

Guidelines for Ph.D. Candidates

(On-campus research scholars, Faculty member, Part time and Aspirant Ph.D. students)

(Including Course Handouts & Evaluation Forms for Ph.D. Courses and Guidelines for Doctoral Candidates and Supervisor(s))

Academic - Graduate Studies and Research Division

Birla Institute of Technology and Science Pilani

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1. Introduction

This brochure presents information on PhD programme of the Institute for continuing on-campus full time & part time PhD candidates. Every candidate has to follow the procedures laid down for fulfilling the requirements of PhD programme of the Institute.

These pages explain two important aspects of the programme viz. Semester-wise Operations and PhD Thesis submission. The Institute follows semester-wise pattern and a candidate is required to register in prescribed PhD courses in every semester by paying requisite amount of fees till all the requirements of the programme are completed and the thesis is submitted. Fee payment is handled by SWD & it is the responsibility of every student to interface with SWD and pay the fees before due date. Nonpayment of fees will result in withholding of registrations formalities & room allotment.

The candidate is supposed to plan his/her work and is evaluated continuously by the respective supervisor/mentor. The overall operation of PhD programme is governed by the Academic Regulations of the Institute.

The paragraphs to follow give details about operational features of the programme, semester-wise registration pattern, requirements of various courses, presubmission seminar and PhD Thesis submission. Various proforma and checklists have also been appended and the same may be photocopied and used. A calendar of various events for a typical semester is also included. All the candidates and supervisors should refer to this document throughout the duration of the PhD programme and adhere to the deadlines of various activities. Changes, if any, will be communicated by Academic Graduate Studies and Research Division (henceforth AGSRD).

It is expected that this brochure will enable a candidate and his/her supervisor in understanding the requirements of the PhD programme of the Institute.

2. Operation of PhD Programme at BITS

Every candidate has to complete certain activities during his/her PhD programme as given in the following paragraphs. The process starts with applying for PhD programme of the Institute and getting admitted.

2.1 Departmental Research Committee (DRC)

Every candidate must interact closely with DRC of the department he/she is concerned. Each Department has a "Departmental Research Committee" (DRC), consisting of Head of Department (HOD) as ex-officio member and Chairperson, and 2 to 6 faculty members, at the level of Assistant Professor or above, who are active in research. The size of DRC may depend on the number of faculty members in the

Department. One of the members acts as its Convener. The term of DRC members is of two years. DRC is approved by the Director of the Campus on the recommendation of HOD through Associate Dean and Dean, AGSRD and helps AGSRD in operations from admission to final thesis submission.

For each PhD student, the DRC will recommend a notional thesis supervisor or mentor based on department need and student's area of interest. Normally only PhD holders with regular employment are eligible to act as PhD Supervisor/Co-supervisor. Further, for each PhD student, the DRC will, in consultation with the notional supervisor of the student, appoint two additional members for Doctoral Advisory Committee (DAC). For students in interdisciplinary area there can be DAC member(s) from other department/campuses based on topic of research.

In case any PhD candidate (e.g. faculty) choose the supervisor from another department then the candidate will come under the purview of DRC to which the Supervisor belongs.

2.2 Admission

A candidate is normally admitted to the PhD programme after passing his/her PhD qualifying examination. A few candidates may be admitted to the programme as provisional candidates before passing the PhD qualifying examination. This provision is applicable to full time research scholars on the campus.

*Modalities of PhD Admissions for Lectures/Faculty joining Hyderabad campus under the faculty Development program:

- i. Faculty members/Lectures after completing their joining formalities can appear for PhD qualifying in their department by following the regular course adopted for PhD qualifying. E.g.:- Filling up of form, identification of subjects, Identification of notional supervisor, DAC members etc.
- ii. Once the Registrar signed result letter is received from Pilani and if the candidate has cleared, then he/she goes to Admissions Office, Hyderabad campus with the pass letter and fill up PhD Admission form.
- iii. Admission office will grant admission to the faculty based on his qualifying result and immediately generate ID No.
- iv. Admissions to PhD can be done for faculty anytime during the semester. There is no need to wait for PhD advertisement or filling up online form etc.
- v. Decision on faculty admission to PhD is handled exclusively by the campus Admission office.
- vi. Using the ID no., the faculty can go ahead and submit for Research proposal for DCC/Research Board approval.
- vii. All other information pertaining to PhD available in PhD Guidelines brochure circulated to all enrolled PhD candidates.
- * Regular full time and part time PhD admissions process kindly refer to the admissions website of BITS Pilani. Vertical transfer to PhD program ensures ONLY admission. Funding/fellowship will be decided through a separate process.

2.3 leave rules

Each candidate is eligible for 30 days of vacation and 15 days of casual leave in an academic year (August to July). Special casual leave of 15 days is permissible for attending conferences/workshop/symposiums/training programmes, etc. For female candidates, maternity leave of 180 days is permitted.

POLICY DOCUMENT ON RESEARCH SCHOLARS/PhD STUDENT'S LEAVE AS APPLICABLE TO HYDERABAD CAMPUS

- Maintaining the attendance register and monitoring presence is the responsibility of individual departmental DRC's.
- ii. All kinds of leave should be approved by the PI/Supervisor and the DRC of each department.
- iii. As per the PhD student guidelines, PhD students and research scholars are eligible for 15 days CL, 15 days SCL and 30 days of vacation leave. A PhD student may have his own fellowship from CSIR/UGC, etc. as per their guidelines given by funding agency.
- iv. Leave for PhD student is usually considered as per the academic year calendar i.e. from 1st August to 31st July of every year.
- v. Vacation Leave:
- a. Vacation leave of 30 days can be used anytime during the year and can be preponed if necessary if course duties are appropriately taken care of. For E.g. In case of prolonged leave requirement like medical reason, marriage etc... Vacation leave can be used.
- b. Vacation leave can be taken only in one or two installments. Vacation leave cannot be split more than twice in one academic year.
- vi. On duty leave:
 - On duty leave is also under the purview of DRC of each department. If the work demands and if the PI and DRC have no objection, on duty leave may be permitted to the PhD student. Care needs to be taken by DRC that academic procedures like registration, grade submission, and other responsibilities of the student are not compromised.
- vii. Special Casual Leave:
- a. SCL conditions are the same as applicable to faculty. For attending Conferences, academic meetings, workshop, symposia etc.
- b. Reasons given above should be considered only under SCL and not as on duty leave. SCL should not be clubbed with on duty leave.
- viii. Casual leave:
 - a. Casual leave cannot be clubbed with any other leave.
 - b. The maximum casual leave that can be taken at a stretch is only 10 days.
- ix. Maternity Leave: For female candidates, maternity leave of 180 days is permitted.

A PhD student may have his own fellowship from CSIR/UGC, etc. For them leave policy as per the funding agency.

2.4 Registration

All the candidates have to register in every semester till the submission of his/her thesis. In the beginning of each semester, all the candidates will sign the registration card confirming their registration for the semester. This card indicates the courses in which he/she is being registered in that particular semester.

Registration of on-campus candidates will be done separately for each campus on the day of registration date. Semester fee and all other dues are to be cleared before registration in each semester.

A PhD candidate under special circumstances can seek permission for not registering in a particular semester. His request has to be verified and forwarded by DRC to the Dean/ Associate Dean, AGSRD.

2.5 Duration of PhD programme

A candidate must submit his/her thesis within ten semesters (excluding summer term) to be counted from the semester following the semester of passing qualifying examination. After the expiry of this term, candidate must seek extension of term from DCC through DRC. This application should reach AGSRD at least two months before expiry failing which the admission from PhD programme may be cancelled.

