Chancellor, whose decision shall be final and binding.
- (ii) The University shall have the powers to issue clarifications to remove any doubt, difficulty or anomaly which may arise during the implementation of the provisions of these Regulations.

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Annexure I-

Sl. No.	Percentage of Marks obtained in Postgraduate Degree Examination	Indicative letter Grade (following will be adopted by DRC/DRCs if the conversion formula adopted by the concerned University is not submitted by the Candidate)	Indicative CPI (following will be adopted by DRC/DRCs if the conversion formula adopted by the concerned University is not submitted by the Candidate)	Criteria for calculating marks for candidates who have been exempted from appearing in the entrance test under – Marks obtained in entrance test (having 70% weightage) Component 1 of the merit list
1	45% to 49%	D	5 to 5.4	25
2	50% to 54%	D+	5.5 to 5.9	30
3	55% to 59%	C-	6 to 6.4	35
4	60% to 64%	C	6.5 to 6.9	40
5	65% to 69%	C+	7 to 7.4	45
6	70% to 74%	B-	7.5 to 7.9	50
7	75% to 79%	B	8 to 8.4	55
8	80% to 84%	B+	8.5 to 8.9	60
9	85% to 89%	A-	9 to 9.4	65
10	90% to 100%	A	9.5 and above	70

Annexure II

Benefits for those full-time research scholars enrolled at Schools/Constituent Colleges of the University

- (i) **Fellowship:**
 - a. All Full-Time Research Scholar shall be paid a consolidated fellowship amount of INR 25,000 per month. All fellowships are subject to Government of India Income Tax Rules and related deductions, as applicable.
- (ii) **Contingency Grant:**
 - a. Contingency grant of INR for INR 20,000/- per annum can be availed by each Full-Time Research Scholars and shall lapse if un-utilized, at the end of each financial year.
 - b. Contingency grants can be utilized for purchase of books, software, equipment, etc. with prior sanction of Research Supervisor and Head of Institution.
 - c. The books, software, equipment etc. purchased out of the contingency grant will become the property of the School/Constituent College of the University, after completion of the Ph.D. programme.
 - d. Contingency grants can be utilized for attending workshops / conferences /seminars etc. with prior approval and upon Special casual leaves (not more than 15 in an academic year), in University's format
- (iii) **Leaves:**
 - a. Full-Time Scholars shall be entitled to avail a maximum of 30 days leave every year in addition to special casual leaves, medical leaves and maternity/ paternity leave.
 - b. Any kind of leave shall be sanctioned by the Head of the Institution in the University's format.

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Annexure-III

SYLLABUS FOR RESEARCH METHODOLOGY PAPER – I

This part is common to all the candidates and will cover topics related to General information and its interface with society to test the candidate's awareness and aptitude for scientific and quantitative reasoning. Questions would be so designed to judge the reasoning, creativity, analytical ability and research aptitude of a candidate.

I. Research Aptitude

- Research : Meaning , characteristics and types;
- Steps of research;
- Methods of research;
- Research Ethics;
- Paper, article, workshop, seminar, conference and symposium;

II. Reasoning (Including Mathematical)

- Number series; letter series; codes;
- Relationships; classification.

III. Logical Reasoning

- Understanding the structure of arguments;
- Evaluating and distinguishing deductive and inductive reasoning;
- Verbal analogies: Word analogy-Applied analogy;
- Reasoning Logical Diagrams :Simple diagrammatic relationship, multi-diagrammatic relationship;
- Venn diagram; Analytical Reasoning.

