

Ph.D. & Post Doc. - Research Regulations

for Research in Engineering, Technology, Science, Arts and Humanity

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BHARATH UNIVERSITY

Bharath Institute of Higher Education and Research

(Declared as Deemed to be University u/s 3 of UGC Act 1956)

Directorate of Research

Faculty of Engineering & Technology, Science & Humanities 173, Agharam Road, Selaiyur, Chennai – 600 073. Ph. 044 – 22290742/0125

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ANNEXURES

A. Ph.D. Regulation for Research in Engineering, Technology, Science, Arts and Humanity

1. Preamble

In exercise of the powers conferred by the Memorandum of Association of Bharath University, Chennai, the Academic Council of Bharath University, Chennai hereby makes the following regulations in the name of "Doctor of Philosophy (Ph.D.) Regulations for Research in Engineering, Technology, Science, Arts and Humanity at Bharath University", which are subject to modifications from time to time as decided by the Academic Council of this University.

The Degree of Doctor of Philosophy (Ph.D.) is awarded to a candidate, who, as per these regulations, has submitted a thesis on the basis of original research work done by him / her in any particular discipline or more than one discipline(Inter-disciplinary), that makes a contribution to the advancement of knowledge in Engineering, Technology, Science, Arts or Humanity or to innovate methods of application of existing knowledge in Engineering, Technology, Science, Arts and Humanity so as to contribute to the betterment of the community and has had the thesis approved by suitably constituted examiners as required.

2. Eligibility

The Ph.D. degree shall be awarded by this University under any one of the recognized faculties of this University. A recognized qualifying Post Graduate Degree is essential with a minimum of 50% of marks in the qualifying examination . Candidates with B.E/B.Tech with research aptitude can also register for Ph.D Research degree programme under M.S. Linked Ph.D. Degree programme regulations.

3. Categories of Ph.D. Candidates

There shall be four categories of Ph.D. candidates.

3.1 Full Time Candidates:

All candidates who pursue full time research in this University shall belong to this category.

3.2 Part Time (Internal) Candidates:

All candidates employed in Bharath University who pursue part time research in this University shall belong to this category.

3.3 Part Time (External) Candidates:

All candidates working in Industrial units, Colleges, Government departments, Research organizations or other Institutions, sponsored for pursuing Ph.D. Programmes in this University while continuing to serve in their respective Institutions /organizations shall belong to this category. They shall pursue research in their place of employment and /or in this University. They have to pursue their course works in this University or in a University recognized by this University during the first two semesters. Further, every semester they should spend their time atleast for a week with the guide at this University.

3.4 Part Time Candidates (Independent Research)

A Senior Faculty Member who is working in any department of this University with not less than ten years of teaching experience of which five years shall be at the post graduate level and having a minimum of three research publications either as a principal author or as a co-author in any refereed journal, is eligible to register for the Ph.D. Degree without a guide as a "Part time Independent Research Candidate".

His/Her research will be monitered by a 'Research Advisory Committee', constituted by the Vice-Chancellor with three experts in the area of his/her research, two of whom being members of the faculty not below the rank of Associate Professor and one being an external expert working in the area of his/her research. This committee will conduct the Research Methodology Examination for him/her at the end of the first year and send the report to the Controller of Examinations as provided in these regulations. Out of the three members of the Research Advisory Committee, one shall be the Convener of the Committee as may be indicated by the candidate. At the end of the prescribed period of research, the Research Advisory Committee shall submit a panel of examiners for evaluation of Thesis and for conducting the public viva-voce examination for the independent research candidate concerned.

3.5 Research Outside the University

During the course of the Ph.D. Programme, for reasons approved by the Research Advisory Committee/Doctoral Committee, Research candidate may be permitted by the University to spend upto one year in an Institution or on a project approved for the purpose, outside the University for carrying out research in the areas related to the subject of investigation.

4. Duration of the Programme

The duration of the programme and the time for submission of thesis are counted from the date of provisional registration.

4.1 Full Time:

The minimum duration for all candidates belonging to Engineering and Technology/ Architecture, Science and Humanities/Management shall be three years and the maximum duration shall be Five years. However, minimum duration may be reduced by one year if the Ph.D. field can be considered as continuation of the M.Phil Degree.

4.2 Part Time (Internal/External):

For all the part time (Internal/External) candidates belonging to Engineering and Technology/ Architecture, Science and Humanities/Management, the minimum duration shall be four years and the maximum duration shall be six years. However, minimum duration may be reduced by one year if the Ph.D. field can be considered as continuation of the M.Phil Degree. Extension of maximum duration may be granted not exceeding 2 years after the completion of the maximum duration, for deserving candidates.

5. Admission Procedure

- (i) The number of available seats in the various specializations under different disciplines will be notified in the University website/ advertisement.
- (ii) The candidates desirous of pursuing the Ph.D. Degree shall submit their application in the prescribed form (Annexure A.1) through proper channel wherever applicable,

before 30th May/30th Nov. each year to the Director (Research). The necessary details are available in the Bharath University website.

- (iii) The applications received will be sent to the respective Faculty Directors who will forward the same to the Chairpersons of the Research Coordination Committee (RCC) of the departments. The RCC will consist of all the recognized guides in the department. If the Head of the department is a recognized guide, he/she will be the Chairperson. If not, he/she will nominate one of the recognized guides of the department as the Chairperson of RCC. The RCC shall screen the applications and conduct written and oral examinations. The RCC will select the candidates based on their performance in the written and oral examinations. The RCC will also fix the guide for each candidate taking in to account the preference of the guide and the candidate.
- (iv) The respective RCC will forward the list of selected candidates along with the applications of all the candidates to the Director(Research) through the Directors of the respective faculties.
- (v) The Director(Research) will seek the approval of the Vice-Chancellor for the provisional registration of the selected candidate.

6. Guides

- (i) All Ph.D. candidates are required to work under the guidance of a recognized guide from the University.
- (ii) The part time (external) candidates shall be required to have, in addition to a research Guide from the faculty of this University, a recognized Co-guide/Research coordinator from the institution/organization where he/she is employed, who is responsible to provide all necessary resources and help to complete the research work in a time bound manner. The institution should have been recognized as a research centre by the university.
- (iii) When a guide of a candidate happens to be away from the University, for more than 6 months, he/she may continue to guide the candidate, but a guide belonging to the same faculty of Bharath University shall be officially nominated as a co-guide by the RCC of the department after obtaining the necessary approval from the Vice-Chancellor.
- (iv) If the guide leaves the University he/she may be considered for continuing as a guide for his/her students depending upon the availability of the individual, subject to the approval of the Vice-Chancellor. Otherwise a new guide belonging to the same faculty of Bharath University, officially nominated by the Research Coordination Committee of the department, will be appointed as the guide after obtaining the necessary approval from the Vice-Chancellor.

7. Recognition of Guides

Recognition of Guide for guiding research work will be accorded by the Vice-Chancellor, based on the application submitted in the prescribed format (Annexure A.2) and on the recommendation of a subject expert identified by the Director of the concerned faculty.

Requirements of Qualification and Experience for Recognition to be a Guide:

- (i) A. Ph.D. Degree in the relevant or allied areas of research in which he/she proposes to guide the candidate.
- (ii) A minimum of two research papers in the relevant or allied areas of research, published in refereed journals with high impact factors within a period of three years preceding his/her date of application for recognition.
- (iii) A minimum of two years of research or teaching experience after acquiring Ph.D degree. However, exemptions my be considered by the Vice-Chancellor on merit.

8. Recognition of Research Centers

Various Regional and National Laboratories / Institutions / Organizations / Industrial Establishments are eligible to admit candidates for Ph.D. provided they possess official recognition from this University to be the Research Centers. Institutions desirous of getting recognition must apply to the University in the prescribed format (Annexure A.3) for securing recognition as Centers of Research. The University will get these institutions assessed through a committee before awarding the recognition wherever necessary.

9. Number of Candidates per Guide

A Guide shall guide not more than eight doctoral candidates at any time. However a guide may guide three more candidates as a Co-guide.

10. Doctoral Committee

The following members shall constitute the Doctoral Committee as approved by the Vice-Chancellor.

- (i) The Guide (Convener)
- (ii) Two experts selected by the Director of the respective faculty from a panel of Six experts recommended by the Guide from the academia/Industries/R&D organizations.
- (iii) The Co-guide, if any.
- (iv) In case of Part time external candidates, the Co-guide/Research coordinator from the organization where he/she is employed.
- (v) An expert in the allied areas of research if required.
- (vi) Chairperson of RCC

Note: The functions of the Doctoral Committee are given in Annexure – A.4.

11. Course Work

(a) For Engineering and Technology /Architecture:

The research scholars with PG Degree should successfully complete a minimum of four courses (minimum of 12 credits) prescribed by the Doctoral Committee out of which two will be core courses at the PG level. The other two courses may be special courses decided by the Doctoral Committee relating to the area of research and approved by the concerned Board of Studies. One of these courses shall be on Research Methodology. The course work shall be completed within a period of the first two semesters.

- (b) For Science, Arts and Humanities:
- (i) All candidates (Full Time or Part Time) shall complete three courses (minimum of 9 credits) prescribed by the Doctoral Committee.
- (ii) The courses are (1) Research methodology for the subject. (2) A course in the background area of research related to his/her Ph.D. work.
- (iii) An advanced course work in the area of research.
- (iv) In the case of candidates with M.Phil. degree, the course work on Research Methodology may be exempted.

Note:

The course works should be PG level courses offered for the PG students. The Ph.D. scholars should take the courses along with the PG students when offered by the concerned Faculty. If some courses proposed by the Doctoral Committee is not available in the PG curriculum, they can be taken as Directed studies. The directed study course is done under the guidance of the Supervisor. For Directed study courses, a minimum of 5 seminars and the 3 tests should be conducted with the award of marks as given below:

5 Semina	rs:	15 Marks
3 Tests	:	15 Marks
Total	:	30 Marks

The syllabus for the seminars and tests of the directed study course should be assigned in such a way that the entire syllabus is covered. The schedule for the course may be prepared by the Supervisor who teaches the course in the format given below and may be submitted to the Controller of Examination well in advance.