2.6 Course work

For students with First Degree, depending upon the student's qualifications and background, the DRC will, in consultation with the student's notional supervisor and DAC members prescribe course work for such a PhD student, and will communicate the same to the Associate Dean, AGSRD for record. The minimum of number of courses shall be six with minimum of 24 units. The number of units in one semester should not exceed 14. Candidate should not obtain less than D grade in any course and should have minimum CGPA of 5.50. If less than D grade is obtained, course should be repeated. On obtaining less than D grade in more than one course or CGPA less than 5.50, student shall be discontinued from the programme.

Usually, if the suggested course is available in the bulletin then the student is advised to register in the same course name and code. This will be added as a course for the department and the I/C will directly submit grades to AGSRD. However, if some course material is not available as a structured course in the bulletin, then the student may register for all those courses under other heads like Study in Advanced Topics, Reading Course, etc. Only two undergraduate courses can be taken by PhD candidates as part of their course work. Both these courses should be greater than or equal to level 4.

Students with Higher Degree (HD) may also be required to do course work if he is working in different area than his area of HD or having less than 6 courses in his HD. Number of courses will be decided by the Notional Supervisor and DAC members in order to prepare the candidate to undertake research in the chosen area. Number of courses can vary from zero to 6. Campus-based Associate Dean, AGSRD will forward the prescribed list of courses for all PhD students to campus-based AGSRD for purpose of course registration. On successful completion of prescribed course work a PhD student will be eligible to appear in qualifying examination and can apply for the same to DRC.

2.7 PhD Qualifying Examination

Each PhD student must, in consultation with his/her notional supervisor, plan for and prepare to clear qualifying examinations in two areas from the list of qualifying examination areas in the sub-disciplines of each department. One of these must be in the sub-discipline in which he/she proposes to undertake research. The list of sub-disciplines should be taken from DRC. One can also choose one area from across other department areas. An application should be made to DRC in the format provided through notional supervisor to conduct the qualifying examination. Qualifying examination will consist of written test on two chosen areas and will be followed by an oral test. The written test usually follows an open book pattern and the rules of the open book are same as applicable to all open book components across the Institute. Provision for permitting material, laptops etc. lies with the examiner and the DRC.

As per requirement, each subarea may have several sections with a total of 150/160 marks for theory and 50/40 marks for viva. The duration of each theory examination will be 3.0-4.0 hrs. Viva may be conducted separately for each sub area. A student will get a maximum of two attempts for clearing the qualifying examination.

At the beginning of each semester, the DRC of each department will announce dates in that semester for holding qualifying examination in each of the sub-disciplines. On receiving request from eligible PhD students, who have completed their coursework, DRC will the conduct qualifying examination. Answer books of PhD qualifying exam are collected back by DRC after showing to the students and send to AGSRD along with the question paper from the department. Results of qualifying examination will be sent to Dean AGSRD through Associate Dean AGSRD for approval of Examination Committee.

2.8 Topic of Research & Supervisor

Once a PhD student clears the required qualifying examination, he/she, in consultation with his/her notional supervisor and the DAC members will decide upon the topic, the co-supervisor (if required), prepare a research proposal and present it in writing and orally before the DAC members. For Research proposal mentioned above, each candidate should carry out a comprehensive literature search, understand the background and scope of research in the particular area of interest and consult his notional supervisor. Based upon DAC recommendation, the DRC will recommend to Dean AGSRD, through Associate Dean AGSRD for approval of (i) supervisor (and cosupervisor), (ii) the research topic together with the detailed proposal and its summary, (iii) the research plan, and (iv) place of research work, as per requirement. Dean, AGSRD in consultation with Doctoral Counseling Committee (DCC) members will approve and report to Research Board. At this stage, the student formally becomes eligible to register in the PhD thesis course.

Normally the approval of research proposal has to be obtained within one or two semesters of the first registration in the PhD programme after passing the PhD qualifying examination. Registration in BITS C799T PhD Thesis (10 units) is permitted only after the approval of Topic of Research and Supervisor.

2.9 Semester Work

The operation of the courses in which the candidate is registered has to be carried out as per details outlined in the course handout of the course and evaluation form for PhD courses. The following documents are to be submitted each semester as per schedule indicated in the calendar of events.

- i. Plan of work for the semester courses in which the candidate is registered
- ii. Mid-Semester evaluation forms and work reports
- iii. Final semester evaluation forms and work reports

After the approval of Topic of Research and Supervisor, the candidate is entitled to register in BITS C799T PhD Thesis course. The supervisor(s) and DAC will monitor progress of the respective student's thesis work. Each semester, the DRC will organize seminars by PhD students to which members of the DAC (as also members of relevant departments) will be invited. At the end of each semester, grades will be communicated to campus-based Associate Dean, AGSRD who in turn will forward the grades to respective campus Dean. Non-receipt of evaluation forms and reports by the due dates may result into a 'NC' (Not Cleared) in the particular course. Award of 'NC' in two consecutive semesters may debar a student from being on the rolls of PhD students.

2.10 Pre-submission draft and Seminar

On completion of research, the PhD student will prepare a draft of the thesis and its synopsis and will submit the same for preliminary but detailed assessment by two members of DAC on whether the thesis is in a shape that it can be formally submitted to the Dean, AGSRD for final evaluation. Candidate should submit two copies of his /her draft thesis to DRC for the necessary review by DAC members. The candidate will make an oral presentation before the DAC, DRC members and others in the department concerned after incorporating corrections/suggestions given by DAC members.

2.11 Thesis Title Approval

After the pre-submission seminar, DRC will forward the request of candidate (through supervisor(s)) to approve the exact title of thesis to Associate Dean AGSRD. The exact title of the Thesis is discussed at the time of pre-submission seminar. The proposed title of the PhD thesis is then approved by the DCC. Chairman, Research Board, thereafter, approves the title of the Thesis. The title should be written following the 'Title Case' style.

2.12 Thesis submission

The candidate can submit his/her PhD thesis once the draft thesis has been approved by the DAC at the time of pre-submission seminar and his title is approved by DCC. Thesis along with synopsis and relevant documents are to be submitted to Convener, DRC. The DRC will also finalize a list of at least 7 potential thesis examiners, based on a list of potential examiners submitted by supervisor(s). The list should also contain (i) a brief description of the potential examiner's current position, (ii) the area of expertise, and (iii) a short list of related publications. The exact format in which the examiner details are to be provided is available with the respective DRC's.

Together with (i) the thesis, (ii) the synopsis, (iii) the original copy of the reports of the DAC members, (iv) the list of potential examiners, (v) other related documents, the DRC will recommend to the Dean, AGSRD through the campus-based Associate Dean, AGSRD that the evaluation of the thesis may begin.

Before forwarding the list of examiners to Dean AGSRD, DRC may check the availability of the examiners. Out of the list, Dean AGSRD will recommend two examiners to Vice Chancellor (VC) for his approval. Subsequently, Dean AGSRD will send the thesis with list of approved examiners to Registrar for necessary communication. The Registrar will send the thesis for evaluation to the examiners. The Registrar will receive examiner's reports, including reports from Supervisor and co-supervisors (if any), and will send reports to Dean AGSRD with a request to study the examiner's reports together with two Examination Committee (EC) members. A three-member committee, including the Dean, AGSRD will examine the reports, and submit recommendation to the Registrar. On receiving the recommendation of the 3-member committee, the Registrar will obtain the approval of EC (or VC as Chairman of EC) for conduct of viva-voce examination. Dean AGSRD will write to the Supervisor (and cosupervisors), through the campus-based Associate Dean AGSRD, to arrange viva-voce examination.