IV. Data Interpretation

- Sources, acquisition and interpretation of data;
- Quantitative and qualitative data;
- Graphical representation and mapping of data

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Guidelines for preparation of Synopsis

- 1 The Research Scholar has to submit 6 copies of the synopsis of the proposed thesis along with a soft copy of the Synopsis & Publications in PDF on a CD to the Controller of Examination, Gujarat Technological University through the Supervisor
- 2 Certificate for Fees must be submitted along with the synopsis as per the format of the University
- 3 The synopsis shall not be longer than twelve to fifteen pages, one and a half line spaced, A-4 size pages in a font size of 12 pt. and font style of Times New Roman, excluding the copies of papers published and the list of references. The synopsis shall be in English and should include the following components:
 - a. Title of the thesis and abstract
 - b. Brief description on the state of the art of the research topic
 - c. Definition of the Problem
 - d. Objective and Scope of work
 - e. Original contribution by the thesis.
 - f. Methodology of Research, Results / Comparisons
 - g. Achievements with respect to objectives
 - h. Conclusion
 - i. Copies of papers published and a list of all publications arising from the thesis
 - j. Patents (if any)
 - k. References
- 4 If a patent is being filed, the Supervisor may select the following option for evaluation of the thesis in the Synopsis submission form
"The thesis be sent for evaluation after the Non-Disclosure Agreement has been signed by the examiner to maintain confidentiality of proprietary information".
- 5 The synopsis will not be accepted if it does not fulfil the above requirements
- 6 The synopsis shall be uploaded on the University's website.

Guidelines for Preparation of Thesis

Submission for Evaluation (Initial Submission) 6 (six) soft bound (spiral) copies of the *Thesis* have to be submitted within 6 months from the date of submission of the synopsis, the Research Scholar will submit a soft copy of the thesis in PDF on CD/DVD to the Controller of Examination, Gujarat Technological University through Supervisor or, in the case of Independent Research Scholar, through the Doctoral Progress Committee.

Submission for Record (Final Submission) If the *Thesis* is recommended for final submission, the research scholar will have to submit hard bound copies as per the following to the Controller of

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Examination, Gujarat Technological University through Supervisor or, in the case of Independent Research Scholar, through the Doctoral Progress Committee after incorporation of corrections recommended by the examiners.

Documents to be submitted at the time of Public Viva Voce Examination are as follows:

- Two CD/DVDs shall be submitted as follows:
 - 1) one CD/ DVD including Metadata Sheet & Splitted Thesis
(kindly refer to <http://shodhganga.inflibnet.ac.in:8080/jspui/> for the format)
 - 2) one CD/ DVD including Full Thesis & Synopsis
- Final Hard Bound copies as per below format
 - 1) University Library
 - 2) Copies to the Supervisor(s) / Co-supervisor(s).
 - 3) Copy to the Institute where the candidate has performed research work.
- PhD Viva Voce Report
- Undertaking for Final Submission of Thesis (as per format given in the Guidelines available on the website)

Presentation Sequence

Fly page (2 Blank Pages) Cover and Title Page Copy Right
 Declaration Page Certificate(s)
 Originality Report Certificate Non Exclusive License Certificate Thesis Approval Form
 Abstract
 Acknowledgement and / or Dedication Page (Optional) Table of Contents
 List of abbreviations (Optional)
 List of Symbols
 List of Figures List of Tables
 List of Appendices
 Thesis Body (Chapters) List of References Bibliography (Optional)
 List of Publications
 Fly Pages (2 Blank Pages)

Cover and Title Pages:

The general format of a sample title/cover page has been given at the end of this document.

In general, the cover/title page shall contain the following details:

- Full thesis title in (18 points) size font properly centered and positioned at the top portion.

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- Full name of the Research Scholar in 16 point font size properly centered at the middle of the page. In case of title page and cover page, this shall be followed by the name(s) of the supervisor(s) in a separate line. In case if there is an appointed Co-Supervisor/ Joint-Supervisor then his/her name may be published. It may be noted that only one name of either the Co-Supervisor/ Joint Supervisor can be published on the Cover & Title Page.
- A 30 mm diameter GTU emblem followed by the full name of the University and the year of submission, each in a separate line properly centered with 18 point font size and located at the bottom of the page shall be placed.
- The cover shall have printing on its side the name of the Research Scholar, thesis title and year of submission in this order. If required, short name, thesis title etc. and reduced font size may be used for this purpose.
- All lettering in the cover page shall be embossed in Golden colour.
- A monochrome (black text on white paper) print out is to be used for the title page.