:

:

:

Course Code & Title	
Name of the Faculty Member	
Department	

S.No.	Component	Syllabus	Date
1	Seminar 1	Unit-1	
2	Seminar 2	Unit-2	
3	Seminar 3	Unit-3	
4	Seminar 4	Unit-4	
5	Seminar 5	Unit-5	

6	Test – 1	Covering Units 1 & 2	
7	Test – 2	Covering Units 3 & 4	
8	Test – 3	Covering all the units	

12. Comprehensive Examination

- (i) A research scholar shall take a comprehensive examination after passing all the course works and after the completion of two semesters of his/her research programme but before the completion of four semesters. The comprehensive examination is mandatory.
- (ii) The comprehensive examination shall be in the form of written and/or oral as recommended by the Doctoral Committee.
- (iii) Comprehensive examination shall be conducted by a panel of examiners which consists of the members of the Doctoral Committee along with one external examiner as recommended by the Doctoral Committee and approved by the Vice-Chancellor. The recommendation of the DC will be submitted in the format as in **Annexure A.6**.
- (iv) The Guide shall intimate the research scholar sufficiently in advance, the scope of the examination and other relevant details.
- (v) If the performance of the research scholar in the comprehensive examination is satisfactory as reported in Annexure A.6, his/her provisional registration shall be confirmed. If the performance is unsatisfactory, he/she shall be given one more opportunity to appear for the examination within six months of the first examination. In case, the research scholar fails to successfully complete the comprehensive examination within the prescribed time limit, his/her provisional registration shall be cancelled by the University.

13. Semester Enrolment

All Research scholars whose registration for research degree is in force, are required to enroll in-person with the guide each semester on the stipulated date, till their submission of thesis. The enrolment form (Annexure A.7.) shall be forwarded to the Director (Research) through the Director of the respective faculty.

14. Monitoring the Progress of Candidates

(i) The research scholar shall appear before the Doctoral Committee once in six months for progress evaluation. He/She is required to make a presentation of the progress of his/her work before the Doctoral Committee for evaluation and for further guidance. The six monthly progress report shall be submitted by the Guide with the approval of the Doctoral Committee to the Controller of Examinations with a copy to the candidate. (Annexure A.5). It shall be accompanied by an attendance certificate from the guide and co-guide, if any. Failure to submit two consecutive six monthly progress reports will entail cancellation of registration of the candidate by the Vice-Chancellor on a report made by the guide and /or the Controller of Examination in this behalf.

- (ii) Log Book/Progress Report:
 - Every registered candidate shall maintain a log book supplied by this University.
 - The log book has to be supervised and signed by the Guide / Co-guide. The log book should be available at the time of Comprehensive Examination and at all other times as demanded by the Guide or the members of the Doctoral Advisory Committee.
 - The log book shall be maintained till the completion of the research work.
 - Xerox copies of the log book signed by the Guide should be submitted along with the thesis at the time of final submission of the thesis.

15. Cancellation of Registration

- (i) The registration of a research scholar whose progress is not satisfactory or who has not enrolled in person for any one semester is liable to be cancelled by the University.
- (ii) The registration of a research scholar who has not submitted his/her thesis by the end of the prescribed /extended period as provided in the Regulations will be cancelled by the University.

16. Submission of the Synopsis of Thesis

- (i) On satisfactory conclusion of the research work, the research scholar shall submit to the Doctoral Committee through the Guide, six copies of the synopsis of the Ph.D. work carried out, and prepared in accordance with the prescribed format and specifications (Annexure A.8) and present the same before the Doctoral Committee.
- (ii) Prior to submission of the thesis, the student shall make a pre-Ph.D presentation in the Department that may be open to all faculty members and research students, for getting feedback and comments, which may be suitably incorporated into the draft thesis under the advice of the supervisor.
- (iii) Ph.D candidates shall publish atleast two research papers in a refereed Journal with high impact factor before the submission of the synopsis of this thesis for adjudication and produce evidence for the same in the form of acceptance letter or reprint.
- (iv) The synopsis of the thesis should include in brief, an introduction, aim, objectives, material of methods, observations, internals, summary and conclusion etc., with a minimum of 20 pages and not excluding 40 pages as detailed in **Annexure A.8**.
- (v) After the approval of the research work reported in the synopsis by the Doctoral Committee, the Guide shall forward 6 copies of the synopsis of the proposed thesis along with a soft copy in PDF format on CD to the Controller of Examinations along with a panel of at least six names (three from India - out side the state of Tamilnadu and three from abroad) as examiners for adjudication of the Ph.D thesis and a panel of three Indian examiners for the viva-voce examination.

17. Submission of Thesis

The research scholar shall, within six months of submission of the synopsis, prepare the thesis in accordance with the format and specification prescribed (Annexure A.9). The thesis shall report, in an organized and scholarly fashion, giving an account of the research contributions of the candidate. He/She shall submit 6 copies of the thesis along with a soft copy in PDF format on CD to the Controller of Examinations through proper channel and Director(Research). Under no circumstances, the thesis submission can be delayed except under special circumstances, where an extension of three months may be

permissible with the recommendation of the Doctoral Committee and approval of the Vice-Chancellor.

18. Thesis Adjudication

- (i) The Thesis shall be referred to two examiners (one from India and one from abroad) nominated by the Vice-Chancellor from among the panel of examiners recommended by the Guide. The Vice-Chancellor, if he deems it necessary, may also nominate examiners from outside the panel.
- (ii) The Controller of Examination shall take such steps as deemed necessary to receive the reports of the examiners as quickly as possible.
- (iii) In the case of undue delay in receiving the report from an examiner, the Controller of examination shall refer the thesis to the second examiner selected by the Vice-Chancellor, after waiting for three months and ensuring that the first examiner is not going to respond within a reasonable period of time.
- (iv) The examiner shall include in his report an overall assessment placing the thesis in one of the following categories:
 - a) Recommended for the award of the degree of Doctor of Philosophy as Commended / highly commended.
 - b) Recommended that the candidate revises the thesis as suggested in the report and the revised thesis referred to the guide for verification.
 - c) Recommended that the candidate revises the thesis as suggested in the report and the revised thesis be sent to the examiner for revaluation.
 - d) Not recommended.

The examiner shall enclose a report of 200 to 300 words, indicating the standard attained in case(a), the nature of revision in case(b) or (c) and the reasons for rejection in case(d)

- (v) On receipt of the reports from the examiners, the following procedure shall be adopted:
 - (a) The Examiners who evaluate the thesis shall report to the Controller of Examinations on the merit of the Thesis for Ph.D. Degree as "Highly Commended", "Commended" or "Not Commended" in the format prescribed (Annexure A.10), along with a detailed report. If both the Examiners commend the thesis with remarks such reports of the examiners will be sent to the Guide who will act as Convenor and prepare a consolidated report which shall include the main points made in the individual reports together with a reference to critical comments and suggestions, if any, suggestions, if any, made by the examiners.
 - (b) If both the examiners recommend the award of the degree, the thesis shall be provisionally accepted. Any minor revision, modification, etc., suggested by the examiners shall be carried out before the oral examination.
 - (c) If any examiner recommends revision of the thesis, the candidate shall be permitted to revise and resubmit the thesis within 6 months. The revised thesis shall be referred to the same examiner, if the examiner has insisted the

University to send the thesis back to him/her after revision for offering his/her final recommendation on the thesis. In such a case the examiner should offer his/her comments for the second time either as recommended for the award or rejected. In case, the examiner did not insist on sending the thesis back to him, then the University may refer the revised thesis to the Guide for acceptance.

- the award of the degree while the other (d) If one examiner recommends recommends rejection. then the thesis shall be referred to а third examiner to be nominated by the Vice-Chancellor. If the third examiner recommends the award, the thesis shall be provisionally accepted. Otherwise, the thesis shall be rejected and the registration of the candidate cancelled.
- (e) If both examiners recommend rejection, the thesis shall be rejected and the registration of the candidate cancelled.
- (f) When the commendation of the examiner on the revised thesis is not as stipulated in Clause 18 (v)(b) above, the Vice-Chancellor, if he deems it necessary, shall refer the thesis and the comments to a committee constituted by the Vice-Chancellor for this purpose.
- (g) Individual cases not covered by the above regulations shall be referred to the Vice-Chancellor for his final decision.

19. Oral Examination

- (i) After the thesis is recommended for the award of the degree by the examiners, oral examination shall be conducted by an Oral examination board to be constituted by the Vice-Chancellor.
- (ii) The Oral examination board shall include:
 - (a) The examiner of the thesis from India or if the Indian examiner of the thesis is not available, a member from the panel of Indian examiners already recommended by the Guide with the approval of the Vice-Chancellor.
 - (b) An examiner from the panel of oral examiners, recommended by the Guide of the candidate with the approval of the Vice-Chancellor.
- (iii)The convener of the Doctoral committee will be the Convener of Oral examination board and the oral examination shall be conducted as "Open defence type" examination.
- (iv)If the performance of the candidate in the Oral examination as reported by the Oral examination board to be NOT SATISFACTORY, the candidate may opt to reappear for the Oral examination at a later date (not later than six months from the date of the first Oral Examination). On the second occasion, the Oral examination board shall include one more examiner nominated by the Vice-Chancellor.

(v) If the performance of the candidate in the oral examination on the second occasion also is reported to be NOT SATISFACTORY, the Vice-Chancellor, if he deems it necessary, shall refer the remarks of the Oral examination board, along with the thesis and comments of the examiners, to a committee constituted by the Vice-Chancellor for this purpose and decide. The decision of the Vice-Chancellor shall be final.

20. Award of Ph.D. Degree

If the performance of the research scholar in the Oral examination is satisfactory, he/she will be awarded Ph.D. degree on the recommendation of the Academic council and with the approval of the Board of Management of the University.