The viva-voce may be held at the respective campus in the presence of the (i) Supervisor, (ii) at least one external examiner, and (iii) Co-supervisor(s), if any. Once viva-voce is held, the final report will be sent to Dean AGSRD who will submit to the Registrar. The Registrar will seek approval of EC (or VC as Chairman of EC). VC approves result in his/her capacity as Chairman, Examination Committee, with information to Dean AGSRD, Associate Dean AGSRD of the respective campus. The award of the degree will subsequently be ratified by the Senate.

2.14 Change of Supervisor/Topic of Research

A fresh approval of the University level Doctoral Counseling Committee based at Pilani, is required for any changes in topic of research and/or supervisor. Candidate has to request through supervisor and DRC to Associate Dean AGSRD, who will forward the request to Dean, AGSRD for approval of DCC/Research Board.

3. Salient Operational Features of the Programme

- PhD qualifying examination is to be cleared by all the candidates.
- Teaching Practice is essential component of the programme to train the candidates in presentation skills.
- PhD Seminar is essential component of semester registration and is meant to take care of issues related to the topic of research.
- Topic of Research and Supervisor may be chosen from candidates' own organizations.
- Provision of any co-supervisor, as recommended by DAC and DRC.
- Registration in PhD Thesis course is permitted only after the DCC/Research Board has approved the Topic of Research and Supervisor.
- Registration is to be done in every semester by paying requisite amount of fees till the submission of thesis.
- Provision of dropping a particular semester by applying well in advance in case of any genuine reason.
- No minimum time prescribed for the programme. A student has to complete minimum 40 units of PhD Thesis course to be eligible to submit the thesis, which normally takes 4 semesters after the DCC/Research Board has approved the proposal. However, mere completion of 40 units does not make someone entitled for the submission of thesis.
- Upper time limit of 10 semesters is usually there for submission of thesis. This is counted from the semester following the passing of PhD qualifying examination.
- Provision exists for accelerating the programme subjected to the merit.
- Doctoral Counseling Committee for monitoring the progress of the programme and need of extension requirements, if any.
- Doctoral Advisory Committees for each candidate consisting of subject experts for academic review of the work.
- Continuous monitoring of all the candidates during the semester.
- The DCC/Research Board on case-by-case basis approves Topic of Research and Supervisor, Locale of Work and Language requirements.
- Thesis should be written in English.
- In house review by subject experts, pre-submission seminar and title approval before submitting the final thesis.
- Viva-voce on PhD Thesis is an essential component before the award of the degree.
- Fixed 'calendar of events' for monitoring.

4. Semester-wise Registration Programme

Pattern 1: Semester-wise Registration Programme for On-campus Candidates and admitted after clearing qualifying examination (For Full time scholars holding Higher Degree and Faculty Members under Faculty

Development Scheme)

	pinent scheme)			
		Unit		
Year	First Semester	s	Second Semester	Units
ı	BITS C797T PhD Seminar	1	BITS C797T PhD Seminar	1
	BITS C791T Teaching Practice I	1	BITS E661 Research Methodology-I	5
	C		BITS C799T PhD Thesis	10
			(For part time students)	
	(For part time students)		BITS C797T PhD Seminar	1
	BITS C797T PhD Seminar	1	BITS E661 Research Methodology-I	5
	BITS E793T Practice Lecture Series I	1	BITS C799T PhD Thesis	10
			(For Aspirant students)	
	(For Aspirant students)		BITS C790T Independent Study	1
	BITS C790T Independent Study	1	BITS E661 Research Methodology-I	5
	BITS E793T Practice Lecture Series I	1	BITS C799T PhD Thesis	10
	BITS C797T PhD Seminar(For FT & PT)		BITS C797T PhD Seminar(For FT & PT)	
II	BITS C790T Independent Study(For Aspirant)	1	BITS C790T Independent Study(For Aspirant)	1
	BITS C799T PhD Thesis	10	BITS C799T PhD Thesis	10
	BITS C797T PhD Seminar (For FT & PT)		BITS C797T PhD Seminar(For FT & PT	
III	BITS C790T Independent Study(For Aspirant)	1	BITS C790T Independent Study(For Aspirant)	1
	BITS C799T PhD Thesis	10	BITS C799T PhD Thesis	10

Note: It is assumed that the topic of research, locale of research work and supervisor are approved by the DCC/Research Board in the First semester of admission.

Pattern II: For PhD candidates holding First Degree and doing courses before becoming eligible for Qualifying Examination (For Full time scholars on the Campus)

Year	First Semester	Units	Second Semester	Units
1	Course 1		Course 4	
	Course 2		Course 5	
	Course 3		Course 6	
	BITS C797T PhD Seminar	1	BITS C797T PhD Seminar	1
	BITS C791T Teaching Practice I	1	BITS E661 Research Methodology-I	5
			BITS C799T PhD Thesis	10
			(For part time students)	
	(For part time students)		BITS C797T PhD Seminar	1
	BITS C797T PhD Seminar	1	BITS E661 Research Methodology-I	5
	BITS E793T Practice Lecture Series I	1	BITS C799T PhD Thesis	10
			(For Aspirant students)	
	(For Aspirant students)		BITS C790T Independent Study	1
	BITS C790T Independent Study	1	BITS E661 Research Methodology-I	5
П	BITS E793T Practice Lecture Series I	1	BITS C799T PhD Thesis	10
	BITS C797T PhD Seminar(For FT & PT)		BITS C797T PhD Seminar(For FT & PT)	
III	BITS C790T Independent Study(For Aspirant)	1	BITS C790T Independent Study(For Aspirant)	1
	BITS C799T PhD Thesis	10	BITS C799T PhD Thesis	10
	BITS C797T PhD Seminar(For FT & PT)		BITS C797T PhD Seminar(For FT & PT)	
IV	BITS C790T Independent Study(For Aspirant)	1	BITS C790T Independent Study(For Aspirant)	1
	BITS C799T PhD Thesis	10	BITS C799T PhD Thesis	10

Note: It is assumed that the topic of research, locale of research work and supervisor are approved by the DCC/Research Board in the first semester of second year.

Common Notes for All the Above Patterns

- All operations are governed by the 'Academic Regulations' of the Institute.
- Registration in PhD Thesis is done only after the DCC/Research Board approves the
 Topic of Research, locale of research work and Supervisor(s). Registration in Thesis
 can be advanced/postponed depending on the approval by the DCC/Research Board.
 Registration has to be continued till the submission of thesis.
- Before submission, the candidate has to give pre-submission seminar and the exact title of the thesis has to be approved by the Doctoral Counseling Committee for recommendation to the DCC/Research Board.
- No minimum time limit is prescribed. Registration in prescribed minimum number of
 units and components normally requires 4-6 semesters depending on the time of
 approval of topic/supervisor and locale of research work by the DCC/Research
 Board. An upper limit of ten semesters for submission of thesis starting from the
 semester subsequent to passing the Qualifying examination is normally considered.
- The foreign language will be prescribed as an eligibility requirement for the PhD only when the supervisor(s) and/or Dean AGSRD have made recommendations for the same for a topic of research and the DCC/Research board accepts this requirement. Otherwise English or an Indian Language as the case may be would suffice. A PhD student for whom foreign language is prescribed is expected to demonstrate an ability to translate a piece from current periodicals in the area of major interest of the student in one of the modern European languages into English with the help of a dictionary.