On the back side of the title page the copy right statement should be placed at the center of the page.

Declaration: Signed declaration sheet is required to be included in the thesis.

Certificate(s): Signed certificates is required to be included in the thesis

Non Exclusive Certificate: As per the given format

Thesis Approval Form: As per the given format

Abstract: The abstract should be a concise description of the problem(s) addressed, method of solving, findings, and conclusions all in one place. As such, it shall highlight the important features of the thesis. It should be able to help the readers to quickly ascertain the purpose of the thesis. An abstract is a self-contained, short, and powerful statement that describes the entire work. It must be self-contained without any references.

Acknowledgement and / or Dedication (Optional): This part(s) of the thesis has no specific format. If the Research Scholar desires to acknowledge his / her thesis, he / she may include the same.

Table of Contents: This section of the thesis shall list all materials that follow it. It shall enlist titles of the chapters, sections, and subsections including reference and appendices (if any) using decimal

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notations (as in text), with corresponding page numbers against them flushed to the right.

List of abbreviations (Optional): If a large number of abbreviations are used in the thesis, which may be unfamiliar to a reader, a list of abbreviations may be useful.

List of Symbols, Figures & Tables, etc.: Symbols, Figures & Table etc. shall be listed separately. List of symbols typically shall contain two columns – symbol and brief description / definition. Similarly, the list of Figures / Tables shall also contain two columns – Figure / Table no. and its caption.

List of Appendices: Appendices may include the formulas, diagrams, protocols or any similar data that are not contained in the thesis body. The number can be given as A-1, A-2.... and listed as such in the list of Appendices.

List of References:

List of Publications:

Thesis Body: The thesis shall be organized in a number of chapters, starting with a general introduction leading to your work followed by literature review and ending with a general discussion and conclusion of your work. A thesis must be an integrated whole of the research work and each of the other chapter should be presented in a coherent and logical way. As such each of the other chapters shall have precise title reflecting content best. A chapter can be subdivided into sections, sub-sections, etc and so on as to present the content discretely with due emphasis. The content/body of the final hard bound/ soft bound (spiral) copies of the thesis can be printed on both the side of pages with Page size, Margins, Text Font, Text Size, and Line Spacing as mentioned in the Thesis Format Section of the Guideline.

Layout of Chapter:

Introduction: Title of the first chapter shall be the Introduction. It shall start with a brief history of the reported work. It shall justify the pros and cons of the present problems posed, and set the aim and scope of his/her work which shall mitigate the present problems. It may end up with highlights of the significant contributions of the present work.

Literature Review: Second chapter shall be on Review of the Literature. However, its title can vary from author to author without losing its true spirit. It shall present a review of the state of the

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work till date which naturally leads to the present topic of investigation. While there is no end to present such a review, the extent and emphasis should be limited to the extent which is relevant to the nature of investigation only.

Report on the Present Research: The work, conclusion and contributions from the research are presented in this portion of the thesis in a number of chapters. The exact structure in these chapters will depend on the nature of research (theoretical or experimental) carried out. However, the following general guidelines shall be followed:

- When reporting theoretical work that is not original, you will usually need to include sufficient material to allow the reader to understand the arguments used and their physical bases. But do not reproduce pages of text that the reader can find in a standard text book; only refer such works and concentrate on the physical arguments leading to your theory. Furthermore, do not include any theory that you are not going to relate to the work you have done.
- Clearly describe the experimental (if any) setup, procedure/technique adopted, methodologies developed and adopted.