21. Publication of Thesis

- (i) After the viva voce examination the candidate shall submit a copy of the thesis in CD ROM duly certified by the guide that all the corrections have been duly carried out as suggested by the examiners, if any, for UNIVERSITY ARCHIVES.
- (ii) Papers arising out of the thesis may be published by the candidate. However, the thesis as a whole shall not be published by the candidate without the specific approval of the University.

22. The Act off Plagiarism

In the case of research scholars who have copied, as confirmed by a committee, a research work/ dissertation/thesis of M.Phil./Ph.D. degrees his/her thesis shall be rejected and his/her research registration shall be terminated and also he/she shall be debarred from registering for any other programme in this University.

23. Change of Regulations

The Academic Council of Bharath University may revise, amend or change the regulations from time to time.

B. Regulations for the Award of M.S Degree by Research in Engineering/Technology

1. Admission Requirement

- B.E/B.TECH/B.ARCH or equivalent in the related area of specialization.
- Eligibility conditions such as the minimum percentage of marks/CGPA obtained by the candidate in the qualifying examination, shall be not less than 60% of marks or not less than a CGPA of 6.0.

2. Categories of M.S by Research Candiates and Place of Research

There shall be three categories of the M.S Degree by Research Programme (i) Full- Time (ii) Part-Time(Internal) and (iii)Part-Time(External)

- (i) *Full-Time Candidates:* All approved candidates who pursue full-time study in this university shall belong to this category.
- (ii) *Part-Time(Internal) Candidates:* All approved candidates who employed in Bharath Institute of Science & Technology (permanent or temporary) and actively involved in the relevant area of research and development as part of their regular work shall belong to this category.
- (iii) *Part-Time(External) Candidates:* Candidates working in Educational / Research institutions and organizations approved by BIHER and who have been sponsored by their respective institutions / organizations to pursue the M.S. Programme in this university while continuing in their job, shall belong to this category. If the institutions/organizations approved by BIHER for Ph.D Programme automatically qualify for the M.S. Programme also. Part-time candidates shall spend 4 months in spells of not less than one month at a time in this university within a period of 18 months. They shall pursue research both in their place of employment and in this university. They shall be required to have one research supervisor and Research coordinator as per clause 4.1 (ii) who is responsible to provide all necessary resources and help to complete the research work in a time bound manner.

3. Registration Procedure

- Candidates desirous of registering for the M.S. Degree shall, after paying the application and registration fees, submit the application in the prescribed form (Annexure A.1) through proper channel wherever applicable, either before 30th May or 30th November every year.
- The applications will be scrutinized by the Department committee constituted by the Head of the Department in consultation with the respective Dean of the faculty and with the approval of the chairman M.S. by Research Board, which shall determine the suitability of the eligible candidates to do M.S degree programme.
- Based on the academic records and the performance in the interview and Test, the Department selection committee shall recommend the names of the candidates found to be suitable for admission to the M.S. by Research Board

- The M.S. by research board will submit the selected Candidates to the director (Research) with the approval by the Vice-Chancellor for admission.
- For approved candidates, the date of provisional registration shall be normally 1st July and 1st January of every year.
- Every registered candidate shall register every semester on the 1st july and 1st January following the initial registration by paying the prescribed fees, in order to keep the M.S. Registration alive until the thesis is submitted.
- If the candidate fails to do so within the permissible dates of payment of fees, registration will automatically lapse and the name of the candidate will be removed from the rolls.

4. Supervisors

- 4.1(i) All M.S by Research candidates shall be required to work under a recognized supervisor who is a member of the faculty of the university or from a neighboring research/ educational institution which is recognized by BIHER.
- 4.1(ii) In the case of part-time (External) candidates there shall be recognized joint supervisor/research co-ordinator from the organization where he/she is employed.
- 4.1 (iii)when a supervisor of a candidate happens to be away from the university for more than 3 months he/she may continue to guide the candidate, but a second supervisor belonging to the university faculty shall be officially nominated by the M.S. board/ respective Dean of faculty to supervise the candidate's work.
- 4.1 (iv)The second supervisor from the university in consultation with the first supervisor shall discharge all the functions of a supervisor.
- 4.1 (v) If the supervisor from the university leaves the university permanatly, the M.S. board shall nominate a new supervisor with the approval of the Vice-Chancellor.

4.2 Recognition

• All teachers of BIST who have Ph.D qualification with required experience and publications will be deemed to be recognized supervisors for guiding M.S Candidates. Further, faculty members possessing M.S. by Research Degree equivalent Master Degree can also apply for recognition to be a supervisor provided they have a minimum of two research publications in the journals of repute in the relevant or allied area of research within a period of 2 years preceding his/her date of application.

a. Number of candidates per Guide

• A supervisor shall normally guide either Full-Time or Part-time internal/External not more than eight research candidates(Ph.D. and/or M.S. Candidates put together) at anytime.

5. Duration Of Programme:

5.1 Duration:

• The duration of the programme and the time for submission of thesis are counted from the date of provisional registration. The minimum and maximum time for submission of Thesis for the programme are given below.

S.No.	Category	Minimum Duration of Programme	Maximum Duration of Programme
i	Full-Time	2 Years	5 Years
ii	Part-Time(Internal)	3 Years	6 Years
iii	Part-Time(External)	3 Years	6 Years

5.2. Extension of maximum duration

- In exceptional circumstances if the monitoring committee recommends, a maximum grace period of one year beyond the normal maximum period, may be granted by the M.S. board with the approval of the Vice-Chancellor.
- If the candidate fails to submit the thesis within the extended period of one year, the registration will be cancelled and the name will be removed from the rolls.

6. Monitoring Committee

- The following will be the composition of the monitoring committee which will be nominated by the M.S.by Research Board with the approval of the Vice-Chancellor.
 - Head of the concerned Department/Senior faculty.
 - The supervisor
 - A specialist in the field of proposed research
- The supervisor shall furnish a panel of 3 names of specialist in the proposed area of research from the concerned faculty of the University of every candidate of whom one shall be nominated as approved by the Vice-Chancellor.
- The supervisor from the university shall be the convener of the monitoring committee.

7. Prescription of Course/Field Work

7.1 Course work:

- The monitoring committee of a candidate shall prescribe the course work for the candidate. Every Candidate has to enroll and register for the courses he/she intends to undergo during the odd/even semester.
- A Minimum of 18 credits shall be recommended by the monitoring Committee from post-graduate courses approved by the board of studies. Each new course shall be designed to be covered in not less than 45 contact hours of instruction and shall be approved by the chairman of the board of studies.
- No change in the course prescribed shall be made without the approval of the monitoring committee.

7.2 Field/Laboratory work:

- Besides course work, the monitoring committee may prescribe for the candidate, laboratory work, field work and participation in seminars relevant to the research project.
- The prescribed course, field/laboratory work shall normally be completed within one year from the date of provisional registration in case of full-time candidates and one and half years in the case of part-time candidates.

8. Monitoring the Progress of Candidates

- Every six months commencing from the date of provisional registration, the candidate shall submit progress reports in the prescribed format **Annexure A.5** to the supervisor who shall forward it to the monitoring committee for review.
- The Supervisor shall arrange for the candidate to make a presentation of his/her work once in a semester before the monitoring committee at a meeting, which is open to faculty members and research scholars.

9. Cancellation of Registration

• The registration of a candidate whose progress is either not satisfactory or who has exceeded the maximum period stipulated for the M.S. Programme shall be cancelled by the M.S. /Research Board with the approval of the Vice-Chancellor.

10. Synopsis of Thesis

- On satisfactory conclusion of the research work after successful completion of all prescribed course/field/laboratory work, the candidate shall prepare the synopsis in the prescribed format (Annexure A.8) and submit to the monitoring Committee through the supervisor nine copies of the synopsis of the M.S. work carried out.
- If the monitoring Committee approves the research work reported in the synopsis, it shall forward six copies of the approved synopsis to the respective Dean along with a panel of at least six names of Thesis examiners.

11. Submission of Thesis

- The thesis shall report, in an organized and scholarly fashion giving an account of the original research work of the candidate leading to the discovery of new facts techniques, correlation of facts already known(analytical, experimental hardware oriented etc) and demonstrating a quality as to make a definitive contribution to the advancement of Knowledge and the candidates ability to undertake sustained research and present the findings in an appropriate manner.
- Six copies of thesis shall be prepared in accordance with the format and specification prescribed (Annexure A.9). These shall be submitted within one month from the date of approval of the synopsis by the monitoring committee.
- Publication of the results of the investigation before the submission of the thesis is permissible. Such publications may be included as supplementary material while submitting the Thesis.

• The Thesis shall include a certificate by the candidate as per the prescribed format (Annexure A.9[a]) and another issued by the supervisor from the university as prescribed (Annexure A.9[b]), to the effect that the thesis is a record of the bonafide research work carried out by the candidate under his/her supervision and guidance and that the work reported in the Thesis has not been submitted elsewhere for a Degree or diploma.

12. Thesis Evaluation

- 12.1. The thesis shall be referred to two examiners nominated by the respective Dean of faculty from the panel recommended by the monitoring committee and approved by the Vice-Chancellor.
 - The examiners are expected to send in the prescribe format (Annexure A.10) their reports within 2 months from the date of receipt of the Thesis.
 - The examiner shall include in his/her report an overall assessment placing the thesis in one of the following categories.
 - (a) Recommended for the award of the degree of M.S commended/highly commended provided the candidate appears for the viva-voce examination and defends the work satisfactorily.
 - (b) Revision required and need not be resubmitted thereafter.
 - (c) Rejected.
- 12.2. The examiner shall enclose a report of 200 to 300 words, indicating the standard attained in case (a), the nature of revision in case (b) and the reasons in case (c).
- 12.3. The monitoring committee based on the reports of the examiners shall adopt the following criteria (a) to (f) to pass or otherwise for the results.
 - (a) If both the examiners recommend the award of the degree, the thesis shall be provisionally accepted. Any minor revision, modification etc. suggested by the examiner shall be carried out before the oral examination is arranged.
 - (b) If both the examiners recommend rejection, the monitoring committee if found necessary can give an extension of one year and the candidate may be asked to resubmit the thesis with the approval of the Vice-Chancellor.
 - (c) If one examiner recommends the award of the degree while the other recommends rejection, the thesis shall be referred to a third examiner to be nominated, by the respective Dean of faculty with the approval by the Vice-Chancellor for evaluation & recommendation. If two of the three examiners recommend the award the thesis shall be provisionally accepted.
 - (d) When two recommendations out of three are negative, they shall be referred to a committee constituted by the M.S. board with the approval of the Vice-Chancellor for the purpose to decide the result.
 - (e) If any one examiner recommends revision of the thesis the candidate shall be permitted only once to revise and submit the thesis within 3 months and the revised thesis shall be referred to the same examiner who suggested revision for offering his final recommendation on the thesis which should only be either recommend for the award or rejected.
 - (f) Individual cases not covered by the above regulations shall be referred to the M.S. board for its recommendation. The decision of the M.S. by research board on such

recommendation shall be submitted to the Vice-Chancellor for approval. The decission of the Vice-Chancellor shall be final.