5. Course Handouts for PhD Courses

The PhD programme of BITS requires a candidate to register in certain category of courses. These courses and their objectives are specified below.

I. Teaching Practice/Research Methodology Series

BITS C791T	Teaching Practice I	1 Unit
BITS E661	Research Methodology-I	5 Unit

(For part time students)

BITS E793T Practice Lecture Series I 1 Unit
BITS E661 Research Methodology-I 5 Unit

The above two separate and independent courses, to be taken one at a time, are designed and operated to provide cumulative experience for PhD student in the practice of teaching.

II. PhD Seminar

On-campus candidates have to take the course BITS C797T PhD Seminar, of 1 unit. For PhD thesis submission, minimum of 2 units of this course are required.

III. PhD Thesis

The registration in course BITS C799T PhD Thesis (of 10 units) is done only after the DCC/Research Board approves the Topic of Research, locale of research work and Supervisor(s). Total minimum units required are 40 for PhD thesis submission and the distribution of the units between different semester /term would be determined by the Dean AGSRD.

The next sub-sections contain the course handouts of the above PhD courses.

5.1 BITS C 797 T PhD Seminar

I Instructor-in-charge : Associate Dean, AGSRD

Instructors : Supervisor(s)/Mentor(s)

II Scope and objective of the course

The aim of this course is to develop student's expertise in the art of oral presentation of his/her research work. It also aims to train students in the art of presentation of their scientific work at seminars etc.

III Operation of the course

The student should immediately interact with his/her supervisor(s)/mentor and decide the topics for the seminar to be presented during the semester. Each semester, the DRC will organize seminars by PhD students to which members of the DAC (as also members of relevant departments) will be invited. At the end of each semester, grades will be communicated to campus-based Associate Dean, AGSRD who in turn will forward the grades to respective campus Dean. A student will give at least two seminars. In case supervisor(s)/mentor desires, he/she may ask his/her students to present more than two seminars also, and he/she would then proportionally assign marks for each seminar and record the Grades/marks in evaluation form broadly in two components. Each component may have more than one seminar.

IV Evaluation

Component	Weightage	Date of Completion	
Seminar-1	50%	8 th week of the semester/ 4 th week of summer term	
Seminar-2	50%	Last week of class work in the semester/term	

The evaluation apart from other components will be based on the following.

- 1. Technical contents in the presentation
- 2. Depth of knowledge in the subject
- 3. Style of presentation (logical development of the subject, due emphasis on salient features, presentation techniques, etc.)
- 4. Response to questions (quick grasp and answer to the point)
- 5. Written report

V Mid-semester Grading

The Supervisor/mentor will submit the mid-semester grades to Instructor-in-Charge after the completion of seminar component to DRC.

V End-semester Grading

The Supervisor/mentor will submit the end-semester grades to Instructor-in-Charge after the completion of seminar component to DRC. 5.2 BITS C791 T Teaching Practice I
BITS E793T Practice Lecture Series I

All PhD students registered to BITS C791 & BITS E793T are advised to follow the

guidelines provided by Instructor-in-charge.

5.3 BITS C 799 T PhD Thesis

I. Instructor-in-charge : Associate Dean, AGSRD

Instructors : All Thesis Supervisor(s)/Mentors

II. Scope and objective of the course

The aim of the thesis course is to impart training in the methodology of research, to cultivate logical and creative thinking and to make the student express his/her

findings in the form of a scientific report. It also gives an opportunity to a student to

comprehend the knowledge of his/her subject and apply it to the given problem.

III. Operation of the course

The student should immediately chalk out a plan of work for the entire semester

and prepare a detailed outline of the work in consultation with his/her

Supervisor(s)/Mentor. The Supervisor(s)/Mentor will spell out the objectives and

expected rate of progress. The detailed outline of work must include a time schedule

clearly indicating the intermediate milestone and the estimated time when these are to

be reached.

IV. Evaluation

The evaluation in this course is essentially individual oriented. At the end of

Semester/Term, Supervisor(s) will give an interim grade. The suggested instruments for

evaluation are given below.

1) Detailed outline of work

2) Oral presentation

3) Written report

4) Progress of the work, findings & results.

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The reports etc. should be submitted to the Supervisor(s)/Mentor. Candidate permitted to work without the benefit of a supervisor or permitted to work at an outside center, should send one copy of each report along with the final evaluation form to the Associate Dean, AGSRD through the respective Supervisor(s)/Mentor so as to reach well before the day on which semester/term ends.

V. Mid-semester Grading

The Supervisor(s)/Mentor to his/her student sometimes in the middle of the semester/term will announce this. The recommended Mid-semester/Term Grade should be sent to the Instructor-in-Charge.

VI. Any other details

This course handout shall be applicable to candidate registering for either first or second semester or summer term of any academic session.

5.4 BITS E661 Research Methodology - I

All PhD students registered to **BITS E661** are advised to follow the guidelines provided by Instructor-in-charge.

6. Other details of PhD courses

6.1 Prescribed Requirements of PhD Courses

Sr No	Course	Minimum Required Units	
1	BITS C 799 T PhD Thesis	40	
2	BITS C 797 T PhD Seminar	02	
3	BITS C 791T Teaching Practice I BITS E793T Practice Lecture Series I	01 01	
4	BITS E661 Research Methodology I	05	
5	Foreign Language- if required		
6	PhD qualifying examination to be cleared by all		

Note: After completing minimum required prescribed units, registration in 10 units of PhD Thesis and 1 unit of PhD Seminar will be continued in each semester till the submission of thesis

6.2 Non-Letter Grades Applicable to PhD Courses

1	Interim grade for PhD Thesis	Satisfactory / Unsatisfactory
2	Interim grade after thesis submission	Thesis Grade Awaited
3	PhD Seminar	Good/Poor
	Teaching Practice/ Practice Lecture	
4	Series/Research Methodology	Above average/Average/Below Average
5	Final grade for PhD viva-voce	Acceptable/Unacceptable

6.3 Various Reports in Grade Card

Sr	Report	Academic Regulation Clause
1	Incomplete (I)	4.13 & 4.14
2	Grade Awaited (GA)	4.15 & 4.16
3	Thesis Grade Awaited (TGA)	4.15 a
4	Withdrawn (W)	4.17
5	Registration Cancelled (RC) Discontinued from	4.18
	the programme (DP)	
6	Not Cleared (NC)	4.19 & 4.20

7. Important Extracts from Academic Regulations

Sr No	Issue	AR Clause No
1.	Language requirement	8.12 & 8.13
2.	Doctoral Advisory Committee	8.02a
3.	Course work	8.03
4.	Qualifying examination	8.05 & 8.06
5.	Research proposal approval	8.17
6.	Change of Supervisor/Topic/Locale	8.19
7.	Registration PhD thesis course	8.21
8.	Title approval	8.23
9.	Writing of thesis in English	8.24
10.	Time for submission of thesis	8.25
11.	Submission of Thesis	8.26 & 8.27
12.	Examination of Thesis	8.28
13.	Verdicts on Thesis	8.29
14.	Resubmission of Thesis	8.30 & 8.31
15.	Viva-voce on Thesis	8.32
16.	Minimum requirements for continuation	8.35
17.	Extension needs if any	8.38

Note: Please refer to Academic Regulations for more details

8. Calendar of Events for a Typical Semester/Term

These dates are subjected to minor changes and proximity to the dates may be assumed for all the operations in a particular semester