Results and Discussions: Whether the work is experimental or theoretical, this is a vital part of the thesis. Depending upon the nature of investigations, a separate chapter (last but one) with title "Results and Discussions" may be presented for summarizing your results and highlighting their implications. Typically, a thesis on the findings on a single but broader aspect of a composite problem shall contain this chapter. For distributed findings, however, this can be presented as the subsections of the relevant chapters towards the end.

Conclusions, Major Contributions and Scope of Further Work: This will be the last chapter of the thesis. A brief summary of the entire work carried out shall form the first paragraph. Conclusions derived from the presented work and its results shall be clearly specified. Conclusion should relate only to your own work. Any generalized, known outcomes should not be mentioned.

Your thesis must highlight the practical implications of your work to the society, in the form of major contributions. Finally all possible future avenues to continue where you have stopped may be mentioned under future work.

Reference Citation: All cited literature must appear in the list of references and numbered sequentially as they are referred in the text of the thesis in standard format of referencing

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(Annexure- XVII). All particular works consulted but not specifically cited should be listed as Bibliography which shall appear after the References. Cited materials shall be listed chapter-wise and at the end of the concerned chapter. A citation repeated in more than one chapter shall be given same number.

Publications & Patents by the Candidate: Articles, Patents (filed / granted), technical notes, book chapters etc. published by the candidate from his/her research work may be separately listed with same format used for listing the references at the end of the thesis. Such publications shall, however, not be cited in the thesis.

Thesis Format:

Paper Specification

Quality: Thesis shall be printed on executive white bond papers only.

Paper Size and Margins

- The paper shall be standard A4 size.
- Top and bottom margins should be 25 mm, right margin should be 20 mm, and the left margin should be 35 mm for both textual and non-textual (figures, tables, etc.) pages. The header footer should be 10 mm each.
- Minimum space below a sub-section head (title) at the bottom of the page should have atleast 2 full lines; otherwise it should begin on the next page.

Text Font, Text Size, and Line Spacing

Font: Throughout the thesis, only the standard Times New Roman fonts shall be used.

Initial Submission: The general text of the manuscript shall be 1.5 lines spacing with a font size of 12 points. However, tables, quotations, footnotes, captions, and referencing materials shall be single spacing with 10 point text size.

Final Submission: The general text of the manuscript shall be in 1.5 line spacing with font size same as in the initial submission.

Pagination: Beginning with the first page of chapter 1 (Introduction) of the thesis, all pages shall be numbered consecutively using Arabic numerals in 12 point fonts. Page numbers of all the pages where a chapter begins shall appear at the center of the footer. Page numbers of all the pages,

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starting from the title page to the page before the chapter 1 starting page, shall be lower case Roman numerals (e.g. i, ii, iii etc.), placed at the center of footer. However, the page number on the title pages shall not be printed.

Header Format: The header shall contain the chapter title on the even numbered pages and section title on the odd numbered pages. The section title shall start from the following relevant page where it appeared first.

Paragraph Format: The paragraph of each section and subsection shall start without any indentation. A vertical space of around 12 points should be left between the section title line and the first paragraph of each section and subsections. All the paragraphs in the thesis shall be in single column format with full justification. A paragraph should normally comprise more than one line. A single line paragraph shall not be placed at the top or bottom of a page.

Chapter(s): A chapter always begins on a fresh page. The capitalized word "CHAPTER" with a font size of 20 should begin with an additional top margin of 30 mm (total 50 mm) followed by chapter no. with center aligned. Next, place the chapter heading with 20 font size and leaving around 18 points vertical spaces and center justified. Leave around 36 points vertical space after chapter heading. In the chapter heading, capitalize the first letter of all the words. Use boldface letters and numbers only.