13. Oral Examination

- The Oral Examination Board shall be constituted by the respective Dean with the approval of the Vice-Chancellor as follows:
 - (a) One of the examiners who commended the thesis Member
 - (b) A Specialist from the respective department Member
 - (c) Supervisor of the candidate in the University Convener
- The Oral Examination shall be conducted as an "Open Defence Type" Examination.
- If the performance of the candidate at the Oral Examination is reported by the Oral Examination Board to be NOT SATISFACTORY, the candidate may opt to reappear for the Oral Examination at a later date (not later than 3 months from the date of the first Oral Examination). On the second occasion, the Oral Examination Board shall Include one more examiner nominated by the respective Dean of Faculty and M.S. Research Board and approved by the Vice-Chancellor.
- If the performance of the candidate on the oral examination on the second occasion also is reported to be NOT SATISFACTORY, the respective Dean of Faculty shall refer the remarks of the Oral Examination Board, along with the thesis and comments of the Examiners, to a committee constituted by the M.S. Board with the approval of the Vice-Chancellor for this purpose and the decision of the Vice-Chancellor shall be final.

14. Award of M.S. Degree

• If the report of the Oral Examination Board is SATISFACTORY, the candidate will be awarded the M.S. Degree with the approval of the Vice-Chancellor.

15. Publication of Thesis

• Technical Papers arising out of the thesis may be published by the candidate. However, the thesis as a whole shall not be published by the candidate without the specific approval of the Vice-Chancellor.

16. The Act of Plagiarism

- In the case of research scholars who have copied a dissertation / thesis/ books for M.S. degree his / her thesis shall be forfeited and his / her research registration shall be terminated in this University and also he/she shall be debarred to register for any other programme in this University, for life.
- For the abetment of above such action the recognition of his/her supervisor shall be withdrawn for a period of 5 years and his/her supervisor shall be debarred from guiding the research scholars / or any other research programme in this University for 5 years.

C. Regulations Relating to MS linked Ph.D. Program

1. Eligibility

Minimum academic qualification required for MS linked Ph.D. programme is BE /B.Tech., in the respective areas.

2. Admission

- 2.1 The candidates desirous of registering for the MS linked Ph.D. Programme shall after paying the application fees, submit the application in the prescribed form through proper channel wherever applicable, before 30th May/30th November each year to the Director (Research). For details visit Bharath University website.
- 2.2 The applications received will be sent to the respective Faculty Directors who will forward the same to the respective head of the department for processing. The admission procedure is given in Clause 5 of the Ph.D. regulations.
- 2.3 For each student a Doctoral Committee is formed as per the Clause 10 of the Ph.D. regulations.

3. Duration of the Programme

Ducanama	Full Time		Part Time	
Programme	Min	Max	Min	Max
MS Degree	2 years	3 years	3 years	4 years
Ph.D.	2 years	3 years	4 years	5 years

4. Course Work

The students shall complete a minimum of ten courses with a minimum of six courses in the core area of research amounting to a minimum of 40 credits. The courses will be decided by the Doctoral Committee. The course work should be completed within a maximum period of 4 semesters.

5. Project Work

- 5.1 Project work/ Dissertation shall be carried out under the guidance of the Supervisor which is equivalent to 32 credits.
- 5.2 The Project Report/Dissertation prepared highlighting the work done by the scholars in the approved format and duly signed by the supervisor shall be submitted to the Controller of Examination for evaluation.
- 5.3 The research scholar shall have completed the courses and project works equivalent to 72 credits to be eligible for the award of MS degree.
- 5.4 The Doctoral Committee shall meet annually to review the progress of the candidate.

6. Assesment of Course / Project Works

6.1 Course Work

i. The examinations of the course work will be conducted as per the PG regulations of the University. For all theory courses, question papers will be set by external examiners. Valuation shall be done by two (internal & external) examiners. If the difference in the two valuations is less than 10 marks, average of the two will be taken.

If the difference in the valuations is more then 10 marks, third valuation will be carried out. In case of third valuation, the average of the third and the marks of one of the first two valuations, which is closer to the third valuation will be taken.

ii. The maximum marks for any course [(theory excluding project work)] will be 100 comprising 30 marks for internal assessment and 70 marks for the end-semester examinations.

6.2 Project work / Dissertation

During the course of the project work, three reviews will be conducted by the guide for 50 marks. The distribution of marks for the three reviews is 10, 15, and 25. The final evaluation and viva voce will be conducted by the duly appointed examiners. The end semester evaluation of the project will be for 50 marks. The grade will be awarded to the student on the basis of the total marks obtained by the candidate out of 100.

7. Passing Requirements

- 7.1 A candidate who secures not less than 50% of total marks prescribed for any course with a minimum of 50% of the marks prescribed for the end-semester examination shall be declared to have passed in the examination for that course.
- 7.2 If a candidate fails to secure a pass in a particular course, it is mandatory that he/she shall register for taking the examination in that course during the next semester when examination is conducted in that course. He/she should continue to register and reappear for the examination till he/she secures a pass. However, the internal assessment marks obtained by the candidate in the first attempt shall be retained and considered valid for all subsequent attempts.

8. Award of Letter Grades

All assessment of a course will be done on absolute marks basis. However, for the purpose of reporting the performance of a candidate, letter grades, each carrying certain points, will be awarded as per the range of total marks (out of 100) obtained by the candidate, as detailed below:

Range of total marks	Letter Grade	Grade Points
90 to 100	S	10
80 to 89	А	9
70 to 79	В	8
60 to 69	С	7
55 to 59	D	6
50 to 54	Е	5
0 to 49	U	0
Incomplete due to absence in end semester examination	Ι	0
Failure due to insufficient attendance in the course	W	0

"U" - denotes Reappearance (RA) in the course

"I" - denotes incomplete and hence prevented from writing end-semester examination.

"W" - denotes withdrawal from the course.

8a. Computation of GPA and CGPA

$$GPA = \frac{\Sigma_{i}(C_{i} GP_{i})}{\Sigma_{i}C_{i}} \qquad CGPA = \frac{\Sigma_{i}(C_{i} GP_{i})}{\Sigma_{i}C_{i}}$$

9. Eligibility for the Award of Degree

A student shall be declared to be eligible for the award of the M.S. Degree provided:

- 9.1 The scholar has successfully completed the course requirements and has passed all the courses as prescribed by the Doctoral Committee.
- 9.2 The scholar has successfully completed the M.S project.
- 9.3 The candidate should have published / presented a research paper in a journal or a conference.

Category	CGPA (From I-IV semester)	Class / Distinction
	\geq 5 & < 5.5	Pass
	\geq 5 5 & < 6	Second Class
	$\geq 6 \& < 8.5$	First Class
Students who successfully complete the programme within the time duration of 4 semesters (R.8.0)	\geq 8.5 (without U or W or I or temporary withdrawal –R.9.0 in any Semester)	First Class with Distinction
	\geq 8.5 (without U or W or I in any Semester but obtained pass grade (S to D) subsequently)	First Class

Students who could not complete the program in 4 semesters but complete it	\geq 5 & < 6	Second Class
successfully within the time duration of 5 semesters. (R.8.0)	≥ 6	First Class
Students who could complete the program in 5 semesters but complete it successfully within the time duration of 6 semesters (R.8.0)	≥ 5	Second Class

10. Classification of the Degree Awarded 11. Continuation Of Ph.D. Work

- 11.1 If the scholar continues his/her research on completion of MS study requirements, his/her provisional registration for Ph.D. shall be confirmed.
- 11.2 After the confirmation of the registration, the candidates shall follow Ph.D. regulations of the University

12. Revision of Regulation and Curriculum

The University may from time to time revise, amend or change the Regulations and scheme of examinations if necessary.

D. Regulations Relating to Post Doctoral Fellowship

1. Introduction

The Institute may award Post Doctoral Fellowship (PDF) with a view to providing an opportunity to competent researchers to do independent research work in an appropriate area as a full-time scholar.

2. Eligibility

- 2.1 Post Doctoral Fellowship is intended for a person below 35 years of age. However a relaxation of 5 yrs for women candidates may be given.
- 2.2 Post Doctoral Fellowship will be awarded to persons who have a Ph.D degree and have published research work /patents to their credit.
- 2.3 Fellowship should be available to Indian as well as Foreign Nationals.

3. Reservation

- 3.1 Government of India notification for reservation of seats for OBC/SC/ST and age relaxation for SC/ST will apply.
- 3.2 Candidates admitted under the reserved quota will necessarily have the minimum qualification stated in para 2 above.

4. Selection

- 4.1 The selection of Post Doctoral Fellowship will be made on the recommendations of a Selection Committee.
- 4.2 The Selection Committee will make its recommendation on the basis of the bio-data, list of publications and recommendation of the referee etc., based on an interview and presentation of the applicants. However foreign candidates are exempted to appear personally before the selection committee but the Skype interview may be conducted.

5. Tenure

- 5.1 The Post Doctoral Fellowship awarded to a research worker shall be, in the first instance, tenable for one year counted from the date of joining.
- 5.2. The tenure can be extended on consideration of the research work carried out in the preceding year by an Assessment Committee. The fellowship tenure will be for a total period of three years renewable on yearly basis.
- 5.3 The Institute may terminate the fellowship of a person at any time on the basis of a report from the Head of the Department/Centre/School. A Fellow may discontinue the fellowship and leave the Institute before the end of the tenure with prior approval of the competent authority.