8.1 Dates from Institute Bulletin

I Semester	II Semester	Summer Term	Item
Aug 01/02	Jan 06/07	May 23/24	Semester /Term starts
Oct 11/12	Mar 16/17	June 29/30	Last date for withdrawal from courses
Nov 28/29	April 28/29	July 15/16	Last day for class-work
Dec 14/15	May 16/17	July 18/19	Semester /Term ends

8.2 Dates from Course Handouts

I Semester	II Semester	Summer Term	Item
Aug 16/17	Jan 21/22	June 1/2	To prepare plan of work for thesis, PhD Seminar, Teaching Practice, Practice Lecture Series, Research Methodology
Oct 10/11	Mar 16/17	June 28/29	Mid-semester report and Evaluation form submission
Nov 28/29	April 28/29	July 15/16	Final report & Final evaluation forms submission

8.3 Dates for DCC/Research Board Matters

	Date of submission to AGSRD	
ltem	Semester-I	Semester-II
Intimation to AGSRD for PhD Qualifying Examination	20 th August & 01 st November	20 th January & 01 st April
Conduct of PhD Qualifying examination	31 st August & 15 th November	31 st January & 15 th April
Submission of PhD proposal duly approved by DRC & All Matters related to the board like change of locale, organization supervisor if any and Research Proposal	10 th August & 30 th October	24 th January & 15 th April

8.4 Pre-submission Seminar and Submission of thesis

I Semester	II Semester	Summer Term	Item
October 15	March 15		Submission of draft thesis for review by DAC
December 01	May 01	July 15	Submission of Final version of thesis

Note: Research proposal may be submitted by these dates or earlier as and when the same is ready. Kindly ensure that you have done a thorough/scholarly literature survey

9. General Guidelines for PhD Candidates

- 1. Rules governing the operation of the PhD programme are described in 'Academic Regulations' of the Institute. Section 8 of the Regulations deals with PhD programme. Candidates are requested to be familiar with these regulations.
- 2. The candidate should clear his/her dues regularly as per the instructions of Student Welfare Division (By DD in favor of BITS, Pilani Hyderabad Campus drawn on SBI Jawaharnagar, Hyderabad). Failure to clear dues will result in withholding the Grade Sheet for the semester.
- 3. All the candidates must register by following the procedures laid down by Academic Graduate Studies and Research Division. Failure to register in a semester without prior permission may result into striking off the name from rolls of PhD programme.
- 4. The candidates should frequently interact with his/her supervisor(s)/mentor. No communication on progress will result into award of Not Cleared (NC) report.
- 5. A copy of plan of work shall be submitted to Associate Dean, AGSRD Through DRC, for approval.
- 6. For field trips outside the approved place of work, a complete plan indicating purpose, duration(more than one week) and place of visit should be given through the supervisor/mentor to DRC, in advance for approval.
- 7. One copy of each report should be forwarded through the Supervisor(s)/Mentor with his/her due recommendations for the award of Mid-semester and Final semester grade so as to reach as per the calendar given in this booklet.
- 8. Candidates should ensure with the supervisor(s)/mentor that the recommendation regarding Final Grades is sent to Associate Dean, AGSRD before the last day of classwork in the particular semester/term as per the calendar given in this booklet.
- 9. The candidates may use photocopies of various proforma in this booklet during the semester.
- 10. Change of postal, E-mail addresses and telephone numbers shall be communicated to the Associate Dean, AGSRD and SWD.
- 11. ID No and Name should be used in all the communications with the Institute.
- 12. For using central facilities such as computing, instrumentation, workshop, IMA lab, various stores etc. the candidate must follow the procedures laid down by the respective facility in-charges.
- 13. Two copies of draft thesis may be submitted for review by the Doctoral Advisory Committee when the research work is over. Request for title approval may be given after the pre-submission seminar.

- 14. It is the responsibility of candidate to inform and seek approval of DCC/Research Board for Change of Supervisor, and Topic if any.
- 15. Unsatisfactory grades in Thesis course for two consecutive semesters warrants the counseling by Doctoral Counseling Committee and debarring the candidate from being the rolls of PhD.
- 16. For submitting thesis 40 units of PhD thesis course, 2 units of PhD Seminar, 2 Units of Teaching Practice/Practice Lecture/Research Methodology course are to be completed by the candidate in addition to foreign language requirement if any.
- 17. Spiral bound copies of the thesis —one for each examiner, 1 soft copy of thesis in the form of CD, 2 copies of Synopsis, Thesis submission original fee receipt given by SWD, prescribed proformas and current semester grades shall be submitted to the Associate Dean, AGSRD through the Supervisor(s) and DRC. The candidate should ensure that the Thesis title page and certificate is as per the requirements. A sealed envelope containing names and details of proposed examiners may also be provided by the supervisor(s) through DRC for completing the submission of thesis. The candidates should ensure that the thesis is being submitted as per the above requirements.
- 18. The thesis must be submitted within 10 semesters of registration (5 years after the PhD qualifying examination semester). Extension requirements if any should be sent to Convener, Doctoral Counseling Committee through the respective Supervisor(s).
- 19. Though completion of 40 units makes the candidate eligible to submit the thesis, the candidate should ensure "Addition of Knowledge" to the field of his/her research work and should come up with his/her own contributions.
- 20. The candidates are advised to publish their work in International/National Refereed Journals, obtain patents and present their work in International/national Conferences of repute. It is expected that candidate publishes minimum of two research papers from his research work in peer reviewed journals before the pre-submission seminar.
- 21. The candidate is called for PhD Viva-voce examination if all the examiners give unequivocal verdict that "The Thesis is approved for Viva-voce Examination".
- 22. The candidate should also furnish the details of their publications, presentations, awards, and patents every year for the Annual Report of BITS.
- 23. All the candidates are requested to use their active e-mail addresses for quick communication.

- Rules governing the operation of the PhD programme are described in 'Academic Regulations' of the Institute. Section 8 of the Regulations deals with PhD programme. Supervisors are requested to be familiar with these regulations.
- 2. A thesis supervisor acts as instructor for various courses registered by a PhD candidate and assists the Instructor-in-charge in the conduct of various PhD courses of BITS.
- 3. The supervisor(s) as per details given in the course Handouts does assignment of work to his/her candidate in PhD Thesis and Independent study courses in each semester. Setting of intermediate targets, monitoring and evaluation of assigned work is carried out by the supervisor.
- 4. The supervisor(s) will recommend a mid-semester and final semester grade in each course registered by his/her student and return the evaluation forms and copy of the reports submitted by his/her student, to the Associate Dean, AGSRD by the specified dates given in the 'calendar of events' through DRC.
- 5. Any request by a PhD student relating to the change of topic, extension of time limit for submission of thesis, approval of title of thesis before submission of thesis, etc. is to be forwarded and recommended by the supervisor(s).
- 6. The supervisor(s) has to certify the originality and authenticity of the PhD work of his candidate in the form of a certificate, which forms a part of the PhD thesis whenever it is submitted. Names and addresses of eminent persons to act on panel of examiners are to be suggested by supervisor. These persons should be able to evaluate the thesis and conduct the viva voce examination.
- 7. A copy of research publications of the candidate either individually or jointly with the candidate on research work should be submitted to AGSRD.
- 8. The supervisor should announce the recommended mid-semester grade to his/her student.
- All communication by supervisor to the Institute should be submitted through AGSRD
- 10. Kindly keep AGSRD informed about your latest postal and e-mail address and telephone, fax numbers.