Sections and Subsections: A chapter is usually needed to be divided into sections, subsections, etc. So as to present concepts with different aspects separately. As mentioned above, a vertical space of around 36 point should be left between the chapter heading and the title of the first section of every chapter. For all subsequent sections/subsections, leave a vertical space of around 24 points before the section/subsection headings. A vertical space of around 12 points should always be left between the first line and the title of every section/subsection. Sections and subsections shall be numbered chapter wise and consecutively. For example, say the first and second sections in chapter 5 shall be numbered as 5.1 and 5.2, respectively. Likewise, the third subsections of sections 1 and 2 in a chapter 4 shall be numbered as 4.1.3 and 4.2.3, respectively. Same style as in chapter heading but with font size of 14 and 12 for section and subsections, respectively, shall be followed for their titles, with a gap of around six characters between their numbers. Use boldface letters and numbers and the entire writable horizontal space to write their numbers and titles. Sub-subsection of a subsection should not be numbered. The title of such topic should all be boldface capitalized letter followed by a colon (:) the content of the same should start after the colon leaving a single character.

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Leave a space of around 12 points before a sub-subsection. Further division of topics is not recommended.

Tables, figures, and Equations:

- All tables and figures should be printed on the same papers used to print the text.
- As far as possible, tables and figures are presented in portrait style.
- All tables, figures, and equations must be numbered sequentially and chapter-wise using Arabic numerals. It must reflect the chapter number also, e.g. 2.1, 6.25 etc. Use boldface capital letters and numbers (separated by a single space) to number a figure and table, e.g., **FIGURE 2.1, TABLE 3.2**. While a caption (figure number) should be placed below the figure, a caption (table number) should be placed above the table. A figure/table should be separated from its number by 1.5 lines. Equations shall form a separate line, having 6 points paragraph separation above and below, with equation numbers within parenthesis and flushed to the right.
- When a figure or table is referred to in the body of the text, the first letter of the word needs to be capitalized with appropriate abbreviations as, for instance, Table 2.17 and Fig. 3.24.
- When an equation is referred to in the text and appears as the first word of the sentence, it needs to be capitalized without any abbreviation as, for instance, Equation (2.5). In all other cases of referring an equation, simply write the equation number in parenthesis as, for example, (2.5).
- All figures and tables shall be appropriately captioned using sentence style format and immediately below the corresponding numbers with an additional space of 6 points in between. If more than one line is needed for the caption they should be separated with single line spacing. A caption needs to be justified with the table/figure borders.
- Font sizes of legends, axis labels etc. of figures should be sufficiently large so that even after compression of the figure, they are legible enough (having same sizes as in the general text).
- Short (less than around half of the writable page area) figures and tables should be presented immediately following their first mention in the text and preferably on the upper portion (before the text) of the following page or bottom portion of the same page, but separated by single lines spacing from the text. If they are placed in between then they should be separated by single lines spacing from both above and below. On the other hand,

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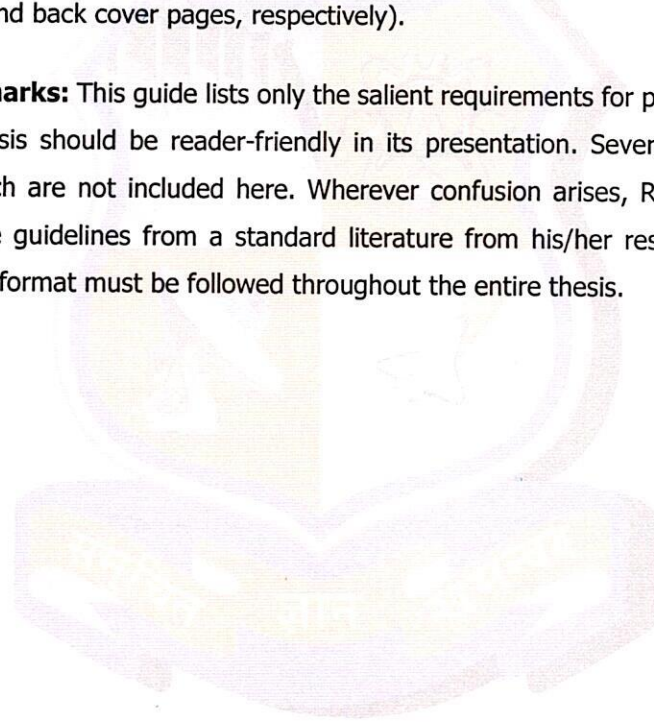
large figures and tables should be presented on page(s) following their first mention in the text.