6. Fellowship

6.1 The Post Doctoral Fellowship shall carry fixed monthly fellowship at a rate, fixed depending upon the experience of the candidate, in any of the rates/groups prescribed by the University.

7. Work Assignments

- 7.1 The Fellow will be attached to the Department/Centre/School and devote himself/herself to full time research & teaching in an area approved by the Department/centre/School concerned.
- 7.2 He/She shall not accept or otherwise or receive any emoluments, salary, stipend, consultancy etc., from any other sources during the tenure of the fellowship without the consent of the Competent Authority.
- 7.3 The Fellow shall be required to present and submit a comprehensive progress report at the end of each semester.
- 7.4 The Head of the Department/Centre/School will assign to a Fellow academic responsibilities (lectures, tutorial classes, laboratory demonstration work, conduct of seminar, symposia, running and maintenance of equipment, computer etc.,) not exceeding 8 hours per week.

8. Other Facilities

8.1 Accommodation:

- 8.1.1 The Fellow will be provided accommodation in the campus subject to availability and on payment of usual fee fixed by the University.
- 8.1.2 While residing in the Campus / Hostels, the Fellow shall abide by the rules relating to residential conditions as in force, and shall also be liable to pay the institute electricity & water charges and Room establishment charges levied by the Warden / Estate officer, as applicable
- 8.1.3 HRA as per approved rates will be paid if accommodation is not provided / availed.

8.2 Leave:

8.2.1 A Fellow may be granted following kinds of leave with full fellowship during each one year tenure:

(i) Causal Leave : 15 days

(ii) Medical Leave on the recommendation of the HOD/DIRECTOR(RESEARCH)

Any leave not availed of shall not accumulate. Any unauthorized absence may be treated as leave without fellowship.

- 8.2.2 The sanctioning authority for the leave shall be the Head of the Department/Centre/School.
- 8.2.3 Married Fellows will be entitled to maternity / paternity leave as per rules of the Government of India.
- 8.2.4 In exceptional cases Fellows may be allowed leave without fellowship for a period not exceeding three months during the total tenure (3 years) of the awarded on the recommendation of the Head of the Department / Centre / School.

8.2.5 The period of leave sanctioned under the provisions of clause 8.2.4 shall be counted towards the tenure of the Fellowship awarded.

8.3 Library books and journals:

The Fellows shall be entitled to all library facilities

8.4 Medical treatment:

A Fellow will be provided with free medical treatment in the Sree Balaji Medical College and Hospital.

8.5 Traveling Allowance:

- 8.5.1. A Fellow may be permitted on the recommendation of the Head of the Department/Centre /School to attend a conference / Seminar / Workshop in India once a year for which he/she will be treated on duty and shall be entitled to the payment of:
 - (i) *Traveling Allowance:* Single Second Class A/C rail fare and / or actual bus fare from the Institute each way, by shortest route.
 - (ii) *Dearness Allowance:* At the same rate per day as admissible to Scheme employee with same monthly fellowship of the Fellow.
 - (iii) Registration fee: Actual amount not exceeding Rs.5000
- 8.5.2. A Fellow nay be permitted on the recommendation of the Head of the Department/ Centre / School to attend an international conference abroad once during his / her tenure after completing one year for which he/she will be treated to be on duty and shall be entitled for the payment of
 - (i) Partial travel grant, with a maximum of Rs.40,000
 - (ii) Registration fee, limited to US \$300.
 - (iii) Such cases will be monitored by the Director(Research).

8.6 Contingency Grant:

A Post Doctoral Fellow will be paid Rs.25,000 contingency grant per annum.

9. Award of Post Doctoral Certificate

The Post Doctoral Certificate will be issued based on the assessment made by a Committee constituted by the Vice-Chancellor, on the report submitted by the candidate and on the approval of the authorities.

Annexures



Directorate of Research

173, Agaram Road, Selaiyur, Chennai – 600 073. Ph. 044 – 22290742/0125

APPLICATION FORM - Ph.D / M.S. Linked Ph.D / M.S. by Research

Bank Demand Draft No:	th University, payable at Chennai, uld be sent to:	Affix latest Passport size photograph
Tamil Nadu, India.		
1. Name	:	
2. Sex :	: Male Female	
3. Address(a) Official with (Designation)	:	
Phone		
(b) Residential	:	
Phone		
4. Email Id	:	
5. Date of Birth	: D D M M	Y Y Y Y Y
Age Completed	:	

6. Nationality	:					• • • • • • • • • • •		
7. Social Status	:	OC	OBC	BC	MBC	SC	ST	
8. Ph.D Programme Selected	:	Re	gular	MS Li	nked	MS by	Research	1
9.Category	:		ıll Time [ne (Extern		Time(Int			
					Industr	ial/Resea	arch org	
10. Whether Employed	:	Ye	es 📃]	No (If	Yes, Spec	ify the fo	ollowing)	
Name and Address of the Employer	:							

Salary Received / Month

11. Academic Background (Start with latest Degree obtained)

S.No	Degree / Diploma	Year of Passing	University	Major Discipline	Percentage

:

Note: Enclose Copies of Degree/Diploma Certificates

12. Professional Experience (Start from the Present Employer)

Organization	Period		Designation	Total Salary/	Nature of Job
	From	То		Month	

13. Publications, if any (Books / Research Papers):

S.No	Title	Name of the Journal/Conference / Published in the case books	Year

:

- 14. Major Area of Ph.D Research
- 15. Tentative topic, if identified for research (Attach one-page write up on the topic identified)
- 16. Department in which the candidate proposes to register
- 17. Name, Designation and address of the Research Coordinator(Outside the University) : (For part-time (External) candidates only

Note: Part-time (External) candidates shall have a Supervisor at Bharath University and in addition, shall have a Research Coordinator at the Organization in which they are working.

18. Department in Bharath University are known, the choice of preference of the Supervisor* : (tentative) shall be indicated (*Supervisor will be fixed by the Research Coordinating Committee)

19. DECLARATION OF THE CANDIDATE :

This is to certify that the particulars given above are true, correct and complete to the best of my knowledge and belief.

Place : Date :

Signature of the Candidate

Note : The completed Application form should be submitted to The Director (Research), 173, Agaram Road, Selaiyur, Chennai – 600 073 on or before

ACCEPTANCE OF SUPERVISOR (Should be typed on Letter head, Addressing to Director, Research)

I, Dr	have done my Ph.D. in the area of
	from the department of
,	University
My present work of research is proceeding in the same area / area of	of
and I am working as	with following research facilities
I am accepting to guide Mr./Ms.	
working as a at	
in this area. Currently I am guiding students.	

Encl : (1) Bio-Data (2) Three recent publications Signature Seal

NO OBJECTION CERTIFICATE - For Part-Time External Candidates

(To be issued by the Head of the Organization of Place of work / Employement of the Candidate, Addressing to Director, Research)

Mr./Ms. will be permitted to pursue the proposed Research work for the Ph.D./M.Phil./M.S. Degree of the Bharath University, Chennai by making use of the available facilities in our organization. The Supevisor(s) shall be permitted to visit the organization periodically to monitor and assess the work of the candidate.

Date : Place : Signature & Designation with Seal

Annexure - A.1c

UNDERTAKING ON ATTENDING THEORY CLASSES, RELATED TO COURSE WORK SUBJECTS

I hereby assure that I shall abide by the Rules & Regulations of the Ph.D. Programme offered by the BHARATH UNIVERSITY in all repects.

I also hereby undertake that I will attend the Contact Classes in connection with the course work subjects and forthcoming course work examinations to be held at Bharath University, as a preliminary part of Ph.D. Porgramme and maintain 75% of the Attendance to write each subject, along with recommendations of the Ph.D. Supervisor.

Date : Place : Signature of the Candidate Reg. No.



DIRECTORATE OF RESEARCH BHARATH UNIVERSITY

APPLICATION FOR RECOGNITION AS A Ph.D. / M.S. DEGREE SUPERVISOR

Norms for Supervisor Recognition:

a. Faculties of Engineering and Technology and Science and Humanities

Candidates seeking for the recognition of the guide ship should possess:

- (i) A Ph.D. Degree in the relevant or allied areas of research in which he/she proposes to guide the candidate.
- (ii) A minimum of two research papers published in the relevant or allied areas of research in refereed journals within a period of three years preceding to his/her date of application for recognition.
- (iii)A minimum of two years of research or teaching experience after acquiring Ph.D degree. However, exemptions shall be considered by the Vice-Chancellor on merit.

1. Name (i	n Block Letters)	
------------	------------------	--

- 2. Designation
- 3. Department and Official Address with Pin code
- 4. Phone No
- 5. E-Mail ID
- 6. Date of Birth
- 7. Educational Qualification *

Category	Name of the Degree	Name of the University	Year of Passing	Specialization	% of Marks / Grades obtained	Mode Regular/ Part-time/ Distance/ week-end
UG						
PG						
Ph.D						

* Attested photocopy of degree certificate shall be enclosed

:		
: (From	to)
urs) :		
: (From	to)
: (From	to)
	: (From : (From : (From rs) : : (From	: (From to : (From to : (From to rs) : : (From to

- 9. Membership in Professional Bodies :
- 10. Are you a recognized Supervisor in other : YES/ NO Universities If yes, mention the Name(s) of the Universities:
- 11. Number of sponsored research projects (as Principal Investigator give details separately)
- 12. Research Guidance (No. of Thesis guided/guiding)(a) Master's/M.Phil. Thesis :(b) Ph.D. Thesis :
- 13. Publications (Please attach list of publications with author(s), title of the paper, journal name, volume, page, year and reprints of at least two publications published during the last 3 years in refereed Impact Factor Journals along with the proof for Impact Factor of the journal)
- 14. a. Title of Ph.D. Thesis :
 - b. Faculty in which Ph.D. was awarded :
 - c. Area of specialization in Ph.D. :
- 15. Details of recognition of your Organization by Bharath University for Conducting Research If employed in other institution (Give the Ref. No.):
- 16. Any other relevant information :

Date : Place :

Signature of the Applicant

Recommended/Forwarded

- Encl : 1. List of publications and copies of reprints
 - 2. Printout for the Impact Factor of the Journal downloaded from website
 - 3. Xerox copies of Ph.D. and Master Degree Certificates
 - 4. Proof for the Institute Recognition
 - *Note: i) The applications will be processed only if the enclosures mentioned above are properly attached.*
 - ii) The applicants are eligible for supervisor recognition is as per clause 7 of Ph.D. regulations

Annexure A.3

Application for getting recognized as a Research Centre of Bharath University for Guiding/Registering Ph.D./M.S. candidates.

