

# **COURSE HANDOUT AND GUIDELINES**

**FOR**

## **BITS G561 DISSERTATION**

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**BITS Pilani**  
Pilani Campus

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**January 2015**

### CALENDAR OF EVENTS

I Sem.	II Sem.	Item	From	To
AUG 16	JAN 22	TS-1 Form	Student	Head of Department
AUG 28	JAN 29	Detailed outline of work	Student	Supervisor
SEP 05	FEB 10	Viva –I	Student	Supervisor
OCT 08	MAR 15	Mid. Semester written report and presentation	Student	Supervisor
<b>OCT 08</b>	<b>MAR 15</b>	<b>Mid. Semester Grade</b>	<b>Supervisor</b>	<b>Head of Department</b>
NOV 15	APR 15	Viva – II	Student	Supervisor
NOV 28	APR 30	Dissertation abstract	Student	Supervisor
NOV 28	APR 30	Final dissertation report submission	Student	Supervisor
Dec 1 - 8	May 3-8	Final Viva	Student	Examiner
<b>Dec 1 - 8</b>	<b>May 3-8</b>	<b>Final Evaluation Form</b>	<b>Supervisor</b>	<b>Head of Department</b>

Note:

1. If any of the above date happens to be a Sunday or a holiday, the immediate next date will be the calendar date. FINAL DISSERTATION REPORT should invariably be submitted on or before the above mentioned date.
2. Student should ensure with his supervisor that the Mid-semester grade and the Final Dissertation Report, Dissertation Abstract and Final Evaluation form are sent to the Head of Department by the due date
3. The time and venue of Seminars is to be fixed by the Supervisor
4. The final viva-voce examination is to be held on the date announced by Departmental Research Committee (DRC). The Supervisor in consultation with the examiner will fix the venue and time.
5. Specified formats of the Cover/Title page and certificate from the supervisor should be adhered to in the preparation of final report. Attention should be given to the items in the checklist for preparation of the report. Supervisors are requested to sign the certificate page in the report and signed copy of dissertation report should be made available to the examiners well in advance.

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**FIRST/SECOND SEMESTER**

**COURSE HANDOUT: BITS G561T DISSERTATION**

**1. COURSE DESCRIPTION**

This course deals with the research and development work in assigned areas of professional interest. Each student will work under the overall guidance and supervision of a faculty member/professional. The course must end with a well defined Final Report outlining all the investigations, achievements and conclusions at the end of each semester. References and bibliography in standard format are also to be included in the report.

**2. SCOPE AND OBJECTIVE OF THE COURSE**

The aim of this course is to carryout a research and development project in assigned areas of professional interest. The course envisages student's training in the methodology of research and presentation of the research findings in the form of a scientific report.

**3. OPERATION OF THE COURSE**

- a) The student should immediately chalk out a plan of work in Consultation with his Supervisor. Current literature (journals, books, etc.) must be methodically reviewed and the status of the work in the field must be considered. The detailed outline of work must reflect a survey of the current literature in the same area and must include topic of research, objective, background of previous work in the area, methodology and a work plan with a time schedule clearly indicating the intermediate milestones and the estimated time to achieve the same along with references and bibliography.
- b) Within two weeks of registration, the student should give his Dissertation particulars to the Head of Department in TS-1 Performa.
- c) The student should regularly interact with his supervisor and present seminars and submit reports on the scheduled dates. Proposed examiners and other faculty in relevant area may be requested to attend the presentations.
- d) Supervisor will announce the Mid-semester grade to his student and send the MID-SEM Evaluation Form to the Head of Department.
- e) Typed copy of Final Dissertation Report and Abstract are to be submitted to the supervisor on or before the last day of class work in each semester.
- f) Every student has to sign his attendance regularly with the supervisor or as per the alternative arrangement made by the supervisor. An attendance sheet is being provided for this purpose to the supervisor.
- g) The candidate should apply and seek prior permission of his supervisor for going on leave for any genuine needs. If leave of absence exceeds **seven** days in entire semester, recommended final grade may be revised by supervisor.
- h) The following format for Dissertation Abstract should be used. Abstract should also be included in the bound report:

### Format for submission of Dissertation Abstract

Thesis Title:

Supervisor:

Semester: First/Second

Session

Name of Student:

ID No:

Abstract (Approx 1000 to 2000 words)

i) A separate Dissertation topic has to be assigned to individual students. Wherever the broad area is same, the aspects to be researched by an individual candidate should be clearly focused and spelt out.

j) Utmost care should be taken in the preparation of the FINAL REPORT. A check-list of various items is provided and students should carefully go through these. Supervisors are also requested to examine the draft of the FINAL REPORT keeping in view the items in the checklist. Title of the thesis should be proper and should be indicative of the type of work done.

#### 4. EVALUATION

Evaluation in this course is essentially individual oriented. The various instruments of evaluation along with the weightage of components are given below:

Component	Weightage	Week in which due
Viva-I	15	5 <sup>th</sup> week
Mid. sem. Written report	15	10 <sup>th</sup> week
Mid sem. presentation	15	10 <sup>th</sup> week
Viva-II	15	15 <sup>th</sup> week
Final Dissertation*	25	Last day of class work
Final viva-voce*	15	Actual date announced by DRC

\*Final viva-voce examination and evaluation of the Dissertation is to be jointly done by the Supervisor and the examiner appointed by the DRC. The other components are to be evaluated by the supervisor and the details are to be made available to the examiner at the time of final viva.

Supervisor will send the copy of Dissertation report to the examiner well in advance. Before sending he should check the contents as per checklist and sign the 'Certificate' page. The evaluation will recognize the day-to-day work involvement and punctuality of the student in his work. Evaluation in various components shall take into account work progress and achievements, technical/professional competence, documentation and expression, initiative and originality, punctuality and reliability, self-reliance, and acquisition of special skills. The student should extend full cooperation to his supervisor and interact with him in advance about the time, venue and mode of each evaluation. He should be in constant touch with his supervisor. Supervisor may require his student to sign the attendance sheet before a particular time on each working day.

Grading will be done mainly on the basis of the progress made towards attaining the overall objectives of the Dissertation. The supervisor shall evaluate various prescribed components of evaluation before the submission of final Dissertation. He/she should seek utmost participation of examiner by inviting him to the various seminars. Supervisor should maintain all pertinent records of his student.

The final report and performance in the final viva are to be jointly evaluated by the Supervisor and examiner appointed by the DRC. Evaluation in various components can be done on the basis of marks or grades. However, the recommendations for the final award shall invariably be made in terms of one of the prescribed letter grades, viz. **A/A-/B/B-/C/C-/D/E**. The student will have to defend the work appearing in his/her Dissertation before the panel of examiners.

Immediately after the final viva, ONE copy completed Final Evaluation Form is to be submitted to the Head of Department by the supervisor.

## **5. MID SEMESTER GRADING**

This will be announced by the supervisor to his student sometime in the 10<sup>th</sup> week of the semester. Mid-semester evaluation form should be returned by the supervisor to the Head of Department during the 10<sup>th</sup> week of the semester.

## **6. COURSE NOTICES**

Notices pertaining to this course will be displayed on respective Department Notice boards by the supervisor.

## **7. GENERAL**

a) It is the responsibility of the student to ensure continuous interaction with his Supervisor.  
b) Prescribed formats of the Cover/Title page and certificate from the supervisor should be adhered to in the preparation of final Dissertation Report. Check-list of items for the preparation of the FINAL REPORT should also be consulted. The following sequence may be followed in the preparation of the Dissertation Report:

- ?? Title page (inner cover)
- ?? Acknowledgement
- ?? Certificate from the Supervisor
- ?? List of Symbols & Abbreviations used
- ?? Dissertation Abstract
- ?? Table of contents
- ?? Chapters 1, 2, 3, etc.
- ?? Conclusion
- ?? Appendices
- ?? Bibliography/References
- ?? List of Publications/Conference Presentations, if any.

c) The registration in Dissertation course is normally after the completion of coursework.