11. Guidelines for Writing the PhD Thesis

- 1. Kindly ensure that your thesis meets all the standards of a scholarly writing. The entire work is divided into suitable chapters, sections, and sub-sections.
- 2. Kindly ensure that objectives, scope, limitations of research, general conclusions, specific conclusions, specific contributions and future scope of work are clearly spelt out in the thesis.
- 3. The thesis may be written in English language and may be word-processed on single side of paper. You may follow appropriate margins, line spacing, and font. In case the numbers of pages are exceeding 350, the thesis may be printed on both the sides of paper. The appendices may be provided in a Compact Disc if the situation warrants. The page orientation may be portrait and good quality A4 size paper may be used. The pages may be numbered properly, and the text is justified.
- 4. Any format of quoting 'REFERENCES' may be followed consistently in the thesis. The reference numbers may be quoted in square parentheses and listed towards the end of chapters or the candidates may follow author's name followed by year of publication in bracket and list the authors alphabetically towards the end the chapters.
- 5. Kindly ensure that all figures, tables have suitable numbers consistently followed throughout the thesis document. Be sure to give caption to each table/figure and they are cited in the text. Mention data sources below the Tables/Figures if any. Figures should be made as self-explanatory as possible.
- Use only standard abbreviations. Avoid abbreviations in the title. The full term for which an abbreviation stands should precede its first use in the text except in case of measurement units. The measurement units if any shall be followed consistently.
- 7. The suggested format of the organization of Thesis is as given below.
 - Thesis Title Page (Inner Cover) as per the format given in Annexure I
 - Certificate from Supervisor as the format in Annexure II
 - Acknowledgements
 - Abstract
 - Table of Contents
 - List of Tables
 - List of Figures
 - List of Abbreviations/Symbols
 - Chapters
 - Conclusions
 - Specific Contributions
 - Future Scope of Work
 - References
 - Appendices
 - List of Publications and Presentations
 - Brief Biography of the Candidate
 - Brief Biography of the Supervisor
- 8. Formats of Thesis title page and certificates given in the Annexure should be strictly adhered to. The Thesis should have an outer cover similar to inner cover.

Multi Criteria Evaluation of Parabolic Solar Cooker as a Domestic Cooking Device

THESIS

Submitted in partial fulfilment of the requirements for the degree of **DOCTOR OF PHILOSOPHY**

by

SANJAY D. POHEKAR ID. No.

Under the Supervision of

Prof. M. Ramachandran

&

Under the Co-supervision of **Dr. Hemachandra**



BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI 2017

Annexure II: Format of Certificate from candidate working without the benefit of supervisor

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI

CERTIFICATE

This thesis is submitted under Regulation 8.20 (a) of the Academic Regulations for Doctoral Programmes which allows a faculty member of the Institute/Professional to do Ph.D. research without the benefit of a supervisor.

This is to certify that the thesis entitled			
and submitted by		for award of Ph.D.	
Degree of the Institute embod	dies my original work.		
Signature			
Name in Block Letters			
ID No.			
Designation			
Date:			

Annexure III: Format of Certificate from the Thesis Supervisor to be incorporated in the Thesis

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI

CERTIFICATE

This is to certify that the thesis entitled				
and submitted by	ID No	for award of Ph.D. of		
the Institute embodies original work	done by him/her und	der my supervision.		
Signature of the Supervisor	Signa	ture of the Co-supervisor		
Name in capital letters	Name	e in capital letters		
Designation	Desig	nation		
Date:	Date:			

12. Guidelines for Pre-submission Seminar

- 1. Submit two copies of the pre-submission draft for review by the members of the Doctoral Advisory Committee (DAC) to the DRC of concerned department
- 2. Kindly ensure that the copies are duly certified by the supervisor and are properly written following the guidelines for writing the thesis.
- 3. The exact title of thesis may also be discussed during the pre-submission seminar if the same is not already approved by the DCC/Research Board.
- 4. Prepare a presentation for approximately 30 to 40 minutes using Power Point. The presentation must cover the following:
 - Objectives and Scope of the Study
 - Literature review (briefly 2-3 slides only)
 - Identification of the research gaps based on literature review
 - Problem Formulation
 - Research Methodology
 - Experimentation/ Data Collection/Analysis
 - Results and discussion
 - General Conclusions
 - Specific Conclusions /Contributions of the research
 - Further Scope of Research
- 5. Inform the presentation needs.
- 6. Kindly ensure that slides are presenting candidate's work predominately. It is better to make a practice presentation before actual pre-submission seminar.
- 7. Note the suggestions/corrections given during the seminar.
- 8. The suggestions shall be discussed with supervisor(s) and incorporated in thesis.

13. Guidelines for PhD Thesis Submission

- 1. The thesis can be submitted only after completion of pre-submission seminar on the thesis and title approval by Doctoral Counseling Committee. Exactly same title (including case, capitalization etc.) should appear on the thesis.
- 2. Kindly ensure that suggestions/corrections discussed during the pre-submission seminar are incorporated in the thesis after discussions with the supervisor(s).
- 3. Formats of Thesis title page and certificates given in the Annexures should be strictly adhered to. The Thesis should have an outer cover similar to inner cover.
- 4. The thesis can be submitted only if the candidate is registered during that semester.
- 5. The thesis can be submitted only if there no Unsatisfactory/NC grade in the previous semester of submission of thesis.
- 6. Kindly ensure that there are no pending dues if any and there are no pending grades if any.
- 7. The thesis can be submitted only after completion of 40 units in PhD Thesis course, completion of minimum 2 units in TP courses, completion of min 2 units in PhD seminar
- 8. Ensure that the name and title of thesis are as per the approval of DCC/Research Board
- 9. Submit the following at the time of thesis submission:
 - Spiral bound copies of the thesis –one for each examiner
 - 2 copies of synopsis of the thesis
 - Soft copy of thesis (as single pdf file), synopsis, anti-plagiarism digital report & receipt in CD
 - PhD students can pay PhD Thesis examination fees (as announced in fee structure) to SWD (Student Welfare Division) at Hyderabad campus. All students submitting PhD Thesis should be pay for the thesis examination fee (as applicable) to SWD, then collect the receipt from them and submit receipt along copy with the final thesis to AGSRD.
 - Copy of the title approval form submitted.
 - Copy of the DAC members comments before pre-submission seminar
 - Evaluation forms for the semester of thesis submission
 - Pre-submission seminar Notice
 - Envelope containing names, communication details and brief bio-data of at least 7 eminent as prospective thesis examiners in the correct format, to be given by the supervisor(s) after approval of DRC.

14. Evaluation Forms for all PhD Courses

In the following section, the evaluation forms are given. These may be photocopied and used for grade submission.

Form	Applicable to course
Mid Semester Evaluation Form	All Courses
PhD Seminar end semester evaluation	PhD Seminar
form	
PhD thesis end semester Evaluation	PhD Thesis
Form	
RM I end semester Evaluation Form	Research Methodology I

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI HYDERABAD CAMPUS Mid-Semester Evaluation Form for BITS C797T Ph.D. SEMINAR

SECTION-I (To be filled by the candidate)

Semester/Term: First	/Second Seme	ester/Summer T	erm 20 - 20		
ID NO:	Na	me:			
Supervisor(s)/Mentor	r:				
Outline of work done	:				
(a) Independent Stud	y/Seminar				
SECTION-II EVALUAT	ION & GRADII	NG BY SUPERVI	SOR(S)/MEN	ГOR	
Component &		Grades/	marks award	ed for	
Weightage	Written	Oral	Technical	Subject	Response t
	Paper 10 %	Presentation 15 %	Contents 10 %	Knowledge 10 %	Questions 5 %
Seminar -1 50 %					
Overall marks/grade	es (out of 50):		I	l	I
Comments on the po	erformance:				
A. BITS C 797T Ph.D. S	Seminar				
Recommended Mid-Se	emester Grade	: Good	/ Poor		
Remarks, if any:					
Date		Signat	ure of Supervi	sor(s)/Mentor	
Instructions:					
1. The candidate should	d fill Section-I a	nd submit form t	o his/her supe	rvisor(s)/mento	or.