The aspiring institution for getting recognized as a research centre of Bharat University for guide/ registering Ph.D candidates should have the following facilities and faculties:

- 1. Minimum two persons with Ph.D qualifications in the area(s) of research by the department/ institution as approved by the University.
- 2. Library facilities with adequate books, journals in the area of research literature retrieval facility through CD-ROM/Internet facilities.(iii) Laboratories with equipments are required for the discipline of Research for which recognition sought.
- 3. Adequate working space for the research students in terms of laboratories, Study rooms, Seminar room facilities etc.
- 4. Faculty Research Profile of the Department seeking recognition along with the Department/Faculty contributions made in the respective fields.
- 5. Details of existing infrastructure facilities of the Department/institution.

Functions of the Doctoral Committee

- 1. The Doctoral Committee shall have a meeting at the University convened soon after provisional registration and constitution of the committee to personally interview the candidate.
- 2. To review the research proposal and finalise the topic of research.
- 3. To guide the candidate to develop the study design and methodology of research; and
- 4. To suggest courses (Theory and/or Practical) to be undertaken by the candidate during the first year of his/her provisional registration. The courses prescribed together with syllabus shall be forwarded to the Controller of Examination to set the question papers for the course work Examination at the end of the first year of provisional registration. On no account this process shall be passed through correspondence/circulation.
- 5. The Doctoral Committee shall monitor the research work of the candidate concerned periodically, record his/her progress bi-annually in the format suggested (ANNEXURE A.5) and send it to the Controller of Examinations and review he overall research work before final submission of the thesis by the research scholar.
- 6. In the case of research scholars doing inter-disciplinary research, the guide shall nominate a person, who is an expert in the other discipline concerned as well as the co-guide to be the member of the Doctoral Committee.
- 7. Any change in the membership of the Doctoral committee shall be effected only on approval by the Vice Chancellor.
- 8. Doctoral Committee shall ordinarily stand dissolved once the candidate submit the thesis. How ever, it shall be available till the end of public viva-voce examination for monitoring and advising candidates for whose thesis examiners have recommended modifications, corrections, etc., to be incorporated in the thesis before the public viva-voce examination.

Format for Six monthly Progress Report to be submitted by Candidates (Full time/Part time including independent research candidates)

- (i) The progress reports shall be submitted by the candidate before the Doctoral committee accompanied by a report by the candidate about the work carried out during the period of this report (in about 300 works). The same shall be duly signed by the guide, co-guide (if applicable) and Member(s) of the Doctoral Committee.
- (ii) One copy is to be retained by the guide, one copy by the candidate and one cop to be submitted to the Controller of Examinations once in six months, immediately after placing before the Doctoral Committee constituted for the candidate.

Note: Failure to submit two consecutive six monthly progress report will entail the cancellation of registration of the candidate by the Vice – chancellor on a report made by the guide and / or the Controller of Examination in this behalf.

1. Particulars about the candidate:		
(a) Name		
(b) Designation		
(c) Institution where working		
(d) Period of the report	From:	To:
(e) Date of provisional registration with University reference		
2. Registration Details	•	
(a) Category of registration	PT F	Г Internal External
(b) Has the provisional registration been confirmed	Yes N	0
(c) If yes, give University approval ref.		
3. Particulars of the Guide		
(a) Name		
(b) Designation		
(c) Institution where employed		
4. Particulars of the Co-Guide		
5. Whether the candidate's report in quadruplicate is enclosed		
Whether papers have been published if yes give the details		
 Whether seminars/ conferences attended, if yes give the details. 		
 8. Whether completed the prescribed course work if yes, give details with the grades obtained 		
9. Has the Annual Research fee been paid	for the year(s)	

Date:

Place:

Signature of candidate:

10. Remarks of the Guide:	
(a) Attendance	Satisfactory Not Satisfactory
(b) Progress	Satisfactory Not Satisfactory
(c) Expected time of completion of thesis	Satisfactory Not Satisfactory

11. Whether the Guide agrees with the scholar's report: (if yes or no please give reasons):

12. Whether the co-guide agrees with the scholar's report (if yes or no please give reasons):

 $\rm I$ / we hereby certify that a candidate has put in necessary attendance and shown progress in his/her research and he/she may be permitted to continue research.

Date: Place:

I agree with the above remarks of the Guide.

Date: Place:

I agree with the above remarks of the Guide & Co-guide

I agree with the above remarks of the Guide & Co-guide

Date: Place:

Member of the DC

Signature of the Guide with Seal

Signature of the Co-guide with Seal

Signature of the Expert Member of the DC

Signature of the Expert

Date: Place:



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Minutes of the Doctoral Committee Meeting for Confirmation of Provisional Registration

Doctoral Committee	e Meeting of the Ph.D. Scholar	Mr./Ms
(Reg. No) was held on	at A.M./P.M. in the Department of
		, Chennai - 600 073/
The following mem	bers were present:	
1.	(Supe	rvisor & Convener)
2.	(Joint	Supervisor, if applicable)
3.	(Exter	mal Expert)
4.	(Exter	mal Expert)
5.	(Chai	rperson of DRCC)
6.	(Expe	rt in allied areas from the University, if required)
7.	(Rese	arch Co-ordinator, if applicable)
8.	(Exter	mal Examiner)

Mr./Ms. _____ has successfully completed the course works recommended by the Doctoral Committee. He/She has obtained the following grades in the course works.

Course Code	Course Title	Credits Core Course/ Elective/Special Elective		Grade/Marks
Comprehensive E	xamination			Pass Fail

The committee also evaluated the research work carried out by the scholar and satisfied with the performance of the scholar. Hence the Committee recommends the confirmation of Provisional registration of the scholar in the Faculty of and permits the scholar to proceed with his/her research work.

External Expert (Signature with Name)

External Expert (Signature with Name)

Research Co-ordinator (Signature with Name) (if applicable)

Chairperson of DRCC (Signature with Name)

Supervisor (Signature with Name)

Joint Supervisor (Signature with Name) (if applicable)

Expert in allied areas (Signature with Name) (if applicable) (External Examiner)

Annexure A.7



173, Agaram Road, Selaiyur, Chennai - 600 073.

Ph.D	FT/PT
Reg. No.	

ENROLLMENT FORM

(i) Name in Block Letters	:	
(ii) Registration No.	:	
(iii) Month & Year of Admission	:	
(iv)Date of Joining	:	
(v) Faculty	:	
(vi)Supervisor's Name	:	
(vii)Department of Supervisor	:	
(viii)Category of Registration	: Full Time / Part Time (Externa	al) / Part Time (Internal)
(ix)No. of Courses Completed	:	
(x) No. of Courses Registered in the Semes	ter:	
(xi) Date of Confirmation	:	
(xii)Date of Payment of Present Sem Fee	:	
(xiii)Fee Details of the Present Semester Fee	e: DD. No.	Date:
	Amount:	Bank:

DECLARATION

- I, is pursuing Ph.D Programme.
- 1. As a full-time scholar, I state that I am not employed anywhere.
- 2. As a full-time scholar working in a project, I state that I am still employed in the project
- 3. As a part-time scholar, I am working as a at
- 4. As a part-time scholar, I am still working in the same college/Industry as mentioned in my application form/Change of working place has been intimated to the office of the Director (Research)

 Date:
 Signature of the Research Scholar

 Signature of HoD
 Signature of the Supervisor (Name with Seal)

 Signature of Faculty Director
 Signature of the Supervisor (Name with Seal)

Manual For Preparation Of Ph.D./ M.S. Synopsis (Prescribed Format and Specification)

1. GENERAL:

The synopsis is to be considered as a detailed summary of the work with important results highlighting the original contributions in the thesis to be submitted. It should give an outline of the thesis. The review of earlier work is to be minimized with just enough to highlight the contributions in the research work to be reported in the thesis. It is expected that at the time of submission of the synopsis no work is yet to be completed except writing the thesis and all other academic requirements such as course work, comprehensive examinations and the suggestions and directions given by members of the Doctoral Committee have been fulfilled.

2. NUMBER OF COPIES TO BE SUBMITTED:

Six hard copies and one soft copy (pdf file) in a properly labeled CD are to be submitted to the University.

3. SIZE OF SYNOPSIS:

The size of synopsis should be 30-40 pages of $1\frac{1}{2}$ spacing on A4 size good quality white paper preferably not lower than 80 gsm.

4. ARRANGEMENT OF CONTENTS OF THE SYNOPS:

The sequence in which the thesis material should be arranged and bound as follows:

- 1. Cover Page & Title page
- 2. Declaration
- 3. Bonafide Certificate
- 4. Acknowledgement
- 5. Abstract
- 6. Table of Contents
- 7. List of Tables
- 8. List of Figures
- 9. List of Symbols and Abbreviations
- 10. Chapters
- 11. References
- 12. Appendices
- 13. List of Publications
- 14. Vitae

The Tables and Figures shall be introduced in the appropriate places.

5. PAGE DIMENSIONS AND MARGIN:

The dimensions of the final bound copies of the thesis report should be 297mm×210mm (Standard A4 size).

The synopsis should have the following page margins Top edge : 25 to 30 mm Bottom edge : 25 to 30 mm Left side : 35 to 40 mm Right side : 20 to 25 mm

The synopsis should be prepared on good quality white paper preferably not lower than 80 gsm. Tables and figures should conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.