- Images, Photographs, etc. must be scanned in resolution at least 600 dpi

Binding: The examination copies of the thesis may be soft (spiral) or paperback cover (soft cover) bound. A paperback cover means a thick laminated covers (front and back). However, the finally corrected and accepted copies of thesis need to be submitted in hard bound only with the black colour.

Two separate additional white sheets shall be put at the beginning and end of the thesis (after and before the front and back cover pages, respectively).

Concluding Remarks: This guide lists only the salient requirements for preparing the thesis. Over and above, a thesis should be reader-friendly in its presentation. Several aspects need a more elaborations, which are not included here. Wherever confusion arises, Research Scholars should follow appropriate guidelines from a standard literature from his/her research area. However, a uniform style and format must be followed throughout the entire thesis.



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Instructions for Filling Online Application

1. Candidates should submit only one application form with valid details. Do not submit dummy application details with same challan number, as it will be treated "multiple applications" and all such applications will be rejected.
2. The applicant must ensure their eligibility for Ph.D. admission 2022-23 in respect of qualifications and other requisite criteria and only then apply.
3. Online application form can be filled from University's website www.gtu.ac.in after ensuring eligibility and other requisite criteria as published in the Prospectus available on website by the candidate.
- 2) Deposit the requisite application fee of INR 1500/- for General/EWS Category and INR 1250/- for SC/ST/SEBC/Differently-Abled Category through SBI online payment link available in the application form.
- 3) Application fee is not refundable in any case.
- 4) Before applying Online, a candidate should ensure availability of following details: Date of Birth, Caste Certificate No. & Date of issuance (if applicable), Non-Creamy layer Certificate No. & Date of issuance (if applicable), Physical Disability Certificate No. & Date of issuance (if applicable), Marks obtained in various examinations from class X onwards, experience in years & months (if applicable), Reference no. on SBI challan generated through Online payment, scanned copy of the passport size photograph and signature less than 100 KB, etc.).
- 5) A candidate, who has applied informally and sent his / her bio-data / academic vitae to the University earlier, must apply again following the due procedures.
- 6) Further, application or CV / Bio-data send through e-mail etc. will not be considered under any circumstances.
- 7) After successfully submitting the application online, candidate will be assigned a system generated Application Number which should be noted for further reference.
- 8) The candidate should take a print out of the Application Form (on A4 size paper), which has to be duly signed. All self-attested requisite certificates and copy of Bank Challan receipt, etc. **must be produced at the time of Admission only.**
- 9) Application filled after last date will not be entertained and no further correspondence will be made in this regard.
- 10) University will not be responsible for any delay at any stage. No correspondence / queries will be entertained regarding delays, conduct and result of interview and reasons for not being called.
- 11) The University reserves the right not to admit any candidate in any discipline if none is found suitable / eligible by the Expert / Interview committee.
- 12) The University reserves the right to alter / insert any corrections / additions in the advertisement / website / prospectus etc. in the event of thing is observed.
- 13) The decision of the University in all matters will be final and binding. No correspondence / interim enquiry will be entertained from the candidates in connection with the process of selection / interview.
- 14) No accommodation / travel allowance etc. will be provided by the University to the Candidates.
- 15) Candidates are advised to refer the website for any updates etc.
- 16) Candidates seeking exemption from Entrance Exam should also submit their application online. Failing to submitting/applying online for Ph.D. admission, will not be considered for further process of admission and such requests would be summarily rejected.
- 17) Candidates should note that their candidature is strictly provisional.
- 18) Candidates should strictly adhere to the procedure of submitting Online Application form, failing which; it will lead to summary rejection of application.