- 2. Supervisor/mentor should evaluate the performance and suggest a grade (section-II) and return this form so as to reach DRC on or before the specified date.
- 3. Attach extra sheets, if needed.
- 4. Strike off courses not registered in a particular semester/term.

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI MID SEM EVALUATION FORM - BITS C790T INDEPENDENT STUDY

ID NO	Na	me:			
Supervisor/Mentor:					
-					
Topics of study underta	aken				
SECTION-II EVALU	ATION & GR	ADING BY SU	PERVISOR/N	IENTOR	
					_
Component & Weightage		Grae	des/marks awa	rded for	
Weightage	Tech	Depth of	Originality	Presentation	Date of
	Contents 20 %	Knowledge 10 %	10 %	10 %	Submission
Seminar-1 + Study Report -I 50 %					
Overall marks/grades (out of 50):	1	<u> </u>		
Comments on the perfo					
RECOMMENDED FO	R GRADE:				
	warded :	Good/Poor			
Mid-semester Grade A					
Mid-semester Grade A					
Mid-semester Grade A					
Mid-semester Grade A Report, if any (vide Ac	. Reg. 4.12):				

Instructions

- 1. The candidate would fill Section-I and submit the form to his supervisor/Mentor.
- 2. Supervisor/Mentor would evaluate the performance and suggest a grade (Section-II) and return this form so as to reach AGSRD Division on or before the last day for class-work in the semester/term.

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI HYDERABAD CAMPUS Mid-Semester Evaluation Form for BITS C799T Ph.D. THESIS.

SECTION-I (To be filled by the candidate)

Semester/Term: First/Second Semester	r/Summer Term 20 - 20
ID NO: Name:	
Supervisor(s)/Mentor:	
Outline of work done:	
(a) Ph.D. Thesis	
SECTION-II EVALUATION & GRADING B	BY SUPERVISOR(S)/MENTOR
A. BITS C799T Ph.D. THESIS	
Recommended Mid-semester Grade:	Satisfactory/Unsatisfactory
Remarks, if any:	
Date	Signature of Supervisor(s)/Mentor

Instructions:

- 1. The candidate should fill Section-I and submit form to his/her supervisor(s)/mentor.
- 2. Supervisor/mentor should evaluate the performance and suggest a grade (section-II) and return this form so as to reach DRC on or before the specified date.
- 3. Attach extra sheets, if needed.
- 4. Strike off courses not registered in a particular semester/term.

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI HYDERABAD CAMPUS END SEMESTER EVALUATION FORM - BITS C797T Ph.D. SEMINAR

ID NO		Name:			
Supervisor/Mentor	:		·		
Title of Seminar tall	ks delivered an	d dates:			
SECTION-II EVALU <i>A</i>	ATION & GRAD	ING BY SUPERV	ISOR(S)/MEN	ITOR	
Component &		Grades/	marks award	ed for	
Weightage	Written Paper 10 %	Oral Presentation	Technical Contents 10 %	Subject Knowledge 10 %	Response to Questions 5 %
		15 %		10 /0	3 70
Seminar -1 50 %		15 %	10 %		
Seminar -1 50 % Seminar -2 50 %		15 %	10 %		
	es (out of 100)		10 %		
Seminar -2 50 % Overall marks/grad			10 %		
Seminar -2 50 %	performance:		10 %		
Seminar -2 50 % Overall marks/grad Comments on the p	performance:				
Seminar -2 50 % Overall marks/grad Comments on the parts of the part	performance:	:	r		

Instructions

Date

- 1. The candidate should fill Section-I and submit form to his/her supervisor(s)/mentor.
- 2. Supervisor/mentor should evaluate the performance and suggest a grade (section-II) and return this form so as to reach DRC on or before the specified date.

Signature of Supervisor(s)/Mentor

3. Attach extra sheet, if necessary.

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI END SEM EVALUATION FORM - BITS C790T INDEPENDENT STUDY

SECTION-I (To be filled by the candidate) Semester/Term: First/Second Semester /Summer Term 20 - 20. ID NO. ______ Name: _____ Supervisor/Mentor: Topics of study undertaken **SECTION-II** EVALUATION & GRADING BY SUPERVISOR/MENTOR Component & Grades/marks awarded for Weightage Depth of Tech Originality Presentation Date of Knowledge 10 % 10 % Contents Submission 20 % 10 % Seminar-1 + Study Report -1 50 % Seminar-2 + Study Report -2 50 % Overall marks/grades (out of 100): Comments on the performance: RECOMMENDED FOR GRADE: : Good/Poor Mid-semester Grade Awarded : Good/Poor Final grade

Instructions

Date

Report, if any (vide Ac. Reg. 4.12):

1. The candidate would fill Section-I and submit the form to his supervisor/Mentor.

Signature of Supervisor/Mentor

Signature of Co-Supervisor

2. Supervisor/Mentor would evaluate the performance and suggest a grade (Section-II) and return this form so as to reach AGSRD Division on or before the last day for class-work in the semester/term.

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI HYDERABAD CAMPUS

END SEMESTER EVALUATION FORM - BITS C799T Ph.D. THESIS.

SECTION-I (To be filled by the candidate)

Semester/Term: First/Second S	Semester/Summer term. 20 - 20
ID. No	Name:
Supervisor/Mentor:	
Approved topic/Title	
Number of Thesis Units registe	red during the current semester/term:
Likely date of submission of Th	esis:
Semester/term or date five year	ars period or /granted extension period ending:
Work done during the semeste	er /term (give only the salient details):
SECTION-II: EVALUATION OF V	MODE & CRADING BY
SUPERVISOR(S)/MENTOR Atte	
Comments on the work:	indunce : Negalar / Integalar
comments on the work.	
RECOMMENDATION FOR GRAI	DE
Mid-Semester Grade awarded	: Satisfactory / Unsatisfactory
Final Grade	: Satisfactory / Unsatisfactory
Date	Supervisor(s)/Mentor
Date	Super visor (S)/ Mentor

Instructions

- 1. The candidate should fill Section-I and submit form to his/her supervisor(s)/mentor.
- 2. Supervisor/mentor should evaluate the performance and suggest a grade (section-II) and return this form so as to reach DRC on or before the specified date.
- 3. Attach extra sheet, if necessary.

15 Checklists for Various Events

15.1 Checklist for Semester's Work

- 1. Payment of fees for the particular semester to SWD
- 2. Semester Registration in ERP portal.
- 3. Making the plan of work for all the courses registered in consultation with Supervisor(s) / Mentor
- 4. Dispatch of the plan of work by email to DRC for necessary approval
- 5. Carrying the work as per the work plan
- 6. Submitting mid semester's reports and grades forms duly signed by supervisor
- 7. Submitting end semester's reports and grades forms duly signed by supervisor
- 8. Informing the AGSRD, changes in address, telephone, E-mail etc., if any
- 9. Informing the AGSRD the change of locale, supervisor, topic, if situation warrants
- 10. Requesting the Doctoral Counseling Committee(BITS Pilani) for extension of time for thesis submission, if situation warrants

15.2 Checklist for Preparing Draft Thesis

Objectives, Scope and Limitations

- 1. Are the objectives clearly spelt out?
- 2. Are the objectives based on in-depth literature review?
- 3. Does the thesis clearly mention scope and limitations of research?