6. SYNOPSIS PREPARATION:

The Scholar shall submit a typed copy of the manuscript to the supervisor for the purpose of approval. In the preparation of the manuscript, care should be taken to ensure that all textual matter is typewritten to the extent possible in the same format as may be required for the final thesis. Upon approval of the manuscript by the supervisor, the final synopsis should be prepared according to the specification outlined in this section as well as in the following sections

6.1 General Typing Instructions:

- Corrections, interlineations and crossing out of letters or words will not be permitted in any of the copies of the thesis intended for submission. Erasures, if made, should be neatly carried out in all copies.
- A sub-heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.
- The last word of any page should not be split using a hyphen.
- One and a half spacing should be used for typing the general text.
- The general text shall be typed in Font Style "Times New Roman" and Font Size 12.
- Single spacing should be used for typing:
 - (i) Long Tables
 - (ii) Long quotations
 - (iii)Foot notes
 - (iv)Multiline captions
 - (v) References
- All quotations exceeding one line should be typed in an indented space the indentation being 15mm from either margin.

7. TYPING INSTRUCTIONS:

The synopsis should have the following page margins Top edge : 25 to 30 mm Bottom edge : 25 to 30 mm Left side : 35 to 40 mm Right side : 20 to 25 mm

- Tables and figures should conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.
- The general text shall be typed in Font Style "Times New Roman" and Font Size 12.
- The page numbering for all items 1 to 3 should be done using lower case Roman numerals and the pages thereafter should be numbered using Arabic numerals.
- General formatting can be similar to that of the thesis (see format for Ph. D thesis). However figures and equations are to number using running numbers. References can be numbered as 1, 2, 3 etc in the order in which they are referred to in the body of the synopsis. Only those, which are cited in the synopsis, only need be given in the list of references.
- Cover Page & Title Page: A specimen copy of the Cover page & Title page for synopsis is given in Annexure A.7(C).
- **Declaration:** A specimen copy of the Declaration by the candidate is given in **Annexure A.8(a)** and by the Guide/Co-Guide in **Annex A.8(b)**.
- **Table of Contents:** The table of contents should list all material following it (divisions and subdivisions of body of the synopsis) and the formatting is similar to that of the thesis (see format for Ph.D thesis)

8. BINDING SPECIFICATIONS:

Each of the 6 copies of the synopsis should be sewn and bound using flexible cover of thick white art paper. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

9. SUBMISSION OF SYNOPSIS:

Six softbound copies of the synopsis are to be submitted along with a soft copy of the synopsis (pdf file) on a CD with proper labeling.

The candidate has to submit the Thesis within six months from the date of submission of the synopsis.



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Check List While Submitting Ph.D. Synopsis

1. Proforma for submission of Synopsis (download from the website)	YES/NO
2. 6 copies of the Synopsis as per the norms of Bharath University Regulations	YES/NO
3. Soft copy of the Synopsis in CD (1 Nos.)	YES/NO
4. Original Minutes of the Doctoral Committee signed by all the members, HoD	
and Research Co-orinator (if any)	YES/NO
5. Panel of Examiners (both Indian and Foreign) with complete and correct postal	
address including Phone No, Mobile No, Fax No and correct E-mail ID	
(typed only) in a closed cover	YES/NO
6. The University communication (in ORIGINAL) confirming the Provisional	
registration	YES/NO
7. The panel of Foreign Examiners should not be of Indian origin	YES/NO
8. Provisional Registration Confirmation order(Original) issued by the University	YES/NO
9. PG / Qualifying Degree Certificate in Original	YES/NO
10. Thesis evaluation fee of 17,500/- in the form of a DD (any nationalized bank)	
drawn in favour of "BHARATH UNIVERSITY" with filled Challan	YES/NO
11. Xerox copy of the journal Publications of the Scholar with proof for the	
impact factor of the journal	YES/NO
12. Copy of the fee challan and Progress report for all the semesters till the	
submission of Synopsis	YES/NO
13. Whether Synopsis submitted within the maximum duration	YES/NO
14. If No, Extension of time obtained.	YES/NO
15. Copy of the Extension order enclosed, if applicable	YES/NO
16. Contact Phone No, Mobile No and E-mail ID of the Supervisor	YES/NO
17. Covering letter duly signed by the Supervisor and forwarded through the HoD	YES/NO
18. Minutes of pre-Ph.D. presentation in the department	YES/NO
19. No dues certificate	YES/NO

Checked and found correct

Signature of the Supervisor



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OFFICE OF THE CONTROLLER OF EXAMINATIONS

Date:

Proforma for Submitting the Synopsis

01. Name (as in the Degree Certificate) in Block Letters	
02. Register Number	
03. Father's Name	
04. Age, Place and Date of Birth	
05. Address (in Block Letters) to which all communications are to be sent	
06. Particulars of PG or other qualifying Degree to the Ph.D Programme	Degree : Date of Passing : Register No. : University:
07. Date of Convocation at which the above Degree was taken	
08. If the qualifying degree is from an University outside Tamilnadu, give the reference number and date of the Communication of this University recognising the Degree	
09. Provide information regarding Provisional registration	Date of Provisional: Registration: Date of Confirmation: University Ref.No :
10. Faculty and Department in which the Research was undertaken by the candidate	
11. a. Category at the time of Registration :	
11. b. Change of category, if any	
12. Date of Completion of maximum period	
13. Extension of period approved (date to be mentioned	
14. Date of DC meeting for approval of Synopsis	
15. Date of Submission of Synopsis	

16. Semeste	16. Semester Fees Details												
Month and Year													
Amount Paid													
Month and Year													
Amount Paid													
17. Course v	work det	ails											
Course c	Course code Course Title crea				credi	its Core Course / Elective / Special Elective					Grade / Marks		
											$\left \right $		
	I			CGP	I A						┼╴		
		(Comprehe			inati	ion					Pass	Fail
18. Progress	report s	subn	nitted										
Period	T T.		Jul-Dec	I	Turr	T1	l-Dec	Terr	L	Jul-de		Ten Ten	L-1 d
Date of submission	Jan-Ju	n	Jui-Dec	Jan-	Jun	Ju	I-Dec	Jan-	Jun	Jui-de	ec	Jan-Jun	Jul-dec
Date of submission													

500111551011	
19. Title of Thesis (in Block Letters)	
20. Name, Designation and full address of Research Supervisor	Name : Designation: Address :
	Email: Phone: Fax:

	For Of	fice Use only		
Signature of the Dean (Research) / Dean, Medical Research		Signature of the Head of the Institution (With Name, Date & Seal)		
Signature of Joint Supe (With Name, Da		•	e Head of the Department Name, Date & Seal)	
Signature of the Candid	late	-	f the Research Supervison 1 Name, Date & Seal)	
24. Whether Synopsis su maximum duration extension order sho Certified that the inforr	(if NO, copy of the uld be enclosed.)	Yes No	est of my knowledge.	
		Address		
Date	DD.No. & Date	Name of the Bank with	Amount	
23. Synopsis fees Paid d	etails			
impact factor should	be enclosed).	International:		
22. Publication Details (Photo copy of the p		National:		
		Email: Phone: Fax:		
21. Name, Designation and full address of the Joint Supervisor (if applicable)		Name : Designation: Address :		

SO

Title of the Synopsis <1.5 line spacing>

SYNOPSIS OF THE THESIS

A Synopsis submitted In Partial Fulfillment of the Requirements For the Degree of

 <Italic>

Submitted by

to the

Department of

Faculty of Engineering and Technology Bharath University, 173, Agaram Road

> Selaiyur, Chennai – 600 073 <1.5 line spacing>

> > Month, Year

Annexure A.9

GUIDELINES FOR THESIS PREPARATION Bharath University, Chennai

GUIDELINES FOR THESIS PREPARATION

1. INTRODUCTION

1.1 Purpose

This document, herein after referred to as 'Thesis Guide', lists the general and specific requirements governing thesis preparation, including guidelines for structuring the contents.

Thesis Submission

Besides various requirements for thesis submission such as submission of a list of examiners, additional copies of synopsis / abstract, and payment of thesis examination fees (for Ph.D. only), the students and their thesis supervisors should ensure that the guidelines are adhered to. While submitting the thesis.

2. SPECIFICATIONS FOR THESIS FORMAT

2.1 Preparation of Manuscript and Copies

- 2.1.1 The thesis needs to be prepared using a standard text processing software and must be printed in black text (color for images, if necessary) using a laser printer or letter quality printer in standard typeface (Times New Roman or Sans Serif font).
- 2.1.2 The thesis must be printed or photocopied on both sides of white paper. All copies of thesis pages must be clear, sharp and even, with uniform size and uniformly spaced characters, lines and margins on every page of good quality white paper of 75 gsm or more.
- 2.1.3 Thesis should be free from typographical errors.

2.2 Size and Margins

- 2.2.1 A4 is the recommended thesis size.
- 2.2.2 The top, bottom and right side margins should be 25mm, whereas the left side margin should be 35 mm for both textual and non-textual (e.g., figures, tables) pages.
- 2.2.3 Content should not extend beyond the bottom margin except for completing a footnote, last line of chapter/subdivision, or figure/table caption.
- 2.2.4 A sub-head at the bottom of the page should have at least two full lines of content below it. If the sub-head is too short to allow this, it should begin on the next page.
- 2.2.5 All tables and figures should conform to the same requirements as text. Color may be used for figures. If tables and figures are large, they may be reduced to the standard size (provided the reduced area is not less than 50% of the original) and /or folded just once to flush with the thesis margin (if the page size does not exceed 250x360 mm).
- 2.2.6 Students may choose to submit printed thesis copies either in the standard size (as in 2.2.1) or in a book format that is roughly half of A4. If the book format is dopted for submission, it should be ensured that all textual and illustrative material is distinct and legible. Students should also submit the thesis in soft form (PDF) for storage and archival.