### Check List of Items for Final Report of Higher Degree Dissertation

1. Is the Report's 'Cover/Title page' in proper format?
2. Is 'Supervisor's Certificate' in proper format? Has it been signed?
3. Is 'Abstract' included in the Report? Is it in properly written?
4. Does the 'Table of Contents' page include chapter page numbers?
5. Does the Report contain a summary of the literature survey?
6.
  - (a) Are the Pages numbered properly?
  - (b) Are the Figures numbered properly?
  - (c) Are the Tables numbered properly?
  - (d) Are the Figures and tables titled properly?
  - (e) Are the Appendices numbered?
7. Does the Report have 'Conclusion' of the work?
8. Are References/Bibliography given in the Report?
9. Have the 'References' been cited in the Report?
10. Is the citation of 'References and Bibliography' in the standard format?

Attention should be paid on the above items while preparing the FINAL REPORT. Supervisors are also requested to ensure that their candidate(s) have prepared the FINAL REPORT properly.

### Illustrative Examples of Citation of References:

1.	Book: A. Gelb, Applied Optimal Estimation. Cambridge, M.A.; M.I.T. Press, 1974
2.	A paper in Conference or Symposium Proceedings edited Published by Book Company: R.E. Kalman, 'New Methods in Wiener filtering theory', in Proc. First Symposium on Engineering Applications of Random Function Theory and Probability' J.L. Bogdanoff and F. Kozin, Eds. New York, Wiley, 1963, pp. 270-388
3.	A Journal Paper: R.E. Kalman and N.S. Pucy, 'New results in linear filtering and prediction theory', Trans. ASME, J.Basic Eng., Vol. 83-D, pp. 95-108, Mar. 1961
4.	A Conference Paper: M. Vidyasagar and N.K. Bose, 'Input-output stability of linear systems defined over measure spaces', in Proc. Midwest Symp. Circuits, Syst., Montreal, P.O. Canada, Aug. 1975, pp 394-397
5.	A Ph.D. dissertation or Dissertation A.C.G Viera, 'Matrix, orthogonal polynomials, with applications to autoregressive modeling and ladder forms', Ph.D. Dissertation, Stanford Univ., Stanford, CA, Dec. 77
6.	A Private Communication W.M. Wonham (1982) Private Communication

## **Format of the Cover/Title page of the Dissertation**

**(Title of the Dissertation)**

Thesis  
Submitted in partial fulfillment of the requirements of  
BITS G561T Dissertation

By

**(Author)**

**ID No. (                      )**

Under the supervision of

-----  
**(Name and Designation of Supervisor)**

Institute emblem

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS

(Date)

## **Format of 'Certificate from the Supervisor'**

### **CERTIFICATE**

This is to certify that the Dissertation entitled, \_\_\_\_\_  
\_\_\_\_\_ and submitted  
by \_\_\_\_\_ ID No. \_\_\_\_\_ in partial fulfillment of the requirement of  
BITS G561T Dissertation embodies the work done by him/her under my supervision.

Signature of the Supervisor

Date:

**Name**

Designation

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**FIRST/SECOND SEMESTER 20 -20**

**MID SEMESTER EVALUATION FORM**

**Section I PARTICULARS (TO BE FILLED BY STUDENT AND RETURNED TO SUPERVISOR)**

Semester \_\_\_\_\_ Session \_\_\_\_\_

ID No. \_\_\_\_\_ Name of Student \_\_\_\_\_

Title of Dissertation \_\_\_\_\_

\_\_\_\_\_

**Section II EVALUATION DETAILS (TO BE FILLED BY SUPERVISOR)**

S.No.	Evaluation Component	Max. Marks	Marks awarded
1.	Viva –I	05	
2.	Mid. Sem. Presentation	10	
3.	Mid. Sem. Written Report	10	
	Total	25	

Recommended Mid-semester grade ( **A/-A/B/-B/C/-C/D/E** ):

Reports, if any (NC/I, See Academic Regulation 4.12)

(Give Reasons)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Supervisor

NB: Supervisor should announce the mid semester grades to his student directly and send the form to the Head of Department

\* Possible break up of marks for grades:

90 < A ≤ 100; 80 < - A ≤ 90; 70 < B ≤ 80; 60 < - B ≤ 70; 50 < C ≤ 60; 40 < - C ≤ 50; 30 < D ≤ 40; E ≤ 30



**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**FIRST/SECOND SEMESTER 20 -20**

**MID SEMESTER EVALUATION FORM**

**Section I PARTICULARS (TO BE FILLED BY STUDENT AND RETURNED TO SUPERVISOR)**

Semester \_\_\_\_\_ Session \_\_\_\_\_

ID No. \_\_\_\_\_ Name of Student \_\_\_\_\_

Title of Dissertation \_\_\_\_\_

\_\_\_\_\_

**Section II EVALUATION DETAILS (TO BE FILLED BY SUPERVISOR)**

S.No.	Evaluation Component	Max. Marks	Marks awarded
1.	Viva –I	05	
2.	Mid. Sem. Presentation	10	
3.	Mid. Sem. Written Report	10	
	Total	25	

Recommended Mid-semester grade ( **A/-A/B/-B/C/-C/D/E** ):

Reports, if any (NC/I, See Academic Regulation 4.12)

(Give Reasons)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Supervisor

NB: Supervisor should announce the mid semester grades to his student directly and send the form to the Head of Department

\* Possible break up of marks for grades:

90 < A ≤ 100; 80 < - A ≤ 90; 70 < B ≤ 80; 60 < - B ≤ 70; 50 < C ≤ 60; 40 < -C ≤ 50; 30 < D ≤ 40; E ≤ 30

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**FIRST/SECOND SEMESTER 20 -20**

**END SEMESTER EVALUATION FORM: BITS G561T DISSERTATION**

Name of Student \_\_\_\_\_ ID No. \_\_\_\_\_

Title of dissertation (As on Dissertation) \_\_\_\_\_

**Evaluation:**

S.No.	Evaluation Component	Max. Marks	Marks awarded
1.	Viva –I	5	
2.	Mid. Sem. Presentation	10	
3.	Mid. Sem. Written Report	10	
4.	Viva – II	35	
5.	Final Thesis Report	15	
6.	Final Viva	25	
	Total	100	

Recommended Mid-semester grade (**A/A-/B/B-/C/C-/D/E**):

**RECOMMENDED FINAL GRADE (A/A-/B/B-/C/C-/D/E):**

Reports, if any (NC/I, See Academic Regulations 4.12)

(Give Reasons)

Supervisor's Rating:

Work Progress and Achievement	<b>A / - A / B / -B / C /-C / D / E</b>
Technical competence	<b>A / - A / B / -B / C /-C / D / E</b>
Documentation and expression	<b>A / - A / B / -B / C /-C / D / E</b>
Initiative and originality	<b>A / - A / B / -B / C /-C / D / E</b>
Punctuality	<b>A / - A / B / -B / C /-C / D / E</b>
Reliability	<b>A / - A / B / -B / C /-C / D / E</b>

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Examiner

\_\_\_\_\_  
Signature of Supervisor

Semester \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

\* Possible break up of marks for grades:

90 < A ≤ 100; 80 < - A ≤ 90; 70 < B ≤ 80; 60 < - B ≤ 70; 50 < C ≤ 60; 40 < -C ≤ 50; 30 < D ≤ 40; E ≤ 30

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**

**FIRST/SECOND SEMESTER 20 -20**

**END SEMESTER EVALUATION FORM: BITS G561T DISSERTATION**

Name of Student \_\_\_\_\_ ID No. \_\_\_\_\_

Title of dissertation (As on Dissertation) \_\_\_\_\_

**Evaluation:**

S.No.	Evaluation Component	Max. Marks	Marks awarded
1.	Viva –I	5	
2.	Mid. Sem. Presentation	10	
3.	Mid. Sem. Written Report	10	
4.	Viva – II	35	
5.	Final Thesis Report	15	
6.	Final Viva	25	
	Total	100	

Recommended Mid-semester grade (**A/A-/B/B-/C/C-/D/E**):

**RECOMMENDED FINAL GRADE (A/A-/B/B-/C/C-/D/E):**

Reports, if any (NC/I, See Academic Regulations 4.12)

(Give Reasons)

Supervisor's Rating:

Work Progress and Achievement	<b>A / - A / B / -B / C /-C / D / E</b>
Technical competence	<b>A / - A / B / -B / C /-C / D / E</b>
Documentation and expression	<b>A / - A / B / -B / C /-C / D / E</b>
Initiative and originality	<b>A / - A / B / -B / C /-C / D / E</b>
Punctuality	<b>A / - A / B / -B / C /-C / D / E</b>
Reliability	<b>A / - A / B / -B / C /-C / D / E</b>

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Examiner

\_\_\_\_\_  
Signature of Supervisor

Semester \_\_\_\_\_

Name \_\_\_\_\_

Name \_\_\_\_\_

\* Possible break up of marks for grades:

90 < A ≤ 100; 80 < - A ≤ 90; 70 < B ≤ 80; 60 < - B ≤ 70; 50 < C ≤ 60; 40 < -C ≤ 50; 30 < D ≤ 40; E ≤ 30

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS**  
**ACADEMIC RESEARCH (PH. D. PROGRAMME) DIVISION**

**PARTICULARS OF DISSERTATION**

The student should correctly fill in this Proforma and submit to Head of Department within two weeks of registration.

Name of the Student \_\_\_\_\_

ID No. \_\_\_\_\_ Discipline \_\_\_\_\_

Topic of the dissertation: \_\_\_\_\_

E-mail ID: 1. BITS email ID \_\_\_\_\_

2. Non-BITS email ID \_\_\_\_\_

Phone Number: \_\_\_\_\_

Contact details of the Supervisor:

Name \_\_\_\_\_

Address (if off-campus): \_\_\_\_\_

E-mail id: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Contact details of Co-supervisor/Mentor (if any):

Name: \_\_\_\_\_

E-mail id: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Signature of the Student

**Panel of examiners (To be suggested by the supervisor)**

S.No	Name	Department/Div./Unt
1.		
2.		

Date: \_\_\_\_\_

\_\_\_\_\_  
Signature of supervisor

(P.T.O)

**Higher Degree Dissertation Outline**  
**(Attach extra sheet, if necessary)**

**Aim or objective of the project work:**

**Background of work:**

**Plan of work:**

**Bibliography and References:**

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**Signature of the student**

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**Signature of supervisor**

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE PILANI, PILANI CAMPUS****ATTENDANCE SHEET FOR HIGHER DEGREE DISSERTATION STUDENTS  
FIRST/SECOND SEMESTER****I. PARTICULARS**

Name of student \_\_\_\_\_ ID No. \_\_\_\_\_ Supervisor \_\_\_\_\_

Hostel \_\_\_\_\_ Room No. \_\_\_\_\_

**II. Attendance (Student to sign his initials)**

Month	DATES																Total working days	Days absent
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
Aug/Jan																		
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Sep/Feb																		
Oct/Mar																		
Nov/Apr																		
Dec/May																		

Note: Supervisor may decide to keep this sheet with him or with the Department office and ask the student to sign on each working day before a particular specified time. This sheet should be returned to Head of Department along with the Final Evaluation Form.

Date:

Signature of Supervisor