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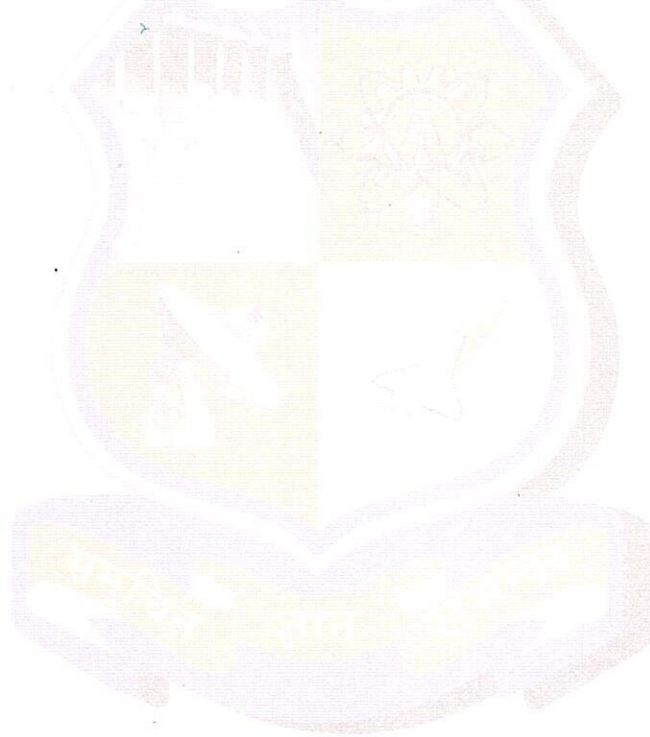
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- 19) Mode of payment of fee is through online SBI portal. Fee submitted through any other mode will not be accepted. Fee once paid will neither be adjusted for any subsequent examination nor refunded under any circumstances.
- 20) Application submitted in any other format will be summarily rejected and no correspondence, in this regard, will be entertained. Hence, the candidates are advised in their own interest to apply early enough to ensure timely submission of their applications on or before the closing date & time.
- 21) The applicant must ensure their eligibility for Ph.D. admission 2022-23 in respect of qualifications and other requisite criteria and only then apply.
- 22) Online application form can be filled from University website www.gtu.ac.in by the candidate after ensuring eligibility and other requisite criteria as published in the Detailed Notification available on website.
- 23) No correspondence will be entertained for any matter for which last date has expired.



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Ph.D. Regulations, 2022

Step-wise Instructions for submitting the Online Application fee

- 1) Click on pay fees Button to make payment (please check amount before make payment)

Gujarat Technological University

Home Register edit application print logout Welcome: test1@gmail.com [PH181]

4. Payment Details 1 2 3 4 5 6

Please fill your details and click on "Update" to save the details and "Next" to proceed.

Enter Payment Details

Fees Amount Rs. : 1500

Pay Fees Previous Next

Please mail to "phd_entrance@gtu.edu.in" regarding any online application form query/problem.

- 2) You will go to the following screen to make payment

Payment Details

Enrollment No/Application Id : xxxxxxxxxxxxxxxxxxxx

Name : xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Session/Year : xxxx

Amount : xxxxx

Payment For : xxxxxxxxxxxxxxxxxxxx

☐ The above details are correct.

Pay Now Cancel

Tick "The above shown details are correct" check box and click on "Pay Now" Button to go to the SBI Payment Screen as below

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GUJARAT TECHNOLOGICAL UNIVERSITY

(Established by Government of Gujarat under Gujarat Act No. : 20 of 2007)

ગુજરાત ટેકનોલોજીકલ યુનિવર્સિટી
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You will get the same details in your email (provided in application form) and SMS alert for you payment confirmation.

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