Literature Survey

- 4. Is the literature survey up-to-date and exhaustive?
- 5. Has the researcher referred international/national journals of repute?
- 6. Are the research gaps clearly identified?

Methodology

- 7. Is the methodology adopted described exhaustively?
- 8. Has the researchers mentioned all data sources?
- 9. Is the research methodology adopted up-to-date?

Results and Discussions

- 10. Are the outcomes of research discussed at length?
- 11. Has the candidate come out with knowledge addition in the area of research?
- 12. Has the candidate come out with publications in international/national journals of repute?
- 13. Has the candidate presented his work in international/national conferences? *Conclusions and Future Scope of Work*
 - 14. Are the conclusions clearly spelt out?
 - 15. Has the candidate mentioned specific contributions to the field of research?
 - 16. Has the candidate mentioned future scope of work?

Literature References

- 17. Is the citation of references done in standard format?
- 18. Are all the references cited in the text?
- 19. Are the references relevant and adequate to the work?

Documentation of Thesis

- 20. Is the flow of writing logical?
- 21. Has the candidate made sections/subsections to explain his work?
- 22. Are the figures/tables presently neatly and clearly with proper and consistent captions?
- 23. Is the list of tables, figures, symbols/acronyms given in the thesis?
- 24. Has the candidate attached a proper acknowledgement?
- 25. Are the appendices appended properly to the thesis?
- 26. Has the candidate appended list of papers published/presented on the thesis?
- 27. Has the candidate included brief biography of himself and his supervisor (about one page each) towards the end of the thesis?

15.3 Checklist for Pre-Submission Seminar on PhD Thesis

- 1. Completion of 40 units in PhD Thesis course.
- 2. Completion of the research work and preparation of thesis duly checked and certified by your supervisor(s) following the guidelines for preparing the draft thesis.
- 3. Submission of two copies of the thesis for review by the members of the Doctoral Advisory Committee (DAC) to DRC.
- 4. Obtaining the comments of the members of DAC on the thesis.
- 5. Preparation of presentation for approximately 30 to 35 minutes using Power Point. The presentation must cover the following...
 - Objectives and Scope of the Study
 - Literature review (briefly 2-3 slides only)
 - Identification of the research gaps based on literature review
 - Problem Formulation
 - Research Methodology
 - Experimentation/ Data Collection/Analysis
 - Results and discussion
 - General Conclusions
 - Specific Conclusions /Contributions of the research
 - Further Scope of Research
- 6. Clearing of dues till date of the seminar
- 7. Clearing of pending grades, if any
- 8. Informing the presentation
- 9. Noting the corrections/suggestions, if any, for necessary action during pre-submission seminar
- 10. Collecting necessary proforma for Thesis Submission and Prospective Examiners Information.

15.4 Checklist for Thesis Submission

- i. Registration in the semester of thesis submission.
- ii. Clearing all pending dues, if any
- iii. Clearing all pending grades, if any
- iv. Completion of 40 units in PhD Thesis course
- v. Completion of minimum 2 units in TP/PLS courses & Research Methodology-I
- vi. Completion of minimum 2 units in PhD seminar
- vii. Any NC/Unsatisfactory grades in immediately preceding semester
- viii. Correctness of name and ID as per AGSRD records: In case of any change of name required the student should apply to Associate Dean, SWD along with supporting documents.
- ix. Approval of the Thesis title by the DCC/Research Board
- x. Pre-submission seminar before the DAC and DRC
- xi. Submission of grades for the semester of thesis submission
- xii. Correctness of thesis title as approved by the Research Board/DCC
- xiii. Submission of Spiral bound copies of the thesis –one for each examiner hard bound copies and Soft copies of thesis (in a single PDF format) & anti-plagiarism digital report & receipt in CD
- xiv. Submission of 2 copies of synopsis of the thesis
- xv. Necessary instructions for title page and certificate are followed or not
- xvi. Submitting Demand draft for 'Thesis examination fees' in favor of BITS, Hyderabad and submitted to SWD or online Payment. Receipt to be given to AGSRD along with final thesis.
- xvii. Submission of sealed envelope containing names, communication details and brief bio-data of at least 7 eminent as prospective thesis examiners to be given by the supervisor(s) to DRC. The DRC will deliberate and approve the examiners and submit the same to AGSRD with a covering letter stating the same.
- xviii. Submission of Proforma THESIS FORM -1 and THESIS FORM -2 duly filled in and signed by candidate and supervisor(s)

16. Glossary

- i. **Academic Regulations**: Institute publication containing rules of operations of all academic programmes of the Institute
- ii. **BITS On Campus Candidates**: A candidate registered and working at BITS, Pilani campus including Faculty members
- iii. **Doctoral Advisory Committee**: A committee consisting of Head of Department (HOD) as ex-officio member and Chairperson, and 2 to 6 faculty members, at the level of Assistant Professor or above, who are active in research to monitor the progress of research work and advise a PhD candidate
- iv. **Doctoral Counseling Committee**: A statutory body to take care of monitoring the progress of Ph.D. candidates
- v. **Examination Committee**: A statutory Institute committee empowered to approve all the course grades and examination results
- vi. **Full Time Research Scholar**: Candidate working at Pilani campus on a full-time basis drawing fellowship from some funding organization /Institute
- vii. **Grade Card**: A computer printout reporting the performance of the student at the end of the semester in all the courses registered by him/her in that semester
- viii. **ID No**: Candidates unique identification number in the Institute
- ix. **Instructor**: A faculty member in the team of teachers conducting a course. Thesis supervisors act as instructors for various Ph.D. courses and recommend mid-semester and final semester grade in the semester
- x. **Instructor-in-Charge**: A faculty member designated for a course to turn in the Grade
- xi. **Mentor**: A faculty member designated by DRC to act as an Instructor in the absence of a supervisor for a particular Ph.D. candidate
- xii. **Research Board**: A statutory body to take policy decisions on research and sanction approval on all the matters connected with the Ph.D. degree pursuit of a candidate
- xiii. **Senate**: Highest academic body of the Institute empowered to devise and approve new programmes etc.
- xiv. **Supervisor**: Guide of the candidate as approved by the Research Board of the Institute

xv. **Various Divisions**: Administrative divisions of the Institute for conducting day-to – day operations.

AGSRD: Academic Graduate Studies and Research Division: Nodal agency for PhD programme of the Institute and responsible for arranging the registration semester by semester for PhD candidates and providing grade sheets, transcript, and provisional degree certificates etc. at the end of programme and also to monitor all Teaching and Evaluation activities of the Institute

SWD: Student Welfare Division: Nodal agency for fees and accommodation and overall welfare of the Institute

PSD: Practice School Division: Nodal agency to plan, monitor and conduct practice school programmes of the Institute

WILPD: Work Integrated Learning Programmes Division: Nodal agency to plan, monitor and conduct distance and collaborative learning programmes of the Institute

17. Contact Details for BITS Pilani, Hyderabad Campus

All the communications may be sent by designation to the following.

Associate Dean

Academic - Graduate Studies and Research Division

Birla Institute of Technology and Science Pilani, Hyderabad Campus Jawahar Nagar, Kapra Mandal, Medchal Dist.

Phone: 040-66303581, 040-66303836

For regular/day to day interaction, enquiries and clarifications: agsrd@hyderabad.bits-pilani.ac.in