2.3 Page Numbering

- 2.3.1 Beginning with the first page of the text in the thesis (chapter 1), all pages should be numbered consecutively and consistently in Arabic numerals through the appendices.
- 2.3.2 Page numbers prior to Chapter 1 should be in lower case Roman numerals. The title page is considered to be page (i) but the number is not printed.
- 2.3.3 All page numbers should be placed without punctuation in the upper right hand corner, 12 mm from the top edge and with the last digit even with the right hand margin.

2.4 Multi-Volume Thesis

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

2.5 Line Spacing

The general text of the manuscript should be in double spacing (3 lines per inch). Long tables, quotations, footnotes, multi-line captions and bibliographic entries (references) should be in single spacing (6 lines per inch), with text size in 11 points.

2.6 Tables, Figures and Equations

- 2.6.1 All tables (tabulated data) and figures (charts, graphs, maps, images, diagrams, etc.) should be prepared, wherever possible, on the same paper used to type the text and conform to the specifications outlined earlier. They should be inserted as close to the textual reference as possible.
- 2.6.2 Tables, figures and equations should be numbered sequentially either throughout the thesis or chapter-wise using Arabic numerals. They are referred to in the body of the text capitalizing the first letter of the word and number, as for instance, Table 17, Figure 24, Equation (33), or Table 5.3, Figure 3.11, Equation (4.16), etc.
- 2.6.3 If tables and figures are of only half a page or less, they may appear on the same page as text but separated above and below by triple line spacing. Font size for text should be the same as for the general text.
- 2.6.4 Good quality Line Drawings/figures must be drawn using standard software that provides vector rather than bit-map graphics. Figures must be scalable.
- 2.6.5 Images, Photographs, etc. must be scanned in resolution exceeding 200dpi with 256 grayscales for the monochrome images and 24 bit per pixel for the color images.

2.7 Binding

The student should submit the copies of the thesis in fully bound form (soft cover) for Ph.D. and a partially bound form (coiled wire binding, clamping, or filing) for M.Tech, respectively. Once the thesis is accepted, it is the student's responsibility to get it properly bound before depositing the required number of copies with the P.K. Kelkar Library and the Department concerned. The front cover of the bound copy should be the same as the title page of the thesis. The front cover should have printing on the side to include the author's name, abbreviated thesis title (optional), degree, department, and the year.

3. GUIDELINES FOR STRUCTURING CONTENTS

Sequence of Contents

The following sequence for the thesis organization should be followed:

- (i) Preliminaries
 - (a) Title Page as per the format given at the end of the Regulation
 - (b) Certificate at the end of the Thesis
 - (c) Declaration by the candidate
 - (d) Acknowledgement and/ or Declaration
 - (e) Table of Contents

List of Figures, Tables, Illustrations,

Symbols, etc (wherever applicable)

(ii) Text of Thesis

Introduction

The body of the thesis, summary and conclusions

- (iii) Reference Material List of References, Bibliography (where included)
- (iv) Appendices (if included)
- (v) Index (if included)

All the headings are centered (without punctuation)25mm down the top edge of the page. The subsequent type-setting begins four spaces below the heading.

Preliminaries

3.2.1 Synopsis/Abstract

- (i) A Ph.D. thesis should contain an abstract/synopsis not exceeding 1000 words (about four pages) in double spacing.
- (ii) Synopsis/abstract shall be printed in double space with the heading "SYNOPSIS/ABSTRACT" in uppercase followed by certain preliminary information and the text.
- (iii) Synopsis/Abstract should be self-complete and contain no citations for which the thesis has to be referred.

3.2.2 Table of contents

- (i) The table of contents lists all material that follows it. No preceding material is listed. Chapter titles, sections, first and second order sub-divisions, etc must be listed in it.
- (ii) Tables, figures, nomenclature, if used in the thesis, are listed under separate headings.

3.3 The Text of the Thesis

3.3.1 Introduction :

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

3.3.2 The body of Thesis This is the substance of the dissertation inclusive of all divisions sub-divisions, tables, figures, etc.

3.3.3 Summary and conclusions

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

3.3.4 Reference material

The list of references should appear as a consolidated list with references listed either alphabetically or sequentially as they appear in the text of the thesis. If pertinent works have been consulted but not specifically cited, they should be listed as Bibliography or General References. Spacing and font size should be consistent inside a single reference, and there should be double spacing between two different references (see Section 2.5).

Reference Format

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

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

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

A few examples of formats of references are given below and the student should be consistent in following the style.

Journals

• M.Ponnavaikko and K.S. Prakasa Rao, "Optimal Distribution System Planning", IEEE Trans. (PAS), June 1981, Vol. 100, PP. 2669 2977.

• K.R.Santhi, M.Ponnavaikko, and N.Gangatharan, "A comparative Study of Stability Testing of 2-D Recursive Digital Filters," Journal of Computer Science, 2008, ISSN 1549-3636, Vol. 4(12), pp 976-981.

Conference Proceedings

- T.Thiagarajan, J.Shanmugham and M.Ponnavaikko, "Artifical Neural Network based on Fuzzification models for air heat systems", proceedings of the International conference on Trends in Industrial Measurements and Automation, TIMA 99, MIT, Chennai(India), Jan. 7 11, 1999, Paper No:48, PP 34 354.
- C.Lakshmi & Dr.M.Ponnavaikko, "Improved kernel Discriminative common vector method for face recognition", Proceeding of the IEEE International Advances Computing Conference, March 6-7, Tappar University, Patiala, India, published in IEEE Xplore, pp: 239-244.

Books

• 'Computer Science - Tools', Text Book authored by Dr.M. Ponnavaikko, for Higher Secondary - Second year. 2006, TamilNadu Text Book Corporation.

Thesis

• Mrs. Jayam Shakthi, "Security Issues in E-Commerce", Ph.D. Thesis, BITS, Pilani, Rajasthan, 2008.

Technical Reports

- Dr.M.Ponnavaikko, Dr.K.Parthasarathy, "Distribution network planning for the Delhi Metropolitan City upto 1980" A Report on the Project sponsored by the Delhi Development Authority. I.I.Sc., Bangalore, 1976,.
- Patents
- Dr.M.Ponnavaikko, Principal Investigator, Dr.G.P.Dubey, et.al, Inter Disciplinary School of Indian System of Medicine (ISISM), SRM University, "Herbal formulation for the prevention and management of Type-2 diabetes mellitus and vascular complications associated with diabetes", US Patent No. US 8,337,911B2, 2012.

3.3.5 Appendix or Appendices

- (i) Supplementary illustrative material, original data, and quotations too lengthy for inclusion in the text or which is not immediately essential to an understanding of the subject can be presented in Appendix or Appendices (as Appendix A, Appendix B, etc.)
- (ii) Each appendix with its title should be listed separately in the table of contents. Likewise, tables and figures contained in the Appendices are to be included in the lists of tables and figures, respectively.

4. CONCLUDING REMARKS

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

Format of declaration certificate by the candidate to be included in the Thesis (in all copies)

DECLARATION

I declare that the thesis entitled
Submitted by me for the degree of Doctor of Philosophy (Ph.D) is the record of research work carried out by
me during the period fromtoto
guidance of and the co-guidance of
(wherever applicable) and has not formed the basis for the award of
any degree, diploma associateship, fellowship,; titles in this or any other University or other similar
institution of higher learning.

Date: Place Signature of the candidate (Name)

Annexure A. 9(b)

CERTIFICATE Format of the certificate to be given by the Guide/Co-guide (in all copies)

Date: Place: Signature of the Guide With Seal

Date: Place: Signature of the Co-guide With Seal



I Registration Details.

synopsis

BHARATH UNIVERSITY

173, Agaram Road, Selaiyur, Chennai - 600 073. Ph. 044 - 22290742/0125

Ph.D	FT/PT
Reg.No	

PROFORMA FOR SUBMISSION OF THESIS

REGISTRATION DETAILS

Name of the Scholar :		Register No:	
Address :		Contact No. & Email ID:	
Supervisor's Name :		Joint Supervisor's Name	2:
Address :		(if applicable)	
Autress .		Address:	
Contact No. & Email ID):	Contact No. & Email ID):
Title of the thesis :			
Category at the time of Registration	PT(Int.)/PT(Ext.)/FT	Change of category if any	
Month and Year of Registration		Period of break of study granted if any	
Date of confirmation		Date of completion of minimumperiod	
Date of completion of maximum period		Extension of period approved (mention date)	upto:
Date of DC meeting for approval of		Date of submission of thesis	

II. Extension of time for Thesis submission beyond 6 months after the submission of synopsis (if any):

Late fee details ::

Amount (Rs.)	DD No.	DD Date	Bank Name	Branch

Signature of the Candidate

Signature of the Research Supervisor (With Name, Date & Seal)

Signature of Joint Supervisor (if applicable) (With Name, Date & Seal) Signature of the Dean (Research) / Signature of the Head of the Department (With Name, Date & Seal)

Dean, Medical Research (With Name, Date & Seal) Signature of the Head of the Institution (With Name, Date & Seal)

Signature of the Director (Research) (With Name, Date & Seal) Signature of the Director of Faculty (With Name, Date & Seal)

(For Office use only)

Checked and Accepted

Controller of Examinations Superintendent

Format for report on adjudication of Ph.D Thesis by examiners

1. Name of the candidate	
2. Title of the thesis	
3. Discipline and subject	
4. Name and address of the Examiner	
5. Recommendation of the Examiner please strike out whichever are not applicable)	

:

(b) Thesis is highly commended

or

(c)Thesis is commended

or

(d) Thesis is commended and the Degree may be awarded subject to the candidate's furnishing satisfactory clarification to my queries during the public viva-voce examination.

or

(e) Thesis is commenced and the Degree may be awarded subject to the condition that the corrections/ modifications, suggested by me are carried out in the thesis and duly certified by the Guide-Con venor before the public viva-voce examination.

or

- (f) Thesis needs to be resubmitted after revision for evaluation.
- (g) Thesis is not commended and the Degree may not be awarded.

6. Detailed report on the thesis (to be enclosed applicable)	
7. List of questions to be asked at the public viva-voce : examination (to be enclosed)	

Date: Place: Signature of the Examiner With Designation

Address: